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Effect of Single L-Carnitine Dose Over Lactate Production During High Intensity - Short Volume Effort

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Abstract
Chronic oral ingestion of L-Carnitine can increase muscle carnitine and alter muscle metabolism during exercise. Yet, few similar results are published regarding acute oral ingestion and performance improvement. Our hypothesis is that non-mitochondrial ATP resynthesize is increased along with Carnitine acetylation, influencing lactate metabolism, and individual performance over single oral ingestion. Therefore, our propose will be to test the current hypothesis by monitoring performance indicators, during 30 seconds Squad Jump Test, after 4.5 g of L-Carnitine oral ingestion. Fourteen football players (n = 14) with a median age of 19 years old (18 – 22), 71 kg (65 – 74.5) median body weight of and 170.9 cm (168 – 176.5) height were recruited in the study. Study protocol consisted of two 30 seconds Squad Jump Tests (SJT). The test were conducted before (Test 1) and after one single oral supplementation dose (4.5 g) with L-Carnitine (T2). Of the fourteen subjects (n = 14) all of them were allocated to L-Carnitine ingestion after T1 test. The ingestion consisted of 4.5 g/day. After 5 days the athletes re performed in T2 30 seconds SJT. To avoid circadian rhythm influence, similar conditions were respected. The statistical analysis were conducted by using SPSS 20. software. The level of significance was set at α=0.05. Comparative changes were measured between T1 and T2. During T1, 1th rep, Tf was not significant different (p=1.00) from Tf, T2, 1th repetition, as seen through 0.43 (0.38–0.48) vs. 0.43 s (0.38–0.48) and 0.46 s (0.42–0.50) values. Similar data was observed during 1th repetition between Ct: 0.66 (0.58 – 0.92) vs. 0.66 s (0.58 – 0.92) (p=0.826). An improved performance can be unlikely due to L-Carnitine, as seen through Lactate accumulation. Further on, we must take into account a possible effect over Lactate tolerance which might favoured improved performance over T2 unlike T1.
Keywords: Carnitine, Power, Lactate, Athlete.

1. Introduction

Carnitine is found in the heart and skeletal muscles, whereas 3/4 of its content comes from food intake. (1) Acetyl L-Carnitine is one of the most frequently used ergogenic aid in both recreational and performance athletes. (2) Ingestion is proposed due to its role in recovery and endurance capacity. (3) Therefore, based on its mechanism, L-Carnitine can be used as a positive factor in muscle mass improvement.

Less research is focused on L-Carnitine use during low volume high intensity effort. (4) L-Carnitine use in training or competition periods varies with individual effort capacity, intensity and effort volume. (5) It is well known that during low intensity effort L-Carnitine can improve fat oxidation and limit muscle glycogen use by activating fatty acyl molecules through mitochondria inner membrane. (6) However less specific data is available regarding short high intensity effort, with energy metabolism differences over athlete age. (7)

The use of large amounts of L-Carnitine is dependent on plasma and muscle glycogen gradient concentration. Yet, plasma concentration is lower in comparison to muscle content. As a result, Na^+ dependent high-affinity active transport must occur in order to observe changes in the two compartments. (8) Increasing Na^+ concentration can activate $Na^+ – K^+$ pump, whose function is enhanced via insulin. (6) Several research papers confirmed an increased Carnitine content due to improved insulin response, based on both L-Carnitine ingestion and carbohydrates. (9) Similar results show that lower respiratory exchange ratio (RER) is related to an increased fat oxidation and decreased Lactate accumulation during high intensity effort. (10,11)

Short period oral supplementation effect over anaerobic effort has been insufficient documented as in report with other supplements.(12) Chronic oral ingestion of L-Carnitine can increase muscle carnitine and alter muscle metabolism during exercise. Yet, few similar results are published regarding acute oral ingestion and performance improvement. From a practical day by day perspective many athletes use one single pre effort oral serving. The effect is not fully documented over functional adaptions, lactate production or related energy metabolism changes. As we have seen though the published data, L-Carnitine can alter muscle metabolism during steady state exercise. (13)

Through our hypothesis we believe that non-mitochondrial ATP resynthesize is increased along with Carnitine acetylation, influencing lactate metabolism, and individual performance over single oral ingestion. Therefore, our aim will be to test the current hypothesis by monitoring performance indicators, during 30 seconds Squad Jump Test, after 4.5 g of L-Carnitine oral ingestion.

1. Method

3.1. Participants

Fourteen football players (n = 14) with a median age of 19 years old (18 – 22), 71 kg (65 – 74.5) median body weight of and 170.9 cm (168 – 176.5) height were recruited in the study by applying the following inclusion criteria: (1) male group, (2) aged between 18 - 25 years old, (3) residence in Târgu Mureş, Romania (4) enhanced effort capacity, (5) general health condition which allows the participation in high intensity effort, (6) participation consent. Study group exclusion was pre-set through the following criteria: (1) medical incompatibility with the pre-determined physical effort, (2) health condition that inhibits the study activity, (3) low effort capacity which alters the possibility to perform the test.

3.2. Materials

A group of football players were recruited to participate in an interventional study during January – February 2018. To perform the research we requested and obtained both the University Ethical Committee approval to conduct and apply the current methodology and the athletes' written consent to participate in the study. The present study was conducted in accordance with the ethics rules and research standards from the Helsinki Declaration of 1964 and its amendments.

3.3. Procedure

Study protocol consisted of two 30 seconds Squad Jump Tests (SJT). The test were conducted before (Test 1) and after one single oral supplementation dose (4.5 g) with L-Carnitine (T2). The athletes recorded a 7 – 10 day diet program pre T1 and T2 tests. Pre-tests the athletes were instructed to avoid caffeine, other supplements during the entire study period and to maintain an 8.7 g/kg Carbohydrate, 1.2 g/kg Protein and 1 g/kg Fat intake, while reducing effort intensity with 48 hours (≤75% of VO_{2peak}) and 24 hours (≤65% of VO_{2peak}) pre evaluation.
Of the fourteen subjects (n = 14) all of them were allocated to L-Carnitine ingestion after T1 test. The ingestion consisted of 4.5 g by using 2 g volume capsules, served during Breakfast, at 7:00 am. After 5 days, with restricted training conditions at 48 hours (≤75% of VO_{2peak}) and 24 hours (≤65% of VO_{2peak}), pre-test the athletes performed in T2 30 seconds SJT. In order to avoid circadian rhythm influence, T2 test began on the same day of the week (Thursday), at the same hour (10:00 am), after a similar food intake, similar training conditions and the same testing protocol, as described in Figure I - Figure II. Before and after each test lactate accumulation was measured.

Pre SJT assessment

Ten days before SJT (T1) athletes came into the Physiology Department for baseline measurements that confirmed individual capacity and health conditions. The screening consisted of general and surface anthropometry, Heart Rate (b/min), ECG, Blood Pressure (Systolic Blood Pressure, sBD (mmHg); Diastolic

Blood Pressure, dBP (mmHg); Mean Blood Pressure, mBP (mmHg)) and Blood Lactate (mmol/l). Anthropometry evaluation was conducted by using ADE taliometer (Hambrug, Germany) and Cosmed plicometer (Rome, Italy), while Careshine EKG-903A3 12-lead Digital 3-channel Electrocardiograph was used for ECG. Heart rate was measured by using Polar H7 device, Omron BPU321OS Blood Pressure analyser and Nova Biomedical, Lactate Plus (Waltham, USA) device for Lactate measurements.
Mean Blood Pressure was calculated by using the following formula:

$$mBP = \frac{sBP + (2 \times dBP)}{3}$$

General anthropometry

Body weight (kg) and inactive mass (%) were assessed during *pre SJT assessments*. The analyses were carried out using ADE taliometer and Cosmed manual plicometer, as described earlier. Durnin and Womersley (14) formula was applied to calculate inactive mass percentage (%) by using: bicipital (mm), tricipital (mm), subscapular (mm), and suprailiac (mm) skinfolds, represented as ($\sum 4ST1$). The body weight (kg), height (m), age (years) and gender (14):

$$\text{Body density} = 1.1765 - 0.0744 \log_{10}(\sum 4ST1)$$

During *pre STJ assessment* athletes performed the testing protocol for familiarization and tasks understanding.

30 Seconds SJT

By performing the test we analysed anaerobic power through: *contact time* (C*t*, seconds), *flight time* (F*t*, seconds), *height* (cm), *and power ratio* (Watt per kilo) by using OptoJump System. The test was performed over three reps (x3) each lasting 30 seconds. Recovery periods, lasting 60 seconds, were conducted after each repetition, as illustrated in Figure I, while maintaining *phase I* position (Figure 2).

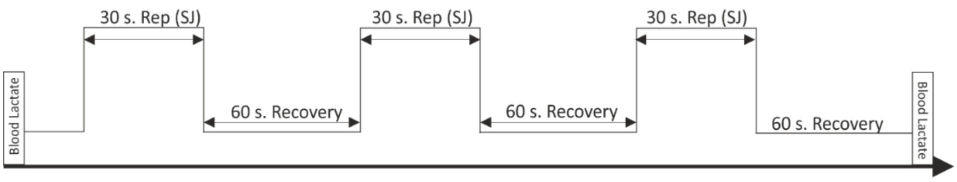

Figure 1. 30 seconds SJT testing protocol

Performance analysis was commenced by 10 minute warm-up that included both static and dynamic exercises of which intensity reached between 65 - 85% of VO_{2peak}, during short (5 – 20 s) high intensity intervals. In order to perform the test, the subjects were placed between the two OptoJump System device's arms with the legs width apart and hands on the hips. During each squad jump, the device recorded the height of the Target Centre (Height, cm), Ground Contact Time (C*t*, seconds), the Flight Time (F*t*, seconds) and Power Ratio (Power, watt per kilo). Tracking was performed in real time, stored and used in comparison during analysis, as shown in Figure 2.

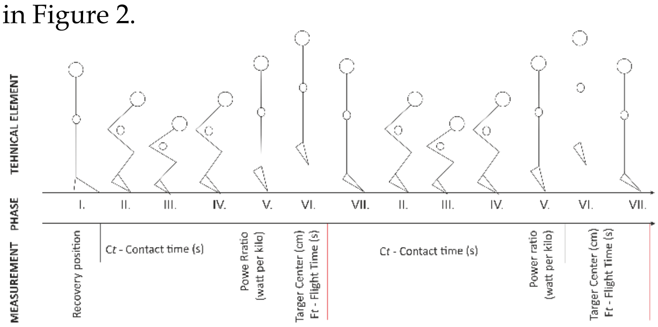

Figure 2. Illustration of 30 SJT measurements conducted during T1 – T2 tests

Statistical analysis

The statistical analysis were conducted by using SPSS 20. software. The level of significance was set at α=0.05. By using Shapiro-Wilk test the data was checked for normal distribution. All descriptive data were presented as Median, Minimum, Maximum and Interquartile Ranges. For inferential analysis, the Wilcoxon Signet Rank Test and Manova Test were used to analyse subjects' performance improvement over T1 and T2.

4. Results

Pre SJT assessment results

Subject median height was 170.9 cm (168 – 176.5). The body weight was measured at a median value of 71 kg (65 – 74.5), while inactive mass was determined at 13.97% (8.89 – 15.5). By using pre 30 seconds SJT assessments, sBP values were measured at 118 mmHg vs 113 mmHg during T1 vs. T2 SJT; dBP was measured at 60 vs. 66 mmHg. Median mBP was 81.67 vs. 85.3 mmHg, whereas median HR reached 73 vs. 72 b/min.

30 seconds SJT Performance Analysis (T1 - T2)

During T1 test, 1th rep contact time was 0.66 s (0.58 – 0.92). Changes were observed over the second and the third repetition: 0.63 s (0.55 – 0.94), 0.57 s (0.52 – 0.88). Contact time improvement was correlated to power ($p = 0.08$) without being linked to flight time ($p = 0.45$) or jump height ($p = 0.62$). Table 1. shows changes over T1 performance parameters.

Table 1. T1 performance analysis over 1th – 3th repetition

Performance analysis	1th Repetition	2th Repetition	3th Repetition	F	*p*
Tf, s	0.43 (0.38 – 0.48)	0.42 (0.40 – 0.46)	0.43 (0.38 – 0.51)	0.593	0.568*
Ct, s	0.66 (0.58 – 0.92)	0.63 (0.55 – 0.94)	0.57 (0.52 – 0.88)	19.19	0.001**
Height, cm	22.02 (16.5 – 23.8)	22.28 (20.35 – 26.86)	24.41 (18.5 – 32.14)	6.852	0.010**
Power, watt/ kg	17 (13.42 – 18.26)	17.40 (14.76 – 20.56)	17.97 (15.52 – 24.40)	7.669	0.007**

$^{**}p < 0.01$; $^{*}p > 0.05$

Basal Lactate measurement resulted in 1.2 mmol/l (1.1 – 1.5) value, whereas post effort a median value of 12.1 mmol/l (8.4 – 12.8) was reached.

During T2 30 seconds SJT, C*t* reached 0.69 s (0.54 – 0.80 s) without being significant differed from T1 value ($p>0.05$). Similar to T1, an improved performance was seen during second and third repetition: 0.65 s (0.50 – 0.78), 0.64 s (0.46 – 0.71). During T2 contact time was correlated to power ($p = 0.01$), flight time ($p = 0.01$) and height ($p = 0.01$), unlike T1 results. Significant changes were seen over flight, contact, height and power during T2 30 seconds SJT, as shown in Table 2.

Table 2. T2 performance analysis over 1th – 3th repetition

Performance analysis	1th Repetition	2th Repetition	3th Repetition	F	*p*
Tf, s	0.43 (0.38 – 0.48)	0.46 (0.42 – 0.50)	0.47 (0.41 – 0.53)	13.187	0.001**
Ct, s	0.69 (0.54 – 0.80)	0.65 (0.50 – 0.78)	0.64 (0.46 – 0.71)	11.400	0.002**
Height, cm	23.7 (18.9 – 29.2)	26.9 (21.7 – 30.7)	28.1 (21.2 – 35.6)	10.745	0.002**
Power, watt/ kg	17.8 (15.1 – 22.3)	19.2 (15.6 – 24.1)	20.6 (16.2 - 28)	7.181	0.009**

$^{**}p < 0.01$; $^{*}p > 0.05$

Lactate measurement during T2 resulted in 1.2 mmol/l (0.8 – 1.5) basal value and 12.9 mmol/l (9.4 – 14.5) in the end of the effort, reported as different in T2 as against T1.

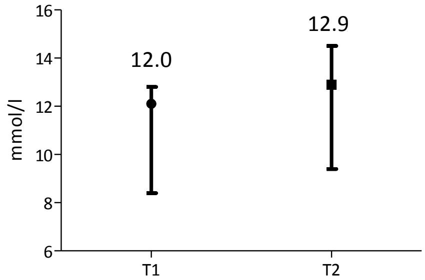

Figure 4. Changes in Blood Lactate in T1 and T2 (p = 0.028) - illustrated as median with range (min - max)

T1 – T2 Squad Jump Test Analysis

During T1, T*f* reached a median value of 0.42 s (0.36 – 0.51), unlike 0.46 s (0.38 – 0.53) during T2. Over T1, C*t* was measured at 0.60 s (0.52 – 0.94) as against 0.65 s (0.46 – 0.80) during T2. Associated values for height: 22.43 (16.55 – 32.14) vs. 26.92 cm (18.94 – 35.63); and power 17.17 (13.42 – 24.40) vs. 18.85 w/kg (15.13 - 28) were obtained, and illustrated in Figure 3.

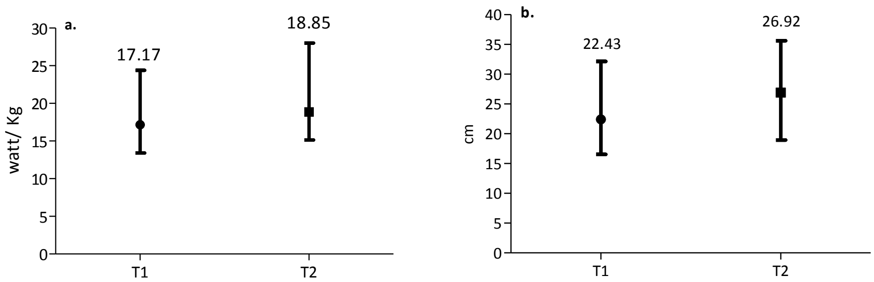

Figure 3. Changes between T1 and T2 over Power (p = 0.0001) (a.) and Height (b.) (p = 0.001) performances - illustrated as median with range (minimum - maximum)

Comparative changes were measured between T1 and T2. During T1, 1th rep, T*f* was not significant different (p = 1.00) from T*f*, T2, 1th repetition, as seen through 0.43 (0.38 – 0.48) vs. 0.43 s (0.38 – 0.48) and 0.46 s (0.42 – 0.50) values. Similar data was observed during 1th repetition between C*t*: 0.66 (0.58 – 0.92) vs. 0.66 s (0.58 – 0.92) (p=0.826). Changes regarding height and power during 1 - 3th repetitions are illustrated in Table 3.

Table 3. Related *Samples Wilcoxon Signed Rank Test* results between T1 and T2

PROPOSED PARAMETERS				**STATISTICAL RESULTS**
STUDY PARAMETERS BETWEEN T1 – T2	**Moment**	**T1 Median value (min - max)**	**T2 Median value (min - max)**	***p***
T*f*, s	1th	0.43 (0.38–0.48)	0.43 (0.38-0.48)	1.000*
	2th	0.42 (0.40-0.46)	0.46 (0.42-0.50)	0.005**
	3th	0.43 (0.38–0.51)	0.47 (0.41-0.53)	0.005**
C*t*, s	1th	0.66 (0.58-0.92)	0.69 (0.54-0.80)	0.826*
	2th	0.63 (0.55–0.94)	0.65 (0.50-0.78)	0.196*
	3th	0.57 (0.52-0.88)	0.64 (0.46-0.71)	0.637*
Height, cm	1th	22.02 (16.5-23.8)	23.77 (18.9-29.2)	0.002**
	2th	22.28 (20.3–26.8)	26.92 (21.7-30.7)	0.008**
	3th	24.41 (18.5-32.1)	28.81 (21.2-35.6)	0.004**

PROPOSED PARAMETERS				STATISTICAL RESULTS
STUDY PARAMETERS BETWEEN T1 – T2	**Moment**	**T1 Median value (min - max)**	**T2 Median value (min - max)**	***p***
Power, watt/ kg	1th	17 (13.4-18.2)	17.8 (15.1-22.3)	0.002**
	2th	17.4 (14.7–20.5)	19.29 (15.6-24.1)	0.009**
	3th	17.97 (15.5–24.4)	20.66 (16.2-28)	0.009**
Lactate (mmol/l)	*Pre Effort*	1.2 (1.1 – 1.5)	1.2 (0.8 – 1.5)	0.298*
	Post Effort	12.1 (8.4 – 12.8)	12.9 (9.4 – 14.5)	0.028**

***p < 0.01; *p > 0.05*

5. Discussion and Conclusion

Performance during 30 seconds SJT was studied through Lactate accumulation and Power Ratio improvements over an anaerobic effort, conducted by trained participants. Through the applied methodology our objective was to minimize training influence over final results, similar to other research papers. (7)

Based on our outcomes, power ratio changed, unlike other outcomes which failed to identify individual performance improvements. (15) L-Carnitine is suggested to alter muscle metabolism during steady state exercise. (16) Various papers are published regarding endurance training while lack of specific data is related to high intensity and intermittent effort, as a result of one single L-Carnitine dose administration. (17,18) Topics related to L-Carnitine supplementation are covered through papers which confirm recovery improvements, cellular damage prevention and hypoxic stress regulation over chronic ingestion (3,12,19,20), as opposite to our findings.

L-Carnitine influence over high intensity Anaerobic Power Ratio and Blood Lactate Accumulation

Overall use of L-Carnitine ingestion over both low and high intensity effort is related to insulin response, (21) whose effect has not been studied in the current work. Over nine weeks of L-Carnitine supplementation changes were seen in Lactate response, oxidative stress and peak power during resistance training, unlike our findings over acute single dose intake. (22) Based on our outcomes, improved fat oxidation through increased glycogen storage which inhibits carbohydrate oxidation (5,6,23) can result due to chronic ingestion but unlikely due to acute L-Carnitine supplementation, as in our case. From a physiological standpoint, higher pyruvate dehydrogenase complex, due to maintain Coenzyme A (CoA), can improve Lactate accumulation and delay fatigue. (3) No similar findings were identified in our paper based on T2 response as against T1 30 seconds SJT.

Lactate accumulation during T2 30 seconds SJT was increased due to a reduced hydrogen ion buffering process, due to Lactic Acid breakdown. However, Leelarungrayub et al. published a paper which suggested that one single dose can improve blood Lactate response and pyruvate dehydrogenase activity, along with VO_{2peak} value, in comparison to our outcomes. (11) Yet, several papers failed to identify a drop in Lactate level despite changes in plasma and muscle Carnitine. (12)

Improved performances are related to Lactate accumulation and tolerance during effort. Based on Lactate increase in T2, one single dose administration will not induce L-Carnitine mediated improvements over pyruvate dehydrogenase flux and activation. Through Burrus M. et al. research, L-Carnitine supplementation, during lower Lactate levels, failed to influence RER value. (10) As we can see that the main effect is not entirely related to fatty acids oxidation, but to muscle Carnitine content. (24) This practical element can be further on confirmed through our nonspecific, anaerobic, testing protocol, which insures an anaerobic energy pathway, limiting fat metabolism while increasing Lactate accumulation, as against Majid Kashef et al. which reported a lower Lactate accumulation. (25)

We consider that the subjects' number and the lack of muscle and plasma carnitine measurement, represent study limitations. However, our study strength points were related to Lactate values, which were higher in T2 as against T1, despite performance improvement. Yet, pre-test training volume and intensity along with food intake, supplementation and recovery phase can influence the final result. Through the current study methodology, all influencing factors were standardized over T1 and T2 testing, as against other papers which studied chronic L-Carnitine supplementation. (25)

In future perspectives, the main outcomes, using a similar hypothesis will be included in a control and placebo double blind study, following several methodology changes: larger study group (1), more dynamic study group with participants from several sports fields (2), muscle and plasma Carnitine evaluation (3).

Conclusions

After one single L-Carnitine dose we obtained an improved power ratio and jump height during 30 seconds Squad Jump Test next to an increased Lactate accumulation. During the second test Lactate levels was higher unlike the first test, while an improved performance was seen during the second as against the first test. Through the current results, we conclude that an improved performance can be unlikely due to L-Carnitine, as seen through Lactate accumulation. Further on, we must take into account a possible effect over Lactate tolerance which might favoured improved performance over T2 unlike T1. Many other factors must be taken into account, including the placebo effect.

Acknowledgments

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Modern Economic Research of Subjects of Investment and Construction Complex

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Abstract

Investment and construction complex (ISC) is a system that is influenced by not only technological, but also organizational, marketing, process innovations.

The question of the subjects of the investment and construction complex is relevant, since it is the participants of the ISC who make decisions that affect the operation of the complex from the inside and, thus, they are one of the driving forces that change the industry.

In addition, human capital and organizational efficiency of the complex are the foundation of the transition to the knowledge economy in the construction industry. In the new economy also the role of determining the future, namely the implementation of innovative goals and objectives are put on the shoulders of participants of the investment and construction complex [8].

As a result of the study, the actual database of the subjects of the complex was supplemented by detailed scientific-theoretical, statistical and legal research. For the first time, subjects of ISC were considered at the junction of legal and statistical approaches. The positive dynamics in the legislative sphere regarding the investment and construction industry was noted. The institutional organizational innovation (consultant), aimed at improving the efficiency of the complex was revealed.

Key words: subjects of investment and construction complex, human resources, innovations, construction, consultant.

Introduction

The important role of the investment and construction environment stands out not only for technological aspects, but also for human capital factors. It is human labor at various levels of complexity that, with the quality interaction of groups of people bring profit to organizations, complexes, and the economy as a whole.

In the context of the transition to an information economy of knowledge, the role of human management and organization of activities becomes especially important: a faster response to changes is necessary. Qualified assessment of the possibility of introducing an effective innovation component due to market research, accumulated experience, technical and economic assessment of innovation implementation, its control at all stages of the investment and construction cycle, subject to certain periods and limited resources.

Scientists engaged in research of ISC are Asaul A.N., Dontsova L.V., Vakhmistrov A.I., Kazakov Yu.N., Ivanov S.N. and etc. The studies devoted to construction innovations are held by Alekseeva A.A., Asaul A.N., Zavarin D.A. et al., Fedoseev I.V. and etc.

The importance of labor and intellectual resources is revealed in the works of Armstrong M., Kapelyushnikova RI, Karlika AE, Platonov V.V. and etc.

Actualization of existing subjects of ISC will allow to organize effective management structures, due to which a possible way to solve the problem of insufficient development of innovations in the complex will be outlined, as well as the efficiency of the investment and construction complex will increase. To understand the laws of innovation and industrial development, the analysis of internal factors is crucial, so the author seems to be expedient to clear up the labor resources of the construction industry.

On the part of the labor resources indicator, there is a negative trend in the number of workers involved in the construction industry. There is also another significant drawback: the low level of staff skills, both from the workforce and from managerial positions.

The author proposes to solve the marked negative tendencies with the help of the organization of human resources. To this end, an academic analysis will be carried out in the work, which will make it possible to identify the subjects and institutions operating in the investment and construction complex and to determine their relations from the point of view of the institutional approach.
The author will analyze the regulatory legal acts, statistical data, as well as authoritative scientific sources. Thus, the analysis will be conducted using three approaches: legal, statistical and scientific-theoretical. For academic research and identification of subjects and institutions operating in the investment and construction complex and determining their relationship from the point of view of the institutional approach, the author proposes to analyze legal acts, statistical data, as well as authoritative scientific sources. Thus, the analysis will be conducted using three approaches: legal, statistical and scientific-theoretical.
1. Legal approach
For the period, 2013–2018 the state authorities carried out a thorough work on amending and supplementing the existing documents regulating investment and construction activities. The author singled out the most significant normative legal acts that concerned the construction industry [1–17].
On the basis of these documents, the author identified the subjects of the investment and construction complex, presented in Table. one.

Table 1. Subjects of investment and construction relations, according to the current regulatory legal acts

№	Subjects	Regulations according to the list above
1	Customer, customer-developer, developer, technical customer	1,3,4,5,6,7,11,12,15,16,17
2	General contractor, contractor(designer prospector), subcontractor, organization-contractor	1,4,5,12,13,16,17
3	Government of the Russian Federation/ state authorities of the subjects of the Russian Federation/ local governments/ executive authority/ organization of architecture and urban planning/ certification organization	1,3,4,6,10
4	Self-regulating organizations of cadastral engineers and their national associations/ self-regulating organization	8,9,14
5	Engineer, engineering organization, person engaged in the preparation of project documentation/ organization, engaged in the preparation of project documentation/ design organizations/architect	1,3,4,10,11,12,16
6	Investors, potential investors	13
7	Consumers of goods, works, services/ Consumers of produced goods works services/ users of investment activity objects/ users of capital investment objects	5,9,14,16,17
8	Landowners, tenants of land plots, owners of servitude, right holders of land plots, owners of land plots, land users	2
9	Work performers, suppliers, legal entities (banking, intermediary organizations, investment exchanges), other participants of the investment process/ construction organizations/other business or professional subjects/ credit organizations and financial organizations/ municipal complex organizations/agent/ person performing engineering surveys/ people involved in the design process, producing, building, installing, adjustment, operation, storage, carriage, implementation, utilization, disposal/ assistants consultants and technicians/ developer/ religious organization	3,4,6,9,10,11,13,14,16,17

A source. Compiled by the author

This table quite fully reflects the participants in the investment and construction industry. The author conducted a comparative analysis of regulatory documentation and came to the following conclusions.
The most significant participants are, as a rule, the user, the developer, the customer, the contractor, the person performing engineering surveys, the person preparing the project documentation, the surveyor, the architect, the designer, the investor, the participants in shared construction, self-regulating organizations [19, 21–24] .
However, the current legislative framework also identifies the following ISC participants:
credit organizations and financial organizations;

• developer;
• agent;
• persons involved in the design process (including surveys), production, construction, installation, commissioning, operation, storage, transportation, sale, disposal, burial;
• tenant of the property;
• assistants, consultants and technical staff;
• religious organization;
• organizations of the communal complex;
• body of architecture and urban planning;
• public authorities of the Russian Federation, public authorities of the constituent entities of the Russian Federation, local governments;
• consumers;
• owners, tenants, owners of land plots;
• other subjects of entrepreneurial or professional activity.

An unconditional and still unsolved problem is the lack of clear boundaries of terms and definitions. The majority of legislative acts are defined by the terms "and other", "and other" subjects of professional, construction, investment activity.

Thus, a unified approach to the definition of economic relations between the subjects of the investment and construction complex is absent. Because of this problem, end users of real estate objects often suffer.

The problem of definitions is significant, the formation of the investment and construction complex as a single system in the scientific and practical aspect is ahead of the description of interactions and relationships in legislation. Part of this problem can be explained by the contractual interaction of the participants of the complex, which gives, on the one hand, greater freedom for entities engaged in the investment and construction sector, on the other hand, it's difficult to encounter problems in the absence of a detailed description or no description of the mechanism for resolving the issue in the contract.

However, it is impossible not to note the positive dynamics in the legislative sphere - virtually all participants in the investment and construction activities, with the exception of the developer, are taken into account. This subject plays an important role in the construction and development of new areas. Often, this feature is included in the contract of the developer.

Neoinstitutionalism allows us to conduct a study on the grouping of the subjects of the complex within the framework of both formal (quantitative values) and informal impact on the subjects of relations in the investment and construction sphere.

It is difficult for the author to allocate revenue in accordance with the new structure of the All-Russian Classification of Economic Activities (RNCE (2)) due to the lack of statistical data, however, an analysis at the junction of the legal and statistical approach is possible and appropriate.

Thus, the author has compiled a table and analyzed the subjects of the investment and construction complex within the framework of the RNCEsystem (2) and legislative acts. The system of statistical classification of RNCE (2) is a tool with which today it is possible to describe both the construction industry and the areas interacting with it, since according to the RNCE (2): "if this activity is carried out for the operation of the constructed facilities, then all types of work relate to construction "[9].

The investment and construction complex is allocated not only through activity type F (construction), but also through other activities, such as mining (B), manufacturing (C), provision of electrical energy, gas and steam; air conditioning (D), water supply; water disposal, organization of waste collection and disposal, pollution control activities (E), construction (F), transportation and storage (H), information and communication activities (J), financial and insurance activities (K), operations with real estate (L), professional, scientific and technical activities (M).

The author, on the basis of the analysis, also highlights a new subject of activity, whose institute is only emerging in the investment and construction complex of Russia - a consultant. The activity on rendering consulting services, according to RNCE (2), is connected in a greater degree with design and architectural developments. (Pic 1)

Unit	Type of activity on RNCE	Allocated subjects of activity (according to Table 1)
B	Extraction of minerals	Suppliers: people, involved in the design process (including surveys), production, construction, installation, commissioning, operation, storage, transportation, sale, utilization, disposal
C	Manufacturing industries	Suppliers: people, involved in the design process (including surveys), production, construction, installation, commissioning, operation, storage, transportation, sale, utilization, disposal, organizations, responsible for preparing documents of the project; person, preparing documents of the project; suppliers, developers, person, who provides engineering survey, contractors
D	Provision of electricity, gas and steam, air-comditioning	Utility complex organizations, suppliers
F	Building	technical customer, developer, general contractor, organization contractor, subcontractor, self-regulating organizations, customers
H	Transportation and storage	People, taking part in the design process (including surveys) production, construction, installation, commissioning, operation, storage, transportation, sale, utilization, disposal, contractors, intermediary organizations
J	Information and communication activities	designers, consultants, technical workers, developers, intermediary organizations
K	Information and communication activities	real estate agent, investors, potential investors, credit and financial organizations, legal entities (banking, insurance and intermediary organizations, investment exchanges) and other participants of the investment process
L	Financial and insurance activities	Agent, property renter, credit organizations and financial organizations, owner of the property
M	Professional, scientific and technical activities	Other subjects of the entrepreneurial and professional activities, consultants, architectures, engineers (organization), consultants and technical workers, people or organizations, implementing engineering surveys

Pic. 1. Subjects of investment and construction relations, according to the statistical and legislative approach (compiled by the author)

However, for an investment and construction complex, the formation of this institution is of great importance from a transformational point of view - the emergence of such a subject as a consultant is an organizational innovation in the ISC.

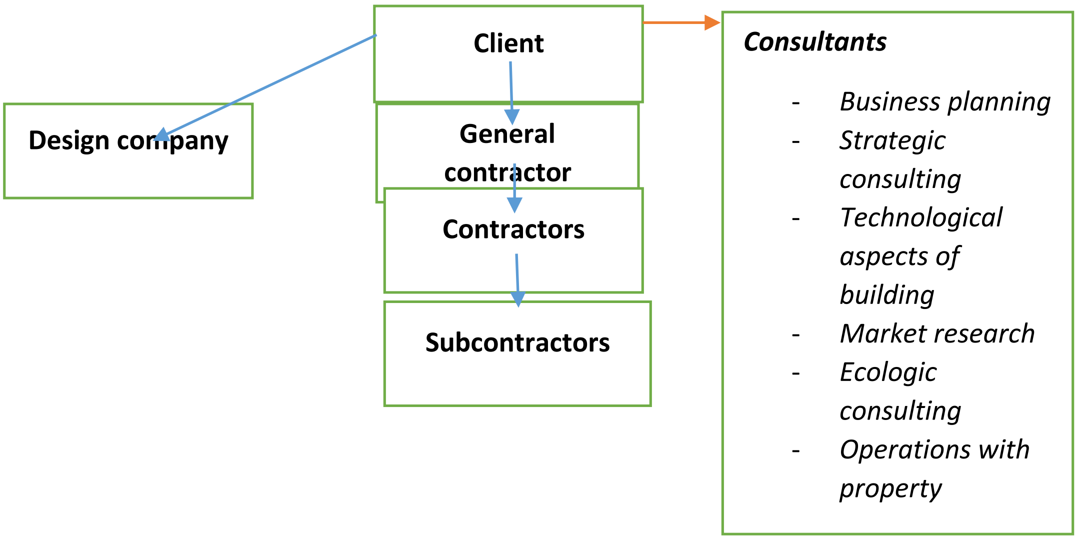
The market for consulting services in Russia, according to experts, is still stagnant. In the near future, the transition to growth can be realized at the expense of demand from customers from the agroindustrial complex, industrial and residential construction, who are encouraged to contact technical auditors and consultants by legislation "[3].

The major companies in the field of construction consulting are "Knight Frank", "Intertrest", "Olsa", "Smart-I", "2K", "Berkshire Technology", "Center for Independent Examination of Property", etc. [4] They carry out their activities in various areas in the field of construction, including assistance in strategic project planning, development of investment projects, technical aspects, design, green building, legal support in the real estate market and other types of consulting services.

In general, the turnover of consulting companies that for the period 2015–2016 provided reporting information regarding the construction complex is amounted to a considerable number, and was equal, respectively, 653, 9 million rubles and 1,132 million rubles. [4].

Then an expert survey was conducted among consulting construction companies, as a result of which it turned out that the services of consultants in the investment and construction complex of Russia are a popular and promising area, since 70% of companies believe that construction consulting services are in demand (7 out of 10 surveyed firms) 20% are in demand, 10% are not in demand.

In Figure 2, the author schematically depicts the organizational structure that reflects organizational innovation — the project consultant in the ISC. It can be seen that from the archaic form of interaction "customer-contractor" it is possible to degenerate into the form of "consultant-customer-contractor".



Pic. 2. Scheme for the use of consultants in various areas of activities in ISC as organizational innovation

The scheme proposed by the author makes it possible to optimize the activities of ISC subjects in conditions of limited labor resources and insufficient qualifications due to the introduction of consultants and the integration of their knowledge in the investment and construction sphere.

These intangible services (consultations, advice) help to make decisions at any project stage, while the awareness of specialist consultants allows not only to solve current problems, but also to introduce innovative products, materials, technologies into the construction cycle, thereby ensuring the development of the ISC from the point of view product and process innovations..

These innovations provide an increase in economic efficiency through reduced overhead costs, savings on transaction costs [7], i.e. bring economically positive momentum. In addition, the effectiveness of such an organization was proved by the data of the Doing Business magazine [12], which show that the involvement of private third parties (consultants) in the construction industry is associated with the best quality of construction, which was measured by the index "quality control of construction".

In fact, 93 of the 190 studied economies use some form of private third-party services in construction management. In high-yielding and upper-middle-income economies, 66.1% and 56.7%, respectively, use the services of consultants in managing construction activities, while only 37.7% of those with lower incomes use third-party services. , and only 25% of low-income economies use consulting services in the construction industry.

Based on the study, the author highlighted the following theses regarding the subjects of the investment and construction complex at the current economic stage:

First, they marked a tendency to reduce the number of participants in the investment and construction complex.

Secondly, despite the vagueness of the definitions of the subjects of the complex, the author notes a positive trend in the field of legislation - virtually all participants in the investment and construction activities, with the exception of the developer, are taken into account.

Thirdly, a new business entity was identified as a consultant. The promise of this direction in the construction industry is proved by the opinion of experts and a survey among the respondent companies involved in consulting conducted by the author together with the supervisor.

Fourthly, organizational innovation in ISC was proposed by consulting firms, aimed at improving the efficiency of the complex by optimizing the activities of ISC participants.

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Perfection of the form and Technology and Development of Reinforced Concrete Piles for Low-Rise Construction

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Abstract

This article presents the results of a computational and analytical study of the carrying capacity of various types of short piles used in low-rise construction. The relevance of the topic of work is determined by the current situation in the industry of individual housing. The most common pile foundations in this direction of construction are considered. Two alternative designs for the construction and technology of piling are proposed. A comparative analysis of the carrying capacity of the piles proposed by the authors with the most common variants was made.

The materials of the publication reflect the effectiveness of the proposed designs and the continuation of research work in this direction.

Keywords: low-rise construction, short pile, effective foundation, pyramidal-prismatic pile, bored pile with broadening, comparative analysis.

Introduction

The development of low-rise construction in our country in recent years has sharply gained momentum. The district building of three-five-storied apartment buildings is being carried out, cottage villages are being built up, private house-building causes great interest among urban residents [1].

In this connection, the task of increasing the productivity of work in this direction becomes urgent. One of the ways to increase productivity in low-rise construction, according to the authors, would be the introduction of new efficient foundation structures. So, if the cost of building a zero cycle for a multi-storey building, depending on the complexity of geological conditions, may be 5–20%, then for low-rise construction this figure reaches 15–30% [2].

In their desire to save at this stage, developers are increasingly turning to pile foundations. Different types of piles are used both in their design and in the method of the device. Nowadays, in the practice of housing construction, short, 3-4 m long, screw piles, bored piles, driven piles - prismatic and less often pyramidal - have found wide application.

In this article, the authors proposed options for improving the construction of piles, as well as a comparative assessment of the bearing capacity of short piles of various types in three types of soils. It should be noted that each type of piles has certain advantages and disadvantages. For example, the foundation of screw piles due to its low cost and ease of manufacture is widely used in the private construction of light wood houses (logs, timber, sip panels, frame houses, etc.).

Due to the fact that houses of this type often have low spatial rigidity, the transfer of horizontal loads to the foundation takes place. Due to the undeveloped lateral surface of the screw piles, which are also in the soil loosened by blades, horizontal slips appear at the foundation. Even if there is a good binding of piles in houses built on the ground works of this type, it is uncomfortable to live, due to the appearance of mobility of the building structure. Also worth noting is their low carrying capacity and susceptibility to corrosion [3].

In ramming piles, it is possible to note a low bearing capacity and the presence of loose soil residues in the well bottom, wet process, difficulty in monitoring the quality of the pile shaft, seasonal rise in price when the concrete is heated.

When applying prismatic driven piles, the disadvantages include loosening of the soil at the beginning of the dipping to a depth of one to two diameters around the perimeter of the pile, the formation of a gap clearance between the pile and the soil in the upper third when dipping.

The lack of pyramidal piles is that due to the inclination of the edges of the pile prone to pushing forces of frost heaving, swelling of soils [4]. In addition, there are difficulties mounting of the pyramidal pile to the driving unit.

The authors propose a number of ways to improve the shape and technology of the short piles. One of the most effective types of pile foundation construction for a private dwelling house is a bored pedestal pile.

In picture1 the sequence of the bored pile is shown.

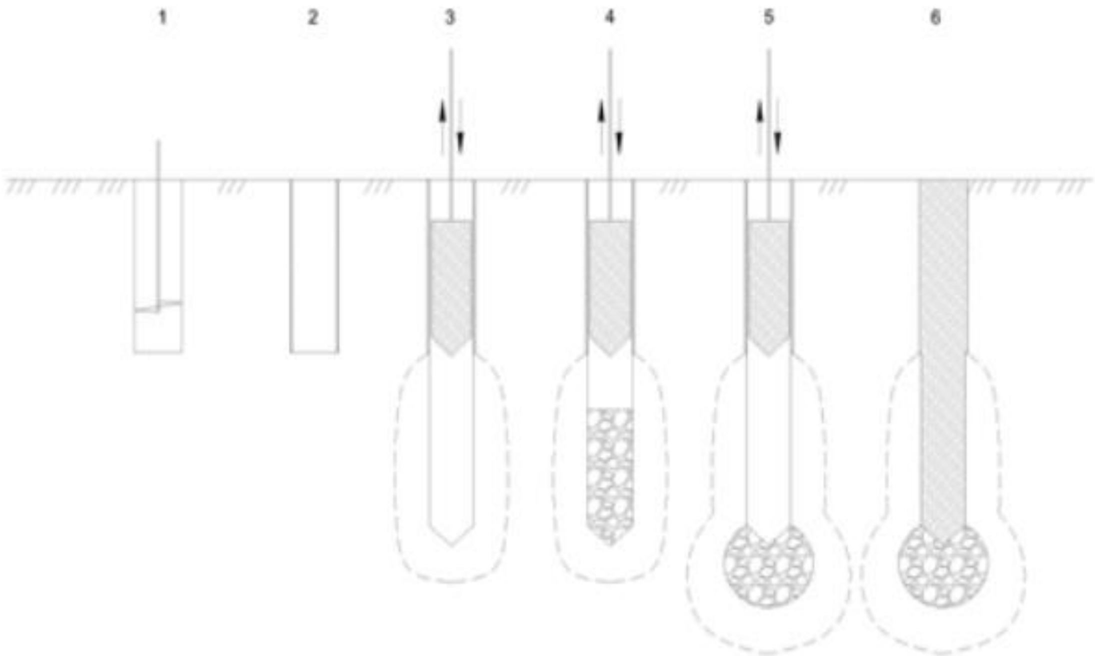


Fig. 1. Technological scheme
of bored piles with broadening:
1 - well drilling; 2 - installation of the casing;
3 - well punching to the depth of three-fold piles;
4, 5 - broadening by tamping coarse-grained soil or hard concrete mix; 6 – piles

The advantage of the proposed technology is as follows:

- as a result of holing, zones of compacted soil are formed with elevated values of strength and deformation characteristics;

-in the process of ramming of crushed stone or hard concrete mix, a broadening diameter of 1.5–2 times the diameter of the pile is formed;

- transfer of the load from the piles to the foundation, both on their base and on the lateral surface, occurs first to a more durable and then less durable soil material while simultaneously increasing the interaction area of the more durable material with the less durable [5];

- the use of casing eliminates the need for a device with a rail for a tamping beam.

The ratio of the diameters of the well, casing and tamping can be taken as 450: 425: 375 mm. The height of the tamper is selected for a given weight. The use of punching a well to a depth of more than three diameters brings the bearing capacity of a ramming pile to a driveline.

In the opinion of the authors, the next effective type of pile foundation construction in low-rise construction is the use of a driven pyramid-prismatic pile. The pile structure is a combination of a prismatic pile in the lower part and a pyramidal pile in the upper part.

The proposed design allows:

- to increase the bearing capacity of the pile due to the inclined edges and more developed lateral surface. The increase in bearing capacity of the pile with broadening in the upper part occurs as a result of soil compaction during its driving, and because of the specificity of the interaction between the pile and the soil under load, such piles constructions compact the soil within the compaction zone, which is especially effective in macro porous soils.

Thus, the bearing capacity of piles with broadening at the top largely depends on the characteristics of the compaction zone. The bearing capacity of such structures increases not only by increasing the area at the tip, but also by changing the working conditions of the soil along the side surface of the pile and the friction force, which is implemented to a greater extent [6].

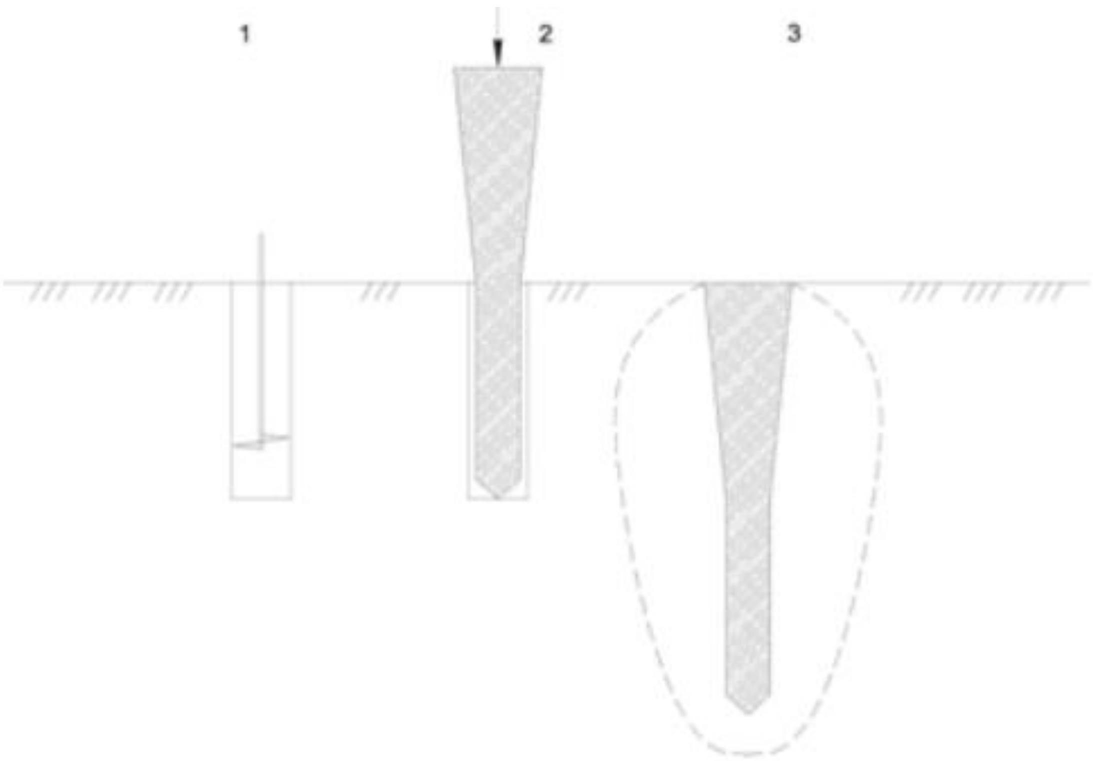
According to the data obtained by experimental and computational methods [7, 8], this kind of broadening gives an increase in the carrying capacity in 1.5–2 times, depending on the size of the head;

- to eliminate the possibility of piling the pile by the forces of frost heaving due to pinching of the prismatic part in the thawed soil, which makes it possible to apply this design above the depth of seasonal freezing of soils;

- to facilitate the process of dipping piles due to the fact that the pile is installed in a pre-drilled well and already from this position is clogged.

The offered technology will solve the problem of fixing the pyramidal part of the pile in a vertical position [9].

In pic. 2 the sequence of the construction of a pyramidal prismatic pile is shown.



Pic. 2. Technological scheme of the pyramidal-prismatic pile:
1 – drilling of a well to a depth corresponding to the length of the prismatic part of the pile;
2 - installation of the pile in the well;
3 - pile driving.

Below there is a comparative assessment of the various structures of piles in three soil conditions - semi-solid loam, refractory and soft-plastic consistencies.
The calculation of the bearing capacity of the piles on the ground, the amount of spent material is found. To determine the effectiveness of the type of foundation used, a comparison was made of such a parameter as the specific bearing capacity of the pile, calculated using the formula

Fspec. = Fd / V,

where Fspec- specific bearing capacity, kN / m3;
Fd - pile bearing capacity, kN;
V - pile volume, m3

The calculation of the bearing capacity of the piles is made using known formulas in accordance with the recommendations of design and construction specifications 24.13330.2011.
The "determination" of the carrying capacity of the ramming part was carried out according to the formula:

$$F_d = F_{dR} + F_{df1} + F_{df2},$$

where FdR is the bearing capacity of the base under the lower end of the pile, kN;
Fdf1 - soil bearing capacity along the side surface of the pile in the drilled area, kN;
Fdf2 is the bearing capacity of the soil along the lateral surface of the pile in the broken section, kN.
To calculate the carrying capacity of a pyramidal prismatic pile, the following formula is offered:

$$F_d = F_{dR} + F_{df1} + F_{df2},$$

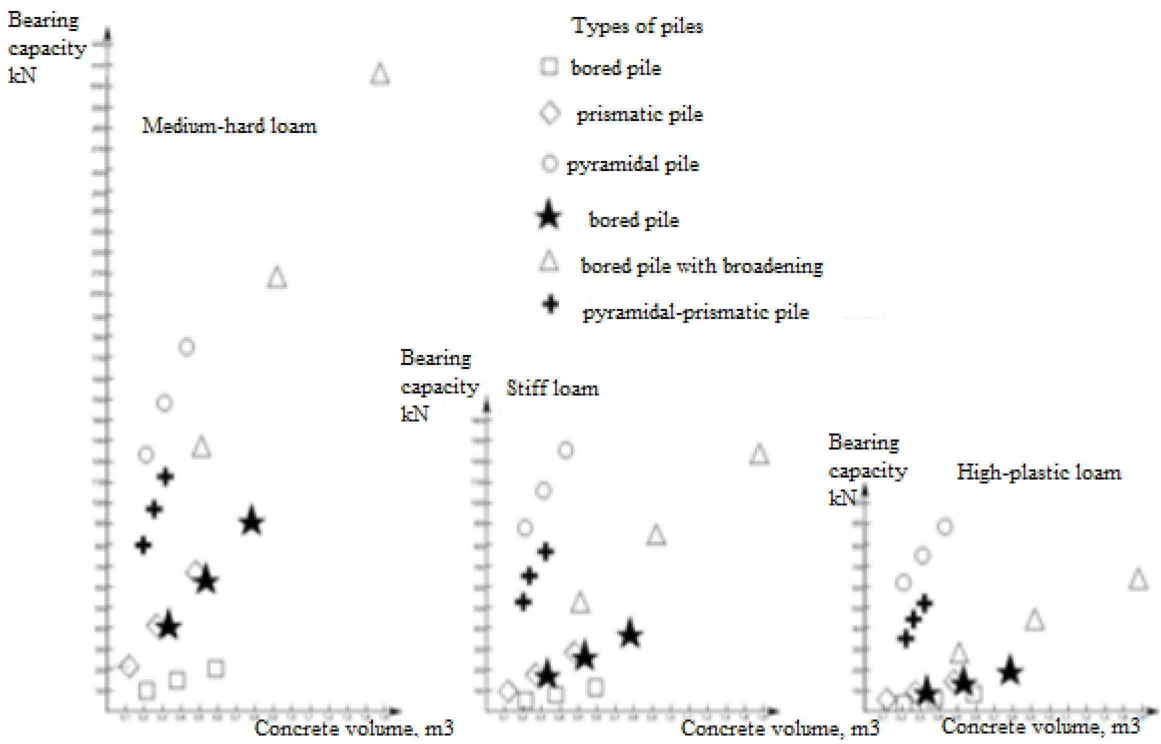
where FdR is the bearing capacity of the base under the lower end of the pile, kN;
Fdf1 - soil bearing capacity along the side surface of the pile in the prismatic area, kN;
Fdf2 is the bearing capacity of the soil along the side surface of the pile in the pyramidal section with a slope of the side faces ip> 0.025 g units, kN.
In table 1 the results of determining the bearing capacity of various types of short piles are presented, including those proposed by the authors. The table is compiled for three types of ground conditions.

Bored cast in situ pile	Rotary bored cast-in-place pile	Prismatic pile	Pyramidal pile	Raming pile	Ramming pile with broadening	Pyramidal-prismatic pile
1	2	3	4	5	6	7
Medium-hard loam, I_L=0,2 un.fr., c=16,7 kPa, φ=20 degree, E=17 MPa						
d=300 mm F_d=99 kN V=0,213 m^3 F_{spec}=465 kN/m^3	d_1=168 mm d_2=300 mm F_d=74 kN	b=200 mm F_d=214 kN V=0,12 m^3 F_{spec}=1783 kN/m^3	b_1/b_2=400/100 mm F_d=1234 kN V=0,21 m^3 F_{spec}=5876 kN/m^3	d_1/d_2=400/350 mm F_d=406 kN V=0,33 m^3 F_{spec}=1230 kN/m^3	$d_1/d_2/d_3$=400/350/700 mm F_d=1258 kN V=0,51 m^3 F_{spec}=2467 kN/m^3	b_1/b_2=400/200 mm F_d=792 kN V=0,23 m^3 F_{spec}=3443 kN/m^3
d=400 mm F_d=148 kN V=0,378 m^3 F_{spec}=392 kN/m^3	d_1=168 mm d_2=400 mm F_d=96 kN	b=300 mm F_d=411 kN V=0,27 m^3 F_{spec}=1522 kN/m^3	b_1/b_2=500/100 mm F_d=1483 kN V=0,31 m^3 F_{spec}=4784 kN/m^3	d_1/d_2=500/450 mm F_d=626 kN V=0,533 m^3 F_{spec}=1174 kN/m^3	$d_1/d_2/d_3$=500/450/900 mm F_d=2069 kN V=0,92 m^3 F_{spec}=2248 kN/m^3	b_1/b_2=500/200 mm F_d=965 kN V=0,26 m^3 F_{spec}=3784 kN/m^3
d=500 mm F_d=205 kN V=0,588 m^3 F_{spec}=349 kN/m^3	d_1=168 mm d_2=500 mm F_d=124 kN	b=400 mm F_d=668 kN V=0,48 m^3 F_{spec}=1392 kN/m^3	b_1/b_2=600/100 mm F_d=1748 kN V=0,43 m^3 F_{spec}=4065 kN/m^3	d_1/d_2=600/550 mm F_d=908 kN V=0,780 m^3 F_{spec}=1505 kN/m^3	$d_1/d_2/d_3$=600/550/1100 mm F_d=3047 kN V=1,48 m^3 F_{spec}=2058 kN/m^3	b_1/b_2=600/200 mm F_d=1121 kN V=0,32 m^3 F_{spec}=3503 kN/m^3
Stiff loam, I_L=0,4 un.fr., c=15,3 kPa, φ=18 degree, E=14 MPa						
d=300 mm F_d=52 kN V=0,213 m^3 F_{spec}=244 kN/m^3	d_1=168 mm d_2=300 mm F_d=44 kN	b=200 mm F_d=92 kN V=0,12 m^3 F_{spec}=767 kN/m^3	b_1/b_2=400/100 mm F_d=880 kN V=0,21 m^3 F_{spec}=4190 kN/m^3	d_1/d_2=400/350 mm F_d=169 kN V=0,33 m^3 F_{spec}=512 kN/m^3	$d_1/d_2/d_3$=400/350 mm F_d=510 kN V=0,51 m^3 F_{spec}=1000 kN/m^3	b_1/b_2=400/200 mm F_d=520 kN V=0,23 m^3 F_{spec}=2261 kN/m^3
d=400 mm F_d=79 kN V=0, 378 m^3 F_{spec}=209 kN/m^3	d_1=168 mm d_2=400 mm F_d=62 kN	b=300 mm F_d=175 kN V=0,27 m^3 F_{spec}=648 kN/m^3	b_1/b_2=500/100 mm F_d=1061 kN V=0,31 m^3 F_{spec}=3423 kN/m^3	d_1/d_2=500/450 mm F_d=259 kN V=0,533 m^3 F_{spec}=486 kN/m^3	$d_1/d_2/d_3$=500/450 mm F_d=836 kN V=0,92 m^3 F_{spec}=909 kN/m^3	b_1/b_2=500/200 mm F_d=647 kN V=0,26 m^3 F_{spec}=2488 kN/m^3

Table 1 - Comparative characteristics of piles of various designs

1	2	3	4	5	6	7
d=500 mm F_d=112 kN V=0,588 m^3 F_{spec}=191 kN/m^{-3}	d_1=168 mm d_2=500 mm F_d=88 kN	b=400 mm F_d=281kN V=0,48 m^3 F_{spec}=585 kN/m^3	b_1/b_2=600/100 mm F_d=1255 kN V=0,43 m^3 F_{spec}=2919 kN/m^3	d_1/d_2= =600/550 mm F_d=366 kN V=0,780 m^3 F_{spec}=469 kN/m^3	$d_1/d_2/d_3$= =600/550 mm F_d=1222 kN V=1,48 m^3 F_{spec}=826 kN/m^3	b_1/b_2= =600/200 mm F_d=760 kN V= 0,32 m^3 F_{spec}=2376 kN/m^3
High-plastic loam, I_L=0,6 un.fr., c=13,3 kPa, φ=16 degree, E=12 MPa						
d=300 mm F_d= 38 kN V=0,213 m^3 F_{spec}=178 kN/m^{-3}	d_1=168 mm d_2=300 mm F_d=30 kN	b=200 mm F_d=49 kN V=0,12 m^3 F_{spec}=408 kN/m^3	b_1/b_2=400/100 mm F_d=619 kN V=0,21 m^3 F_{spec}=2948 kN/m^3	d_1/d_2= =400/350 mm F_d=89 kN V=0,33 m^3 F_{spec}=270 kN/m^3	$d_1/d_2/d_3$= =400/350 mm F_d=260 kN V= 0,51 m^3 F_{spec}=510 kN/m^3	b_1/b_2= =400/200 mm F_d=349 kN V=0,23 m^3 F_{spec}=1517 kN/m^3
d=400 mm F_d=58 kN V=0,378 m^3 F_{spec}=153 kN/m^3	d_1=168 mm d_2=400 mm F_d=46 kN	b=300 mm F_d=90 kN V=0,27 m^3 F_{spec}=333 kN/m^3	b_1/b_2=500/100 mm F_d=748 kN V=0,31 m^3 F_{spec}=2413 kN/m^{-3}	d_1/d_2= =500/450 mm F_d=135 kN V=0,533 m^3 F_{spec}=253 kN/m^3	$d_1/d_2/d_3$= =500/450 mm F_d=423 kN V=0,92 m^3 F_{spec}=460 kN/m^3	b_1/b_2= =500/200 mm F_d=440 kN V=0,26 m^3 F_{spec}=1692 kN/m^3
d=500 mm F_d=83 kN V=0,588 m^3 F_{spec}=141 kN/m^3	d_1=168 mm d_2=500 mm F_d=64 kN	b=400 mm F_d=145 kN V=0,48 m^3 F_{spec}=302 kN/m^3	b_1/b_2=600/100 mm F_d=887 kN V=0,43 m^3 F_{spec}=2063 kN/m^3	d_1/d_2= =600/550 mm F_d=190 kN V=0,780 m^3 F_{spec}=243 kN/m^3	$d_1/d_2/d_3$= =600/550 mm F_d=619 kN V=1,48 m^3 F_{spec}=418 kN/m^3	b_1/b_2= =600/200 mm F_d=522 kN V=0,32 m^3 F_{spec}=1631 kN/m^3

To visualize a comparative assessment of the considered structures of the foundations, the dependencies of the bearing capacity of piles on the consumption of concrete were constructed. As can be seen from the graphs (Fig. 3), the most effective in terms of the ratio "concrete consumption - bearing capacity" is a pyramidal pile, followed by pyramidal-prismatic and ramming pile with broadening for all types of soil.



Pic. 3. Graphs of the bearing capacity of piles from the consumption of concrete

On the basis of the results of the comparison, and also taking into account the fact that the use of pyramidal piles is limited by the depth of seasonal freezing, it can be concluded that the proposed designs of the pile foundations are highly competitive.

The proposed types of foundations will significantly reduce both labor and material costs in individual housing construction due to the relative simplicity of the construction, less consumption of materials and, at the same time, increased bearing capacity compared to other types of pile foundations.

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The Use of 3d - Printing in Construction

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Abstract

In this article the effectiveness of a new technology - a concrete 3D printer is considered. The creators of this equipment claim that it can save a significant amount of money when used for building construction. This study examines how a 3D printer can save the time that is necessary for building a framework, and how this may affect the overall design cost.

In addition, in the article, you can see the results of the calculation of labor and material costs for two types of houses: printed on a 3D printer and made of blocks of cellular concrete. Moreover, the percentage of profit, based on the potential time, the savings and the total cost of a one-story building were calculated.

The study concluded that 3D printers would be beneficial for construction companies engaged in large-scale low-rise construction.

Keywords: building structures, 3D printing in construction, section, low-rise construction, fiberglass, composition, and reinforcement.

Introduction

Currently, construction is the only fully non-automated industry. Human involvement is quite large at various stages of the construction process, resulting in reduced yields, increased error probability, work costs, construction project costs and risks. 3D printing is one of the most advanced and promising technologies to date, which recently began to be used for printing building structures, apartments and houses.

The relevance of this study lies in the fact that the use of this technology will allow optimizing high work processes, reducing construction costs and risks associated with industrial injuries.

The use of 3D printers in the construction process is relatively new, and is considered in the article written by N.S. Mustafin, E. A. Sorokina, A. V. Ivasyuta, K. W. Jumambetskov [1-4].

The main advantages are the reducing the duration of construction and increasing the level of work optimization. On the other hand, the impossibility of using vertical and full reinforcing bars can be considered as a disadvantage, since it leads to decreasing in the strength of such structures. 3D printers require special concrete mix [6], either for layering; development of regulatory documentation and solving problems with reinforcement structures [7, 8].

Russian engineer Andrei Rudenko claims that in terms of strength and quality, printed apartments are not inferior to monolithic structures. In cold climates, hollow walls can be used as a fixed formwork for foam concrete with enhanced thermal insulation properties [9].

Pic. 1. 3D Printed Villa made by the company Sanghai WinSun [11]

A few years ago, 3D printing began to be used by large companies, such as Shanghai WinSun [12], mainly for low-rise residential buildings. They were the first to build a 5-storey residential block and a country villa using this technology (Pic. 1).
According to company representatives, during the experiment the savings achieved amount of about 60% of building materials and about 30% of the time required for the construction of such an object, using traditional methods.
In addition, the construction crew was reduced five times, which means saving and reducing the risk of industrial injuries. The material used was a mixture consisting of cement, fiberglass reinforced fiberglass, reinforced plastic, sand and a special hardener. The walls of such houses are almost hollow, and the strength and stability of the structure is ensured by the zigzag supply of the mixture inside such walls [13].

Pic. 2. Apis-Cor 3D building printer (2016) [15]

The modern market of construction machinery and equipment has a large variety of construction printing equipment that allows you to create low-rise buildings of various configurations [14].
In a short period of time, 3D printer designs have evolved from large massive designs [14], to the newest compact model that allows the construction process inside the building. In 2016, the Russian company Apis-Cor introduced such a printer (Pic. 2).

Its dimensions are as follows: 1.6 meters in diameter, 1.5 meters in height, with a boom reach of 4-8.5 meters and a weight of 2.5 tons. This printer works by twisting around its axis and building structures up to 132 m2. The operation speed allows printing up of a 100-m2 house for 24 hours.

The developers of the company also created their own fiber-reinforced concrete, and received the appropriate quality certificates, according to which it corresponds to the strength of ordinary concrete with a B20 mark and a water resistance of W6 [16].

Concrete with such technical characteristics is superior to previously used analogues with a lower strength of 1.6 MPa [5], which makes it possible to use it in construction without reducing the quality. The use of fiber-reinforced concrete as a printing material, reinforced with steel or fiberglass, helps to partially solve the problem of lack of reinforcement and protect the building from moisture.

There is a possibility of horizontal reinforcement laying of reinforcement or flat ARMO frameworks between product layers during printing [7]. In Russia, the development of new materials requires thorough and long-term testing, which is accompanied by long-term certification and research processes.

This requires not only time, but also very significant funds [17]. Studies in the relevant literature have shown that 3D printing of buildings is especially effective in low-rise buildings. In this regard, we compare two methods of low-rise construction: a house that was made of aerated concrete blocks and one that was printed with the help of a 3D printer.

The purpose of the study is to analyze the effectiveness of the implementation of 3D printing in construction, its impact on the cost and time of construction. For this it is necessary to achieve several goals:

1) to study possible applications in construction and learn about the necessary machines and materials
2) to study the existing technologies of analog construction and identify the most used
3) to conduct a comparative analysis of the use of 3D printing and the most common building technologies using an example of a building model with the same planning solution in terms of time and cost
4) to conclude how the introduction of 3D printing helps to optimize the construction process.

The most common materials in low-rise construction are wood, brick, reinforced concrete and aerated concrete, concrete block. The duration of the construction of buildings made of brick and monolithic reinforced concrete is longer than that of logs and aerated concrete. Houses made of logs are built much faster, but at the same time much more expensive than those built from aerated concrete. In addition, aerated concrete has good thermal insulation properties and it is considered to be inexpensive in the market of building products [18].

The walls of such masonry are built with maximum speed and is widely used in low-rise construction. In this regard, for comparison, we chose just such a design of external walls.

When printing 3D-objects, the printer uses a layer-by-layer structure construction method. This construction work begins with the installation of the printer on the construction site, and then a solution is prepared from special concrete. It consists of cement, fiberglass or other materials, as well as a special thickener.

Next, the printer feeds the mix mortar from the nozzle and the necessary construction is carried out in layers. Thus, in the same way, the entire frame of the building is gradually built, starting with the foundation and ending with the walls. When printing an object, part of the job cannot be performed by the printer. The whole complex or cosmetic processes, such as laying communications, installing doors and windows, roofing, exterior and interior decoration are done manually. Despite this, the group of workers can be reduced to 2-4 people [8].

To find out how the implementation of 3D printing is consistent, it is advisable to compare the time and money spent on construction using the most popular analog technology for the construction of a one-story house. To calculate the amount of work and materials, a one-story house was chosen with the following dimensions:10m x10m and an area was of about 100m2 (Pic.3).

A comparison of the structural elements: formwork, foundation, exterior walls, interior walls, installation of floors, ceilings and roofs was held. The costs for installing the communications and engineering systems are not taken into account.

It should be noted that a 3D printer can immediately print walls with corresponding holes for pipes and electrical wiring. The labor intensity and material intensity of earthwork operations were not taken into account, because this type of work is performed in the same way. To calculate the labor costs and construction time, we were guided by the state elementary estimates [9], average prices in the modern labor and materials market. Construction calculator was used to calculate the amount of material. The foundation in both cases is tape-shaped, is made the same, with the exception of formwork.

In the case of building a house using the traditional method of aerated concrete, when pouring the foundation, as a rule, removable wooden formwork is used, which workers build within a few days. The 3D printer makes it possible to create a permanent formwork with already laid reinforcing mesh in just 1 hour. This amount of concrete poured into the formwork is the same in both cases — 16.1 m3.

In the case of a gas concrete house, the walls are constructed from rectangular aerated concrete blocks with a density of D600. The height of the walls is 3m. After construction is completed, the enclosing walls are insulated with mineral wool 100 mm thick. Ceramic granite is used as a facing material. The blocks are connected to each other using an adhesive mortar mix.

Pic. 3. Layout of the house

The floor is made of wood. The ground is leveled, the sand is compacted, then the lags are installed, which are supported by the foundation, the panels are installed on top of the log. After that, waterproofing and floor insulation is completed.

Attic overlap is made of 50x200mm glued timber with a 300mm pitch; thermal insulation and sound insulation are completed after that. The roof is duo-pitch with a slope of 15 degrees, the roof is made using metal tile.

Now let's take a closer look at how the design is performed using a 3D printer. Printing of the walls of the house is made layer by layer. Each layer is printed first along the contour, and then a zigzag lacing is printed in the cavity of the bearing walls for greater strength and stability.

Through every 10 -16 layers, the worker places the longitudinal reinforcement. First, printing of bearing walls is held, then installation of prefabricated floor slab structures is done, and the last stage is printing. The required volume of fiber-reinforced concrete is being calculated, such things as the house plan, wall thickness, hole dimensions and layer thickness are taken into account by printer diffusers. During printing of transverse reinforcement of d = 10 mm, 50 cm intervals are set around the perimeter every 40 cm height.
From the point of labor costs for printing walls and foundation formwork, only 2 specialists are required: one is for a 3D printer driver and one is as an assistant. Printing bearing walls are produced during one work shift. During the next shift, the installation of the wooden floor is completed. During the third shift, the sections are printed and the house is finished.

When using a 3D printer, reinforcement during the foundation process is simpler, since it can be put lengthwise: a reinforcing mesh, without tying. This allows you to reduce the time to establish a complete framework and the corresponding labor costs. In the case of building a house in the usual way the use of fixed foundation formwork is allowed. As for this house, it will cost at least 27 thousand rubles.
However, when it comes to erecting the entire cottage village, it is more profitable to purchase one folding formwork, which can be reused on other typical objects.
The advantage of time and cost, excluding the cost or rental of equipment for construction is not more than 25%. As for frameworks for the foundation, it will be about 20%. Printer manufacturers claim to save the total cost of 15% due to foundation work. In accordance with the calculations, the savings from this type of work amounted to 5%. The greatest savings are achieved using wall construction — 18% of the total cost of the house, while manufacturers of the innovative Apis-Cor printer claim that it is possible to save up to 25% on a frame structure [6].

If we separately consider the savings at specific stages of construction, the savings on the foundation are up to 50% in cost and up to 40% in time. Wall printing on a 3D printer saves up to 80% of the cost of this type of work, while performing them three times faster. At the same time, the creators of 3D printers are developing their technology and building structures as close as possible to existing standards of concrete products for durability, stability and quality.
Based on the proposed prices on the market of construction equipment, the average cost of a 3D printer can be 2 million rubles. If a construction company acquires it for the construction of a cottage settlement or a private low-rise building, taking into account the savings on each house of 370 thousand rubles the printer will recompense for itself when building the sixth house.

From the saying above, the following conclusion should be drawn:

1) Research has shown that the introduction of a 3D printer can be very useful for construction companies. In the best way, now, the printer shows itself in low-rise construction. It can also be effective in cases of the need for urgent construction of temporary housing after natural disasters.
2) Among the existing analogs of houses in low-rise construction, aerated concrete is closest to the price and temporal characteristics of a 3D printer, optimal for comparative analysis.
3) The comparative analysis showed that for private construction, the use of this technology, taking into account the lease, could be beneficial only in terms of construction time; the costs will remain about the same.
   In the future, for construction companies, this technology may be effective, as it will optimize the production technology.
4) 3D printing technology will allow building faster and saving up to 23% of construction costs and up to 25% of construction time when taking into account the construction of a one-story cottage without interior decoration and installation of utilities.

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Facade systems of "wet" and suspended types

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Abstract

Currently, the construction industry is characterized by a gradual increase in requirements for the quality of work, economic efficiency and the external appearance of the object. Works on the arranging of the exterior finish are the final stage of construction. Their purpose is to protect structures from the harmful effects of the environment, increase service life and provide an attractive appearance.

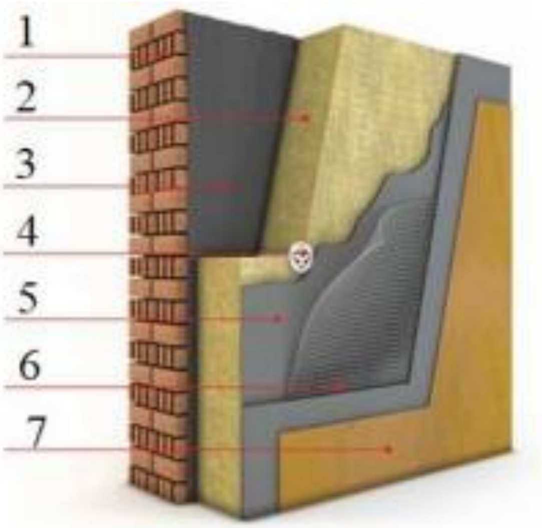
The article presents a comparative analysis of the technological features of the arranging and the operating of two the most common facade systems for external thermal insulation: with finishing ("render" facade) and a protecting structure with a ventilated air layer (suspended ventilated facade). The following parameters, such as the operational efficiency of the facade systems used, the specifics of their design, and the fire safety of the materials used in constructing facades of render and suspended types are compared. The cost of installation work on the facade and the cost of the necessary materials are given.

Keywords: façade of "wet" type, suspended ventilated facade, facade design, features of arranging, operational efficiency, heat insulation layer, fireproof insulation.

Introduction

Each architect seeks to make his design of the object individual through the geometry of a building or structure, as well as various types of exterior decoration. Facade systems for exterior insulation with plaster and a system with a ventilated air layer have become widespread [1]. "Render" facade is a multi-layer construction used for exterior finishing with simultaneous wall insulation. Its main components are heat insulating, base and decorative layers [2].

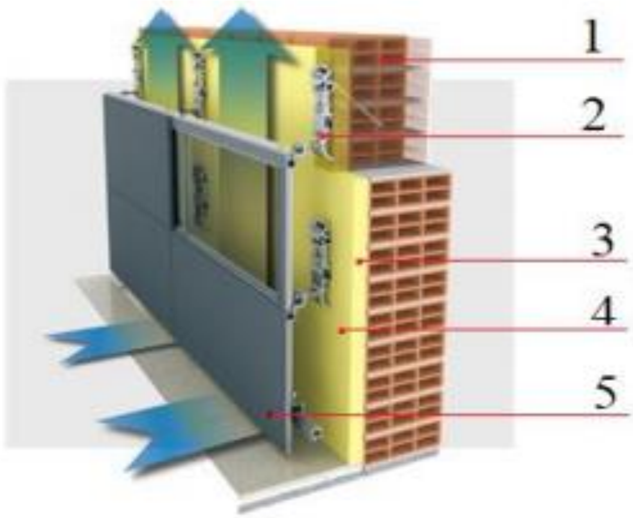
The constructive scheme of the "wet" facade is shown in Picture 1.



Picture 1. Scheme of the structural elements of the wet facade: 1-bearing wall; 2 mineral wool plates; 3-adhesive composition; 4-dowel; 5- base layer of plaster; 6-fiberglass; 7-decorative plaster layer

Wet facade insulation systems were invented in Germany in the 50s of the last century, but it was widely used only in the 70s [3]. The facade with "wet" plaster is used in the construction of public, industrial, low-rise buildings [4].

Suspended ventilated facade is a system consisting of a load-bearing wall, a support bracket, insulation, air gap and a decorative screen that is mounted on a metal support profile [4].
The constructive scheme of the "suspended" facade is shown in Picture 2.



Picture 2. Scheme of the structural elements of the "suspended" facade: 1- load-bearing wall; 2- support bracket; 3- insulation; 4-protective membrane; 5-decorative screen.

Ventilated facades in Russia began to be used relatively recently. Over the past 10 years, more than 4 million exterior wall insulation systems have been used, using the structures of ventilated facades [5]. Their advantage lies in the fact that they can be constructed in almost all climatic regions.
Suspended ventilated facades are used as exterior insulation for public buildings, high-rise residential buildings, as well as for buildings with a complex configuration. Thanks to a wide range of cladding materials, it is possible to create original architectural solutions of various types and shapes [6].
The main characteristic of facade systems with external insulation is operational efficiency, which is understood as a maintenance-free period of using the structure while maintaining its basic parameters that ensure the functional purpose of the object [4].
For a wet facade, the main factor affecting operational efficiency is the durability of the thermal insulation layer. High-density materials are the most resistant to the wearing process.
Expanded polystyrene (density is 15 kg / m3) is often used as a "wet" facade insulation, which causes deterioration of performance characteristics.
Mineral insulators have the best characteristics (density is 40-60 kg / m3), but they are used less frequently due to their high cost [2]. Thus, the actual lifespan of wet facades can range from 5 to 35 years. The relatively short lifespan of a "wet" facade is also explained by the fact that a thermally insulating contour is created on the wall surface, which prevents the air from functioning inside the structure, which leads to "aging" (physical wear) of the heat-insulating layer.

For the suspended ventilated facades technology, the average effective life is 50 years. The hinged facade, by analogy with the "wet" creates a continuous insulating circuit. The main difference lies in the fact that the moisture passing through the carrier part of the wall enters the insulation, then, due to the air gap and frequent inflow of air, is removed from the insulation to the atmosphere. As a result, the insulation in any period of the year remains in the regulatory-humidity regime, which increases the efficient use of the structure.

Insufficient thickness of the ventilated layer may affect the over-moisture insulation, as moisture will not be fully removed from the thickness of the structure that will lead to the destruction of the insulation layer [7]. When choosing the type of facade system, it is necessary to take into account the fact that the design of the frame of the ventilated facade, which is often made of steel, may be subjected to corrosion. This disadvantage is excluded when installing the "wet" facade.

The most time consuming procedure in the creation of a building envelope is its installing. The distinctive feature is that when installing the wet facade, the decorative mixture is applied by mechanization using special equipment for the supply and application of the solution.
In turn, the process of facing the building with a suspended ventilated facade is carried out manually, which significantly increases installation time and labor costs.

The facade of buildings and structures should not only provide an attractive appearance and operational efficiency, but also meet a number of regulatory requirements. The main one is fire safety. “Wet” facade in terms of fire safety has an advantage over ventilated.
To reduce the risk of ignition of objects with plaster finishing, it is necessary to use a non-fire hazardous mineral-cotton insulation, which, according to the technical regulations on fire safety requirements (Article 10 of the Federal Law No. 123 dated July 22, 2008), belongs to fire class K0 and has a flammability group G1 (slightly inflammable).
It is also possible to use polystyrene foam as a heater, but with using fire-prevention dissecting made from mineral-cotton since expanded polystyrene is a fire-hazardous material and has a flammability group G4 (highly flammable) [8].

In other words, the use in the construction of external walls with facade thermal insulation of mineral-cotton insulation, along with the protective and decorative layer, contribute to increased fire safety.
In designs with a suspended facade, the presence of a non-combustible or low-combustible insulation is not the only factor affecting fire safety. This is because the structure itself provides the presence of a wind- and moisture-proof membrane, which can be a material with a flammability group G2 (moderately combustible) and which is attached directly to the insulation. Considering the fact that air circulates in the structure at an average speed of 2 m/s, in case of fire, a fairly rapid violation of the integrity of the entire facade will occur [5].
In order to eliminate the possibility of large-scale ignition of the object, it is advisable to use non-flammable wind-hydroprotective membranes, which include fiberglass impregnated with fluoropolymer (fire-resistant material), or use additional compaction in the form of mineral-cotton of high density (150 kg / m3 and higher) [4].

The cost of the installing considered facade systems also have significant differences. Tables 1 and 2 show the cost of installation work of "wet" and suspended ventilated facades of an area of 1 m^2. Tables 3 and 4 show the price range of materials required for the installation of a “wet” and suspended ventilated facades of an area of 200 m^2.
The tables are compiled according to the data of Perm companies LLC “Fasad-Perm” [9], engaged in plaster finishing of buildings, and LLC “Fatsia” [10], which deals with ventilated facades.

Table 1 - The cost of the work of installing the "wet" façade

Name of service	Unit of measurement	Cost, rub.
Priming of walls (2 layers)	m^2	50
Installing of thermal insulation	m^2	150
Installing of adhesive-reinforcing layer	m^2	200
Application of decorative plaster	m^2	250

Painting (2 layers)	m^2	150
Installation, dismantling of scaffolding	m^2	50
In total		950

Table 2 - The cost of the work of installing the suspended ventilated façade

Name of service	Unit of measurement	Cost, rub.		
		Stainless steel sheet	Metallic panel	Composite
Subsystem mounting	m^2	500	450	400
Vapour barrier	m^2	80	80	80
Insulation of laying	m^2	150	150	150
Installation of windscreen	m^2	80	80	80
Installation of facing	m^2	200	1110	1115
Covering of protruding parts, slopes	rm	250	250	250
Installation, dismantling of scaffolding	m^2	50	50	50

Table 3 - The cost of materials for the installing of "wet" facade of 200 m^2

The work performed	Name of material	Cost, rub.
Attaching the insulation	universal primer	629
	glue	329
	dowel	1779
Heat insulation layer	polystyrene foam	226 394
	mineral cotton	2 059 794
Base layer	glue	439
	facade reinforcement mesh	2119
	PVC profile-drip with reinforcing mesh	129
	plastic corner with mesh	49
	window profile with mesh	95
Priming for decorative plaster	primer "Primer"	2199
Decorative layer of plaster	plaster	
	mineral	329
	silicate	15 559
Paint coating	exterior paint	
	acrylic	2995
	polymer	37 779
In total	Maximum	237 485
	Minimum	2 122 009

According to Table 3, it can be seen that the minimum and maximum cost of materials for installing of a "wet" facade and suspended façade differ almost 9 times and 5 times appropriately. This cost difference depends on:

- type of insulation material;
- quality and composition of fasteners;

- type of material for the decorative layer ("wet" facade);
- type of facing material.

The choice of cheap materials may adversely affect the operational efficiency of the facade system, which will lead to the need to perform premature repairs and invest additional money. Thus, in the long run, from an economic point of view, it is more advisable to use high quality, expensive materials [11].

The minimum cost of a suspended façade differs from the cost of a "wet" facade in external insulation by 2 times. This is due to the use of expensive cladding materials and metal fasteners.

The use of stainless steel clamps, which are not susceptible to corrosion and increase the service life of the facade system, has a particularly noticeable effect on the total cost of the suspended ventilated facades.

The maximum cost of a "wet" facade in terms of external thermal insulation and suspended ventilated facades differ slightly due to the use of expensive polymeric and silicate materials for a "wet" facade, which are comparable to the prices of suspended ventilated facades materials.

A separate component of facade systems is the cost of installation work, which is presented in Tables 1 and 2. For suspended ventilated facades, this criterion is 1.5–2.3 times higher compared with the cost of work on the construction of a "wet" facade. This is due to the complexity of the work and time-consuming when installing suspended ventilated facades because of the element-by-element manual assembly of all layers of the system.

The analysis of the features of the external thermal insulation of structures using suspended ventilated and "wet" facades showed the advantages and disadvantages of both systems. To create a reliable, durable and aesthetic facade, one must comply with the requirements of the relevant regulatory documents. It is necessary to consider the purpose of the building or structure being constructed, the climatic characteristics of the construction area.

Quality, well-selected materials will allow to avoid adverse effects on human health, as well as unforeseen financial costs.

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Building of Dome Constructions in the Conditions of the Far North

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Abstract

One of the main prerequisites for the successful solution of capital construction problems is its further industrialization. Existing ideas about the construction of structures made of monolithic concrete is based mainly on the experience of the construction of flatwork systems. The technology of a monolithic concrete dome can be considered as the construction and erection of permanent structures. The most common option is the arranging a monolithic dome with the use of pneumatic formwork.

The purpose of this work was to describe the method of using pneumatic formwork systems for the construction of monolithic structures.

The Russian Federation is increasing its presence in the Far North, and in its military doctrine considers the development of a rich mineral region - the Arctic to be a priority.

This article discusses the construction technology of pre-fabricated dome structures in the conditions of the Far North, their advantages and disadvantages are assessed.

The subject of the research is reinforced concrete dome structures and possible prospects for their use in the interests of the Ministry of Defense of the Russian Federation.

Keywords: pneumatic formwork, dome, hemisphere, reinforced concrete, shotcreting, gunned concrete, the Far North, construction, dome structure, dome.

Introduction

Nowadays, modern technologies and building materials, which practically do not differ from bricks, are popular. One of these structures are spherical or domed houses.

The use of pneumatic forms allows, in accordance with industrial requirements, to erect spatial structures from monolithic reinforced concrete. [2, p.37]

Monolithic dome housing has the following advantages:

“Thanks to the high-tech construction, the monolithic dome house is built quickly and does not require heavy construction equipment, which significantly reduces the cost of construction work.

- Saving building materials is up to 20% at all stages of construction.
- Spherical shape is energy saving system
- Increased strength, which is due to a uniform distribution of the load on all points of the surface.

In accordance with the technology of construction of monolithic domed houses, at the initial stage of construction, the fundamental layer and the blind area are being prepared.

The base layer consists of a sand cushion, waterproofing, reinforcement. As a heater, expanded clay cushion is used. The blind area, concrete, 800 mm wide, is part of the foundation.

The process of building monolithic reinforced concrete structures is complex and consists of

- installation of formwork system;
- reinforcement work and installation of embedded parts;
- laying and compaction of the concrete mix;
- care of concrete (moistening - in the summer, warming - in the winter), set of stripping strength;
- demoulding.

After disintegration, a monolithic “stone wool” shell and shotcreting with a finishing layer are provided.

The walls of the monolithic domed house consist of three layers:

- monolithic concrete is 80 mm, its density is 2000 kg / m3
- basalt wool is 100 mm, its density is 130 kg / m3

- finishing layer of shotcrete, concrete is 20 mm, its density is 2000 kg / m3

In accordance with the construction project, window and door blocks are mounted, interior and finishing works, and engineering communications are carried out.

The formwork system is made in the form of a flexible shell made of high-strength rubberized fabric with a thickness of 0.3 ... 0.5 mm, filled with compressed air. In the working position, the formwork is obtained due to excessive air pressure. When working with a pneumatic form, it is necessary to constantly maintain a working pressure of about 1.2 kPa.

The air supply unit should operate in automatic mode, the pressure inside the formwork should be constantly monitored with pressure gauges. For the passage of workers under the shell of the formwork entrance gateway with two tight-closing doors is arranged.

Before concreting, its surface is coated with emulsion grease. The reinforcement is made of dispersed reinforced fiberglass or from a meshwork. Concrete is applied by spraying. When concrete acquires the design strength, the formwork is separated from concrete.

Concrete mix is put with the pneumatic concrete installation, beginning from the bottom from the base up, to the lock, on zones and on full constructive height. Workers are on a hydraulic lift, the thickness of the spray layer is controlled by pre-installation on the formwork of special landmarks, showing the thickness of the structure.

When the concrete reaches the design strength, it is removed. Initially, the internal pressure in the system and the formwork is removed, then the fixing devices are removed.

The demoulding of structures and the subsequent maintenance of concrete are allowed when concrete reaches 70% of the design strength. In order to speed up the process of hardening of concrete, steam or heated air is applied to the formwork. [1, p.20]

The Russian Federation has been increasing its presence in the Far North, and in its military doctrine it considers the development of a rich mineral region - the Arctic to be a priority. Currently, there is no one doubts in the need to build up a military presence there, politicians of different levels openly speak about it. Thus, opening the Arctic drifting station, Dmitry Rogozin said that Russia "must come to the Arctic and make it its own," and in turn this is impossible without the creation of large permanent military bases.

The arctic bases under construction and currently being designed are built on a modular basis from modern, lightweight and convenient materials. However, with all the advantages such constructions are good for scientific expeditions, and not as permanent strongholds of the Armed Forces of the Russian Federation.

Thus, the main useful areas are located above ground level, which undoubtedly facilitates the design, construction and operation, however, in the event of a military conflict, such a structure is extremely vulnerable to enemy fire. Moreover, the materials from which the modular structures are made do not provide protection even from small weapons.

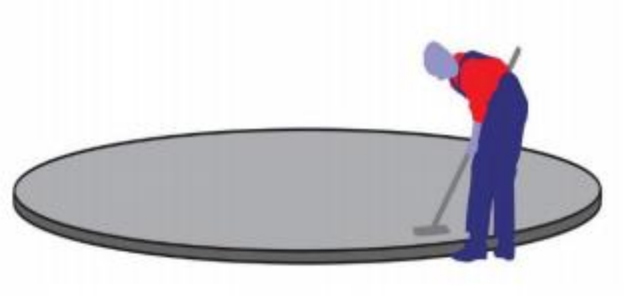
The question naturally arises about finding new technological solutions for building military bases in the conditions of the Far North. One of the solutions to the problem can serve as pre-fabricated domed reinforced concrete structures. These constructions meet all the basic requirements for the Arctic military bases:

1. These constructions are prefabricated (the term of construction depends on the specific size of the dome);
2. The main production processes (after inflation of the pneumatic formwork) are held inside the dome, which facilitates the construction work;
3. The air injected into the pneumatic wall performs the function of heating the concrete;
4. Dome structures are more durable with less material intensity;
5. There is practically no wind load on the dome structures;
6. The snow load decreases due to the deflation of snow and the absence of snow bags;
7. The dome structure is devoid of vertical supports, and can block large spans, which provides an increase in the usable area of the exploited space.

If we consider the dome structures (hemispheres) in terms of heat efficiency, then in a regular quadrangular building, the heating capacity (or insulation thickness) should be 30% larger than the building in the form of a hemisphere with an equal useful area.

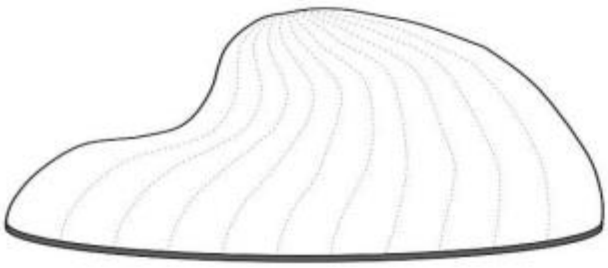
Accordingly, the operation of the building with the usual quadrangular shape leads to an increase in the cost of fuel and electricity by about 30% per year.
Dome shells show high reliability, durability and stability in conditions of extreme geological or climatic activity. Possessing high aerodynamic characteristics, shells are resistant to wind effects and perceive wind speeds that would be critical for other structures.
Dome-type structures can work excellently in areas of high seismicity, due to their relatively low weight, evenly distributed throughout the area, as well as high spatial rigidity.

These indicators cause the high resistance of such elements to earthquakes of up to 7-8 points on the Richter scale. The main advantage of dome structures is their low cost, due to the high manufacturability and low operating cost. The solidity of dome structures provides a high degree of localization of dust, thereby reducing the cost of environmental protection measures.
The technology of construction of pre-fabricated hemispheres is the construction of buildings using pneumatic formwork, lifting from the ground the entire structure, reinforcement, concrete in a liquid state.
The foundation for a dome structure is designed depending on the loads taken, as well as the purpose of the structure. The most common and convenient are: the foundation in the form of a ring slab or the foundation in the form of a round solid slab (see Pic. 1). In the case of the use of the foundation in the form of a solid plate, it also perceives the load from the stored material. In addition, a solid slab can be a pile grillage, forming the upper structure of the pile field.
During construction in the Far North, as well as for convenience and speeding up production, it is reasonable to carry out a foundation slab of precast concrete blocks assembled on site.



Picture 1. Base Plate

Along the edge of the foundation, it is necessary to leave the reinforcement for which the external thread is cut, to simplify the fixing of the pneumatic formwork.
However, when erecting small domes (the basis for long-term firing points, transition corridors, and so on), it is possible not to make releases from the foundation by fixing the pneumatic wall directly to the concrete with special screws with a bandage.
In conjunction with the side outlets in the foundation of the dome, mandatory vertical outlets of the working reinforcement are made for the direct fastening of the rods of the bearing reinforced concrete shell.



Picture 2. Pneumatic Formwork

A pneumatic formwork (see Pic. 2) is an awning made of special reinforced and resin-impregnated fabric, corresponding to the size and shape of the future structure. The pneumatic formwork has a rope sewn into the loop, which provides its fasteners to the foundation around the entire perimeter of the future structure. In addition, it should have a sleeve through which, after air injection, people will have access, as well as a hose for connecting a powerful air injection system and for maintaining an overpressure inside the dome during the entire construction period.

Everything necessary for construction work is laid on the base plate inside the dome, even before the pneumatic wall is filled with air.

The pneumatic formwork itself is placed in the center of the structure, unfolds over the entire area and is attached to the pre-set releases, along the entire perimeter of the foundation. Then atmospheric air is injected into the mold.

In order to avoid pressure drop and other unforeseen situations, the electric motor should be equipped with a dual drive system and automatic adjustment of the air supply. This will instantly switch work to power from a diesel generator. In addition, if these structures have to be erected in close contact with the immediate enemy and the form will be damaged, the system should automatically increase the air supply, which will prevent the loss of stability of the form.

As soon as the pneumatic formwork is filled with air and the internal pressure reaches the operating value, the air injection decreases.

After that, the pneumatic supply is connected to the technological passage left in advance, thanks to which it becomes possible for builders to enter the shell for further work. From this point on, all construction work is performed inside the shell, which negates the impact of climate impacts.

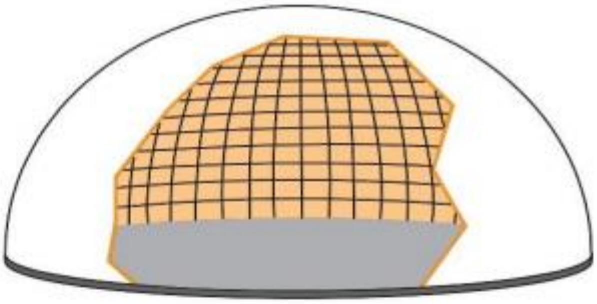
At the first stage of interior work, the first layer of a 2-component polyurethane mixture is applied on the inner surface of the pneumatic formwork (Picture 3). At the same time, the mixture itself (its components) is fed to the inside of the dome through hoses using a pump.

Picture 3 - Thermal Insulation

After hardening of the first layer of polyurethane, clamps are installed (on the surface of the foam over the entire area), to which the working reinforcement will be attached later. Then a second layer of insulation is applied, strengthening the fixing brackets. The heat-insulating polyurethane foam layer is: a reinforcing layer, due to which the form acquires comparative rigidity; it is used to install the working reinforcement during reinforcement and subsequent shotcreting.

The total thickness of the polyurethane foam layer depends on the terrain conditions and the purpose of the construction object. It can vary from 5 to 20 centimeters.

After the polyurethane foam is cured, the first-level reinforcement is installed by fastening the rods to the retainers of the polyurethane layer (Picture 4).

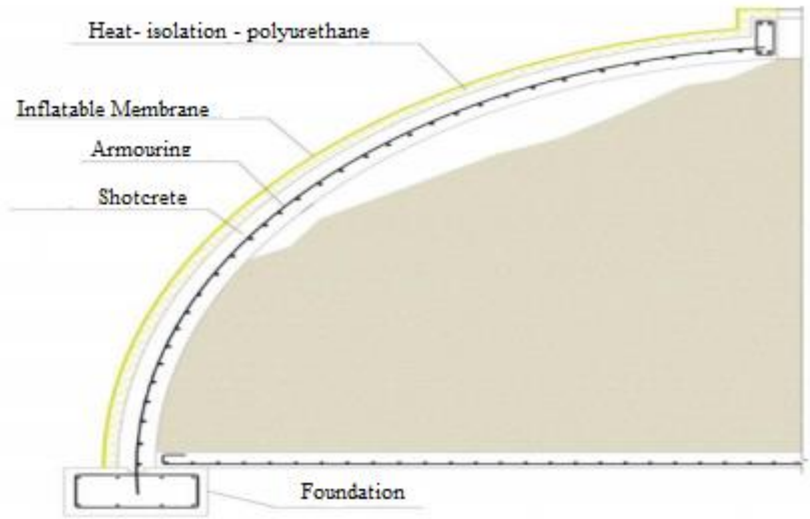


Picture 4. Armature frame

After installing the reinforcement of the installation layer, the working reinforcement is fastened and a solid spatial framework is created. To facilitate the entire structure while maintaining the quality characteristics of the structure, fiberglass, instead of steel, should be used as the working reinforcement.
Reinforcement is made from the bottom up in such a way as to transfer most of the load directly to the foundation, reducing the impact on the pneumatic wall and the insulation layer. Then, the frame is molded by spraying the concrete mixture (shotcreting method) (see Pic. 5)
The splash of concrete is produced by grippers in the direction of the bottom-up, from the "basket" placed on the boom of the crane or loader. The concrete thus applied, after setting, together with the reinforcement, forms a high-strength framework of the structure, capable of receiving the calculated loads with a large margin of safety and stability.

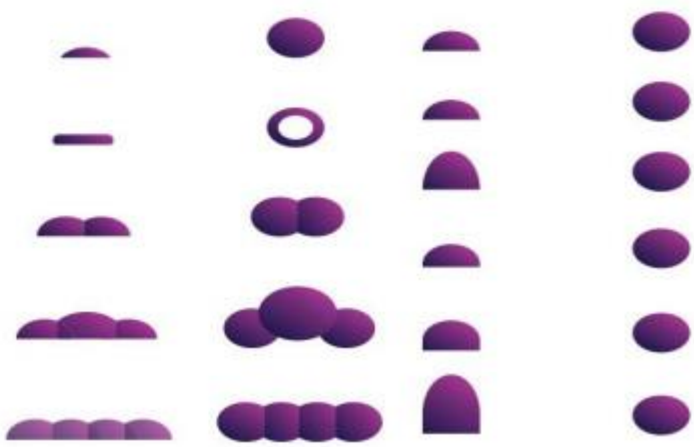
Picture 5 – shotcreting

If hemispheres, besides their own weight, must take increased external loads, additional reinforcement should be provided. When concrete takes about 75-80% of the design strength, the air supply stops, the inflator can be turned off and the main opening is opened for the removal (removal) of the construction equipment of unused materials.
After the termination of the application of the concrete mixture, the necessary apertures are cut out, their filling is carried out - the concrete dome is ready (Picture 6).
Pneumatic formwork plays the role of permanent formwork and performs the function of the top layer of the coating. Based on this, the color and quality of the reinforced polyester vinyl fabric should be chosen, taking into account the requirements for masking and architectural design of the structures.



Picture 6. - Dome in section

Thus, we get a solid reinforced concrete structure, suitable for use in northern latitudes, as well as providing reliable protection during military operations. The database for a closed system of vital activity, in which all processes are performed, does not leave the premises.



Picture 7. - Possible forms of dome structures

The main advantage of dome houses is high mobility and at the same time sufficient reliability to build such houses even in rather harsh climate. In the process of building spherical houses, as a rule, light, environmentally friendly and durable materials are preferable. In addition, they should be easily mounted and at the same time fully fulfill their role. The reviews about the domed houses are mostly positive.
Owners like the original shape, comfort and spaciousness of these buildings. Energy savings, low costs for the construction of spherical buildings are also often mentioned in the comments of their owners.
Projects of dome houses is an original idea worthy of attention. At an affordable cost, this design is very easy to build, resistant to any external factors and in no way inferior to the houses of the traditional form.

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Innovative Materials for Reinforced Concrete Foundations

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Abstract

Currently, most people are in a different search: in the search for information, materials or resources. The main criteria for finding a specific query are a cost-effective offer, environmental safety in use and maximum saving of personal time. A global environmental catastrophe hangs over the modern world. To prevent it, it is necessary to apply measures.

This article discusses the main types of foundations, as well as innovations in this area.

Key words: reinforced concrete foundation; isolated foundation; strip foundation; solid foundation; self-healing elastic concrete.

Introduction

The foundation is a structure buried in the ground that transfers loads and impacts from a building to the basement [1]. In the construction as a basis, it began to be used in the ancient times. Simultaneously with the development of the foundation, there was a process of development of the construction itself. Structures built on a good basis, have great durability, for example, the pyramid of Cheops has survived until our time. Its age is about 4.5 thousand years; weight is about 6 million tons, and the average load on the base is 12 kg / cm2.

The first mentions, recommendations for the construction of foundations appeared in Rome. Roman architect and mechanic Vitruvius (I century BC) is known for his treatise "On Architecture" (De archiectura), which is very valuable for the history of science, engineering and architecture. As well as recommendations for the construction of foundations found in the ancient annals of our country. But these are only references and recommendations, at that time there was no theoretical basis for calculating the basement and foundations.

Only in the XVIII century, the first theoretical development of science in foundation engineering appeared. In 1773, the French scientist Charles Augustin Coulon presented his work "On the application of the maximum and minimum rules to some maximum rules to certain statistical issues related to architecture" to the French Academy of Sciences. There the theory of calculating the resistance of soils to shear and the formula for calculating the pressure of the soil on the retaining wall were derived. Later also the French scientist Jacques Triget in 1841 proposed one of the methods for the construction of caisson foundations.

And in the XIX century such material as concrete was discovered which serves as the main link in the construction of foundations. And in 1899, our scientist Anton Emilievich Straus suggested using the stuffed piles, he also proposed to lower the armature into the wells and then fill it with concrete. Thus, the Straus first introduced reinforced concrete piles, and another Russian scientist, Alexander N. Lentovsky, used reinforced concrete to construct reinforced concrete caissons. All foundations are divided into three types: isolated, tape and solid.

Isolated prefabricated foundation

The most common among all types of foundations are isolated foundations. This is due to the fact that they are simple in construction and economical. It is recommended to perform this type of foundation symmetrically with respect to the plane of action of moments, which is the axis of the column.

Thus, they have a square plan on central loading, and in cramped conditions and on off-center loading, a rectangular shape is allowed, but with an aspect ratio of not more than 3: 1. They are arranged under each

column, regardless of its type (built-up column or monolithic), provided they are rarely located and there is a relatively small load on them.
There are two types of isolated foundations: prefabricated and monolithic. In turn, prefabricated foundations are divided into solid and composite. They are classified by the size of the columns. Solid prefabricated basket-type foundations are small, they are usually performed with one step with bevels on the surface of the steps of heavy concrete, starting with class B15 and ending with B25.
Despite the fact that this type of foundations is small, they have a rather large mass. For this reason, various designs of ribbed foundations were created, but due to the complexity of their manufacture they did not find wide application in production. In order for the foundations not to "move" on the ground, a sand-gravel compacted cushion 100 mm thick is made.

With such base preparation, it is allowed to use a protective layer thickness of 35 mm, while without this preparation it is necessary to use at least 70 mm. When reinforcing the diameter of the rods must be taken not less than 10 mm, and their pitch is in the range from 100 to 200 mm inclusively. When connecting the prefabricated columns and the foundation, they use the method of embedding the columns in special sockets.
The embedding depth of a rectangular section is assumed to be not less than the larger cross-sectional size of the column, and for two-bay, half the cross-sectional size of the larger side of the entire column and at least one-and-a-half size of the larger side of the cross section of the column branch is allowed.
The nest is made in the form of a trapezoidal parallelepiped. In this case, the wide part is located on the surface of the glass, and the narrow part is at a distance of at least 200 mm from the base. Between the sides of the column and glass, the foundation is arranged in such a way that it is at least 50 mm in the lower part and 75 in the upper part.

After the installation of the column in the nest is made, the gaps must be filled with concrete of a class not less than B12,5 on the fine aggregate to prevent the appearance of voids.
These conditions help to create a more reliable design through its rigidity. If at the preliminary calculations of loads on the ground large sizes of the foundation cushion are obtained, then prefabricated foundations are used.
Usually they are made of several blocks, it is more expedient from two parts - a shoe and a plate. Compared with the previous one, this type of foundation consumes significantly more materials.
The mass of prefabricated elements can reach tens of tons. At significant moments and horizontal thrusts blocks are interconnected by means of welded outlets, anchors, as well as embedded parts.

Isolated monolithic foundations

Monolithic isolated foundations are arranged both for prefabricated and monolithic frames of buildings and structures. In most cases, this type of foundation is performed directly on the construction site. To do this, at the bottom of the pit, it is necessary to mark the axes of future columns in a place that has been prepared and equipped in advance. Next, they install the formwork or assemble a removable formwork design, which greatly simplifies the work, because it does not require additional checks for correct installation.
After the installation for the lower tiers has been held and, accordingly, the check, they proceed the installation of the socket (sub-column). With a complex form of the column, the foundation is additionally reinforced with a metal mesh or welded reinforcement framework.

To simplify the work of designers and builders, standard designs are designed for standardized dimensions, which are 300 mm taps with a sole area from 1.5 × 1.5 to 6.0 × 5.4 m, height 1.5; 1.8; 2.4; 3.0; 3.6; and 4.2 m of monolithic foundations consist of an elongated sub-column, which is reinforced with a spatial frame, a base plate, where the overhang size refers to thickness as 1: 2, it is also reinforced, but with a double welded mesh.

Monolithic foundations are divided by form into two types: pyramidal and stepped. The height of the foundation must be taken in such a way that it is not required to be reinforced with clamps and bends. All pressure on the base of the foundation is distributed along the pyramid, the angles of which are equal to 45 °. This is what should be guided by when choosing the size of the steps.

Various columns can also be installed on the monolithic foundation. In order to rigidly connect the foundation and the column, from the basement they release the fittings calculated for the column at the edge of the foundation. The length of the release must be chosen in accordance with existing requirements.
Joints are installed only above the level and they distinguish several types of them. The reinforcement can be connected to overlap without welding, connected to the outlet in one place for columns centrally and eccentrically compressed at low eccentricities. If the column is eccentrically compressed with greater eccentricity (not less than two levels on each side of the column) and the section there are three rods, first the middle one is connected.
For ease of installation and welding in the connection fittings arc welding is used.
Currently, the use of pile foundations, which also belong to the type of monolithic reinforced concrete isolated foundation, is widespread. All piles of the building (structure) are united by a grillage, which is represented by a rigid slab. This is done in order to transfer the pressure from the pores to the piles. The forces directed from the center of the support are transmitted directly to the pile, but in flight, other forces that act on the compressed zone of the grillage must balance them, and thus all pressure will be transferred to the piles.
In this regard, we adopted the following reinforcement scheme: reinforcing belts are placed in the lower part of the grillage, which hold back the spread of the force F1; the clamps surrounding them take the F2 forces and are anchored in the concrete of the compressed zone, the reinforced spans are placed in the center of the lower part of the grillage.
Thanks to separate foundations, people have the opportunity to get in a short time a solid construction of their home, place of work or leisure.

Strip foundations

Strip foundations are foundations that are most common in construction. This foundation is a reinforced concrete strip, which is arranged under the rows of columns or under load-bearing walls. Under the load-bearing walls, strip foundations are most often assembled.
They are used at high loads from overlying structures or with weak soils. This design is created from prefabricated foundation blocks that transfer loads from the building to foundation pads, which in turn transfer the load to the foundation. Foundation blocks and foundation cushions are made in specialized reinforced concrete plants. In some cases, lightweight foundation cushions are used. Their distinctive feature is cut corners. Such cushions are applied to save 10% of the material used in their manufacture.
If the load on the base is insignificant, then foundation blocks can be used as a support part. For brick or block walls, wall foundation blocks are used. They are made with only two types of heights: 0.3 and 0.6 m.
Before the installation of prefabricated strip foundations, sand preparing is performed. Its thickness ranges from 10 to 20 cm. After this, foundation cushions are laid, between which a gap of 20 mm is left. It is not always possible to perform the tape without gaps between the prefabricated elements.
In such cases, monolithic reinforced concrete inserts are used, the height and dimensions of the cross section of which are similar to the adjacent precast elements.

On top of the foundation slabs, the foundation blocks on the cement-sand mortar are laid down. The width of the blocks is chosen according to the width of the walls of the building or structure, while it is allowed to carry out the overhangs of the elevated walls up to 13 cm. The number of rows of blocks in height is determined depending on the depth of the foundation. When laying the foundation blocks, they are ligated along the wall and at the junction of the longitudinal and transverse walls.
To provide dressings, monolithic concrete inserts and additional blocks are used. The seams between the foundation blocks must be reinforced with reinforcement. A reinforced concrete belt 15–20 cm thick should be arranged over the last row of blocks.

Under the rows of columns, tape foundations are arranged in the form of cross-strips of the longitudinal or transverse direction. They can be performed as prefabricated foundation or monolithic one. In most cases, the foundations of T-section with a flange to the bottom are used. There are cases when foundations with the same cross section are used, but with a flange on top, for example, in soils of high connectivity. The flanges are assigned such thickness that it does not require reinforcing them with bends and transverse rods.

If the overhang of the flange is of great length, then its section is made with a thickening towards the rib. The reinforcement of the ribs is performed in the same way as the reinforcement of multi-span beams. The longitudinal working reinforcement is determined by the calculation of the normal section for the effect of bending moments, and the transverse rods and bends- by the calculation of the inclined sections for the action of transverse forces.

When constructing foundations, it is very important to take into account the possibility of uneven loading of the foundation during the construction of the structure. Therefore, in the ribs a continuous longitudinal upper and lower reinforcement is established.

Tapes are reinforced with welded or knitted frames. Upper longitudinal bars are reinforced along their entire length with welded meshes in the horizontal direction. In the calculated cross section of the reinforcement of the tape include the longitudinal bars of the frames and grids. No more than 30% of the working rods can be distributed over the entire width of the flange.

When the flanges are reinforced with welded and knitted nets, the wide welded meshes should be laid in such a way that the longitudinal bars serve as the reinforcement of the tapes, and the transverse ones - the reinforcement of the flange. When reinforcing the narrow mesh is laid in 2 rows. According to the rules of joining welded meshes, all meshes are laid without an overlap, with the exception of the upper, longitudinally joined overlap without welding.

If the flange overhangs are large, up to 750 mm, half of the working reinforcement may not be brought to the outer edge by the distance calculated by a special formula.

Continuous foundations along with pile foundations are deservedly considered the most versatile, since they can be used both for lightweight structures and for loaded ones, evenly distributing pressure over the entire perimeter of the base. Despite the simplicity of the design, it is quite durable.

Solid foundations

In contrast to continuous foundations, solid ones are very uneconomical in terms of the consumption of building materials and, accordingly, cost. Solid foundations are made of reinforced concrete or girder less slabs to the entire area of buildings and structures. They are used at significant loads, as well as when there is a need for a device to protect the basement from the penetration of groundwater.

Slab-beamless, slab-beam and box-shaped foundations are distinguished. The choice of the type and size of a solid foundation directly depends on the resultant of the main loads of a building or structure. It is very important that this load passes through the center of the sole.

The base plate without a beam is reinforced with welded meshes with working reinforcement in one direction, which is joined by an overlap without welding.

The reinforcement of the non-working direction is connected without an overlap. The grids are stacked on each other in not more than four rows. In ribbed base plates, the reinforcement occurs similarly to the reinforcement of the ribbed slab, that is, with welded meshes and frameworks.

Double longitudinal and transverse meshes are placed in the body of the slab, the maximum stress zone of which is additionally reinforced with a double transverse mesh. The armature, grouped into grids of three working rods, is applied at local bends and is installed above the grids so that gaps remain that provide access to the lower reinforcement.

In the fins of the slab space frames are placed, which are made of flat frames and transverse rods. They are joined by welding. The frames in the ribs are connected to the reinforcement of the plate with pins.

Foundations perceive static and dynamic loads. Impacts from various machines and mechanisms can be attributed to dynamic loads. Depending on the type of main movement, all machines and mechanisms are divided into two groups – batch type and acyclic (table).

Table 1 - Classification of machines with dynamic loads

The group of machines	Type of the main motion	Sample
Batch-type	Equable rotation and related	electrical machinery, electric motors,

machine	translatory motion; reciprocating motion culminating in periodic strikes	generators, machines with a crank mechanism, compressors, pumps, internal combustion engines, sawmills, shaking and shock-vibration molding machines, used in foundry and precast concrete industry, automatic stamps
Acyclic machine	Uneven rotation or reciprocating motion; reciprocating motion with individual strikes; motions causing mass displacement of the processed material, transferring random loads to the foundation	drive motors of rolling mills, discontinuous power generators, forging and stamping hammers, impact machine, mill installations

For proper operation and normal operation of machines and mechanisms, the foundations must have a convenient location, in order to secure the mechanism, they must be strong and resistant to various types of loads. Foundations for machines are made of concrete or reinforced concrete. According to the method of construction, they can be arranged in monolithic, prefabricated and monolithic, and prefabricated. For monolithic and prefabricated monolithic foundations, concrete of a class not lower than B12.5 is used, and for prefabricated ones it is B15.

According to design features, foundations can be divided into massive, wall, frame and lightweight. The reinforcement of such foundations is carried out in accordance with the requirements of the construction rules 2.03.01–84 "Concrete and reinforced concrete structures" and the construction rules 2. – 2.05–87 "Foundations of machines with dynamic loads".

It is permissible to build foundations for vehicles with dynamic loads on bulk soils, but provided that they do not contain trash and various kinds of impurities, otherwise the foundation may drawdown. If at the base of the foundation there is a weak ground, for example, peat lands or over moistened clay, lying at a depth of 1–1.5 m, then it is replaced with a well-compacted sand cushion.

Innovative materials

The 21st century is the age of high technology. Thus, at the present time in the USA, self-healing elastic concrete was invented; concrete from carbon dioxide was introduced by Canadians. The idea for self-healing elastic concrete was given to scientists from the University of Michigan, Victor Li and Yingzi Yang by ordinary shells. A complex of minerals that affects shell growth has been added to concrete. The effect surprised even the scientists themselves. When applying the load on the plate of concrete, it bends, but does not break, becoming covered with a grid of small cracks.

After the load is removed, the concrete restores its integrity. Water and air are necessary for this. Water reacts with compounds in concrete, and when reacting with CO2, calcium carbonate compounds are formed, which fill the cracks. "After self-healing, this piece of concrete will have almost the same strength as before damage," the inventors commented. This type of concrete has already been used in the construction of one of the bridges in Michigan.

During the construction of the overpass, compensating temperature fluctuations were not used, due to which cars pass over the bridge silently. Similar concrete has already been used in the construction of a sixty--storied building in Osaka.

Scientists hope that their invention will be in demand despite the cost is three times more expensive than the type material. This technology allows building houses in earthquake-prone areas of the globe, since such concrete is 40–50% lighter than usual concrete [2].

With the development of technology, there is an increase in harmful emissions into the atmosphere of the Earth, which leads to the formation of holes. Along with this, there is an active deforestation on the planet, forming new plantings, but they are ineffective, because the rate of cutting down trees is higher than the growth rate of one tree. A single newly planted tree cannot replace an adult healthy tree.

Canadian company Carbon Cure Technologies has created concrete that can reduce emissions. For their production requires carbon dioxide emitted from factories such as refineries or for the production of fertilizers. One hundred thousand blocks can absorb as much carbon dioxide as ninety-two trees in one year. This recycling of garbage gas will reduce the greenhouse effect, reduce the cost of concrete, while it will become even stronger and environmentally safer [3].

New is well forgotten old. Even in ancient Rome, houses were built from ordinary earth soil. Today, the Priory Palace in Gatchina, built by the architect Nikolai Aleksandrovich Lvov in 1799, can be considered the most famous rammed-earth construction. This is the only building in Russia built of compressed loam impregnated with lime mortar. Now it is used for the construction of support structures and walls.

Rammed earth has high moisture resistance and practically does not shrink. To improve the thermal performance, you can use the most environmentally safe material additive - straw. It must be cut and added to the mixture. After a few years, this composition is gaining strength comparable to the strength of concrete [4].

Each person has a question about where to start, no matter what concerns the question: living or building a house of dream. The choice of the foundation must be considered very seriously, so that it can ensure maximum reliability of the structure and be completed as soon as possible. To do this, first, you need to decide on the type of construction, then carry out engineering surveys and determine the type of foundation soil, it is important to take into account the cost of building the foundation.

The most expensive foundations are solid. Their cost for the size of 6 × 6 m with double reinforcement and a plate height of 250 mm on average costs 136 thousand rubles. Under these conditions, about 20 piles will have to be driven at an average cost of 56 thousand rubles. Pile, like tape, is very versatile - can be used in different soils, but the consumption of materials is 4 times more.

The cost of work increases significantly due to the fact that special pile-rigs are required for piling. It is necessary to treat isolated foundations with due attention, since these are rigid structures and, accordingly, reliable. But we must take into account the fact that when installing in winter conditions it will be necessary to attract additional funds for various additives or electric heating.

Without these elements, it is impossible to begin construction at this time of the year, since the declared strength of concrete will not be achieved. In turn, the individual precast foundations are easy to use, do not require a large amount of time during installation, and do not require aging after installation [5–7].

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3d Technologies

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Abstract

The article describes the main innovative technologies of construction 3-D printing in modern construction. This research direction confirms the relevance of the selected problem.

Development of structures for 3D printing will allow the construction of not only individual building structures, but also buildings and structures as a whole. Experimental compositions are being developed that allow one to obtain a sufficiently dense concrete structure.

The roles of additive technologies in the construction of buildings during the construction of buildings and structures are shown.

Keywords: 3D printing, additive technologies, fine concrete, dry mortar.

Introduction

Modern construction is developing at a high speed due to the introduction of innovative technologies into its process, as well as modern materials [1]. The construction area can be called the most resource-intensive, since the construction of buildings and structures requires a large amount of non-renewable resources, the consumption of which increases with the increasing needs of people. These include the need for housing, the construction of industrial and public buildings [2]. In this connection, it is necessary to use various additive technologies that could solve such important problems as:

- energy consumption;
- resource consumption;
- low production efficiency
- increased safety at the construction site.

Many countries are facing these problems. Additive technologies are the process of stratifying or soldering individual parts or materials into a single whole, while the total construction costs are reduced to 60%, which leads to a decrease in the cost of finished products [3].

Pic. 1. Layering of building materials

In building 3D printers, the main part is the print “head” into which the solution is fed [5]. In some installations it is provided to prepare the mixture directly in the “head” itself. The advantages of layering can include such factors as:

- the possibility of changing the shape of the structure in the process of its manufacture,
- manufacture of structures of complex geometric shapes,
- low labor costs
- speed of construction (no need to install and disassemble the formwork for each structure),

- high quality,
- economical consumption of building materials.

Used printers may vary depending on the type of construction being constructed, the conditions of construction and on the type of building materials [6]. The most common types of 3D printers are: self-propelled (Fig. 2), with a telescopic device (Pic. 3) and portal.

Pic. 2. Mobile self-propelled tracked printer

Pic. 3. Printer with a telescopic device

Together with the use of 3D printers, modern building materials should be used, which will be distinguished by their cost effectiveness and low cost. The composition of the working mixture (Fig. 4) of the printer will depend on the operating conditions.

Pic. 4. Certified construction mixes for 3D printers

The most well-known additive technologies include the use of 3D technologies in the construction process, namely printers. The essence of this method consists in applying the construction mixture in layers to each other (Pic. 1), and in some cases creating a net structure, which becomes possible using fast-hardening mixtures and solutions [4].

The first who began to use 3D-printers for the construction of residential buildings were scientists from China. So, in 2014, using a WinSun printer, they were able to create ten 5-storeyed houses. "WinSun" - allows you to build buildings up to 6m in the shortest possible time.

Currently, additive technologies in construction are not widely used, this is due to several factors. These include the high cost of the equipment itself and its rent, as well as their small amount [8].

Another obstacle to the introduction of additive technologies is the lack of a regulatory framework for their use. In the future, scientists are planning to improve the production technology of 3D printers, which will reduce their market value and massively introduce them into the construction market. The use of innovative technologies will contribute to a significant reduction in the cost of construction [9].

To create an optimal building structure using additive technologies, the requirements for rigidity, strength, durability under various operating conditions should be taken into account at the first design stage. Therefore, the selection and study of raw materials is of paramount importance [10].

Today, 3-D printers can use different polymers, steel powders, alloys of such elements as titanium, nickel, aluminum, copper, ceramics, and so on [11-12]. But in the field of construction, additive technologies have not yet acquired large-scale use, since raw materials are under research and development.

It is worth noting that in order to build a building using a 3D construction printer. First of all, it is necessary to prepare the area, fill the foundation of the future building and level the surrounding area that the printer itself stands as even as possible. Only then can you install the printer.

The main difference between a 3D printer and any other industrial robot is the way of creating products. In particular, a construction 3D printer has a nozzle or an extruder and squeezes a fast-hardening working mixture out of it. The surface, on which the volumetric product is created, is called the working area and it has the dimensions given by the stroke of the nozzle. And the formwork is not required.

There are three ways to create a three-dimensional structure:

1. Layer-by-layer extrusion of a viscous working mixture. Most construction printers use this method. It lies in the fact that the 3D mechanism has an extruder or the nozzle from which a rapidly hardening concrete mix is squeezed out, which includes many different additives. Each layer is squeezed by the 3D printer over the previous one, due to which a certain structure is formed.
2. Sintering method. With this technology, in the working area of the 3D machine, the working mixture is melted, and melting is achieved, as applied to construction, with a concentrated laser or sunbeam, and the working mixture is ordinary sand.

3. Spraying method. In this method, a jet of sand comes out of the working nozzle, which is immediately mixed with an adhesive / catalyst, forming a volume at a programmed point.

Sintering and spraying methods are environmentally friendly as solar energy is used.

There are two types of designs:

- in the form of a bridge crane;
- in the form of a boom.

3D printing technologies have several advantages. They will be considered on the example of the comparison of construction using gas blocks and the introduction of 3D construction printer.

Table 1 - Comparisons of construction when using gas blocks and the introduction of 3D construction printer

Construction using gas blocks	Construction using 3D-printer
Production blocks at the factory	Concrete mix is ready for building constrcution
Delivery of blocks to the place Construction	Two people are needed to control the process of printing
Laying of blocks lasts for 1-2 months	Printing the walls of the building lasts for 2-3 days
Additional insulation	The building is ready for finishing
Construction waste on construction site	No construction waste
Additional materials and equipment	Minimum of handling operations

But, in spite of all this, there are still several factors of the widespread use of 3D printers in construction:

1. Concrete that requires vibration treatment cannot be used as a working mixture, since due to the inability to use the appropriate settings, the material strength is significantly reduced. A high setting and hardening speed of mix is required. It is impossible to infinitely enhance the action of an accelerator without the danger of deterioration. The solution may be the development of new / deep modification of the types of building materials. At the moment, such concrete mixtures are too expensive to produce.
2. There is no proven technology for the installation of valves; vertically mounted rods prevent the printer from moving freely over the layers at the correct height. The reinforcement technology can be applied innovative technology woven bulk-mesh frames. It is proposed to connect the reinforcement on the pins, screw it, etc. Perhaps the problem of reinforcement will be solved by using two robots at once: one mounts the reinforcement, the other lays the mixture.
3. The impossibility of vibration treatment. In the case of monolithic and block-panel construction, vibration treatment is used to remove air and air voids from concrete. Due to this, reinforced concrete has a very high strength. But in the case of 3D construction, due to the lack of formwork and the short-term placement of the supporting molding blades in contact with the concrete solution, vibration processing is practically impossible. As a result, the constructed building or structure according to this technology will stand for a long time.
4. Filling technology is carried out by waves, in which the air gap remains, which provides the necessary degree of house insulation. This method is suitable only for a temperate climate. In colder countries, a house created using this technology will require additional insulation.
5. And one of the most significant limitations is that the concrete, used in contour casting, hardens only at above zero temperatures, which negates the possibility of using such 3D printers in winter or in cold climates.
6. There is a restriction on the height of buildings. They should be not more than four floors. Due to the fact that the construction of the building uses a special lightweight reinforcement cage, which fits only in the process of pouring concrete. This greatly reduces the strength of the building.

The average print speed of a modern construction printer is 7-10 m2 / min, while in China, devices that can build houses at 50 m2 / min are already being actively used. In just a couple of hours, such installations can print a whole house up to 200 m2. Taking into account the finishing and laying of all necessary communications, construction takes from one month to six months.

The cost of building of a small, about 100 square meters, typical country house is only 2.5-3.5 thousand dollars.

The cost of such a house with doors, windows, roofing, communications, with external and internal decoration is about 8-10 thousand dollars. A similar structure of brick will cost at least twice as expensive. It is possible to sell a printed house with a full finish for 16-25 thousand dollars.

Such low construction costs are ensured by low prices for materials and their extremely accurate dosing, as well as high quality construction. So far, the house building industry using 3D printing is at the initial stage of its development, and few companies produce equipment. The cheapest way is to buy a printer made in China.

A little more expensive the products of the Russian company ZAO Spetsavia will cost, which is based in Yaroslavl. In terms of price and quality, they are the best on the market. The ubiquity of construction printing is only a matter of time. The technology makes it possible to build houses quickly and at minimal cost. This may be relevant in countries with a large population and lack of housing, for example, India, China. And also in the countries of the third world, where people are forced to live in barracks built of scrap materials. Rapid construction can be used in disaster areas - it will be possible to produce fast houses and temporary shelters in a matter of days.

And NASA plans to use this method of construction when building a base on the moon [6]. We look forward to further development of technology. In our opinion, the next step will be the use of robots, which do all the work without human intervention - build walls, reinforce them, build roofs, conduct communications, equip houses with stairs and windows, and make exterior and interior decoration of the rooms. Not far off, and the construction of multi-storey structures - seven floors and more.

Comprehensive development of concrete mixes will help to select not only compositions for specific conditions and tasks, but to use construction waste as a raw material. The use of mineral additives in concrete solutions will also help to maintain the ecology of the planet - reduced cement consumption will reduce carbon dioxide emissions into the atmosphere.

To summarize, we can say that this technology has great potential in development, but it requires significant improvements and additional financial investments. And while it justifies itself only in the stationary, industrial and mass production of complex concrete products suitable for the construction of prefabricated houses on the principle of the designer.

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Specific Features of Socialization and Rehabilitation of Minors Prone to Commission of Offenses

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Abstract

The article is directed towards the solution of such an urgent problem of contemporary society as the improvement of the system of preventing juvenile delinquency. The content of the process of preventing juvenile delinquency has been disclosed in the article. This process is viewed as an integral part of the single educational process, designed to ensure the solution of common objectives of socialization and education of the younger generation with the maximum use of available funds of educational, cultural, public and state organizations. It has been proved that the prevention of juvenile delinquency should include: 1) cooperation of law enforcement agencies, cultural, educational, scientific centers, public and state institutions in the planning, organization and maintenance of preventive activities; 2) the development and use of adequate criteria to evaluate preventive activities together with designated institutions and organizations; 3) professional training programs for specialists who are able to provide social, psychological, pedagogical assistance to children with difficulties in social adaptation; 4) the organization of continuous information interaction between all institutions and subjects of prevention. In addition, In the article the author(s) also identifies the effective mechanisms for socialization and rehabilitation of minors who are prone to commission of crimes or have committed offenses and crimes.

Keywords: socialization, rehabilitation, deviant behavior, minors, psychological and pedagogical support and follow-up.

Introduction

The objective of the social formation of an individual is important for any state, especially for our multinational country during the period of the reorientation of values that have a significant influence on the formation of social experience in children and teenagers. The social significance of social institutions which create conditions for socialization significantly increases. Institutions that provide recreation and rehabilitation for minors occupy an important place among all these institutions.

Socialization in terms of institutions that provide recreation and rehabilitation of minors comprises two stages. The first stage is intended for adaptation to the conditions, to the role functions of an adult person, social norms, taking shape at various levels of the child's life in a recreational or thematic institution. The second stage of socialization is characterized by the process of transferring social norms and values into the inner world of a child. Being engaged in remedial work, the specialist takes account of the previous, formed experience of deviant behavior of the minor. Health care and recreation institutions that provide their services to minors, being in contact with the family, school, and state, to some extent, ensure the inclusion of children and teenagers in social life. The concept of developing a system for the prevention of child neglect and juvenile delinquency for the period up to 2020 emphasizes the importance of a child's attending recreation and recreation institutions as a part of the socialization process. It represents the purpose-oriented management of personal development based on the inclusion of children and teenagers in various types of social relations in communication, play and practical activities. Spending time in recreation and health care institutions a child can become aware of himself as a person, assert himself, take up his interests. In this connection, pedagogical activity in such institutions should be based on harmonization of social needs and interests of an individual, ensuring the priority of the interests of each individual and society (Efimova, Salakhova & Oschepkov, 2015; Masalimova et al., 2019; Salakhova et al., 2018a; Zmanovskaya, 2004).

Taking account of the specific character of institutions that provide recreation and health care services for minors, we can identify three main criteria of the effectiveness of socialization:

– a cognitive criterion characterizing the availability of knowledge about various types of social relations; knowledge of the features of social communication; awareness of the dependence of their success on the development of public relations.

– a motivational criterion characterizing the need for social communication in various groups; focus on achieving results in social activities; adequate assessment of their participation in activities.

– an activity criterion characterizing the inclusion in socially significant activities; being initiative and active in various types of activity; a creative approach to activities.

Thus, the attendance or stay of children and teenagers in the institutions of recreation and rehabilitation will ensure the implementation of the three criteria of socialization and will help eliminate the causes and conditions conducive to offenses and anti-social actions of minors (Mitin, 2016; Rean, Belinskaya & Narovsky, 2013; Kalenik et al., 2018; Salim, Wadey & Diss, 2016; Sevastyanova, 2004).

Sample and Techniques

In recent years in Russia, in practical work with children and teenagers, who have certain deviations in their behavior, there is a tendency to use the potential of recreational institutions to implement remedial activities by various specialists. The provision of reforming activities in the setting of recreation and health care institutions has its own characteristics in comparison with other institutions of education that implement this type of activity. The main feature is the focus of reformation work on the personality of a teenager himself and the changes that have occurred in him, due to the established experience of deviant behavior in the main living environment.

Solving the problem of reforming deviations in minors' behavior is an urgent task not only for parents and teachers, but also for state and municipal administrations and committees. An increase in the number of children's and teen clubs in Russia, as well as the growing cooperation of educational institutions with social and psychological centers, other health care centers and foundations has recently contributed to it. However, the system of interaction between such centers and educational institutions is not always sufficiently effective due to temporal limitations. Work with children is often conducted only during the school period and within the walls of the school. During the holidays, some of the children go to an institution of rest and recreation for minors, the rest remain either under the care of parents or at the mercy of the street. They solve the problem of arranging their own leisure by themselves, and substantial and interesting activities, exciting activities during the holidays are often missing. It is during the holiday period, according to law enforcement agencies, the number of offenses among children and teenagers rises. Therefore, to keep this category of children busy means not only to arrange interesting holidays, but also to carry out remedial work in order to form attitudes towards socially-approved patterns of behavior. The majority of the minor children who attend the institution of recreation and health care, have records in the police department for vagrancy, petty hooliganism, the tendency to arson, the use of psychoactive substances among children. Now more and more recreation and health care institutions for minors are springing up, which bear not only the function of providing rest, but also a reforming one. In this regard, the issue of planned and systematic arrangement of the activities of children and teenagers, in particular, in organizing rest and recuperation, becomes especially urgent (Rubinstein, 2000)

Recreation and health care institutions for minors are, on the one hand, a form of organizing children's free time, and on the other hand, supplementary education institutions whose tasks are to provide training and upbringing for minors. These institutions are a part of the social milieu in which children discover, realize their potential, gain experience of social interaction in isolation from the familiar family or school atmosphere. The goal is pursued by complementing and expanding the influence of the family and the school on the child: assisting in social, spiritual and moral well-being, healthy physical and mental development of the child. In view of the current nature of the development of our society, the leading objectives of education should be directed towards the development of the skill in children and teenagers to learn how to behave in a difficult situation, the development of self-regulation skills, communicative competence, skills of coping behavior (Masalimova & Chibakov, 2016).

Reforming work in the setting of providing recreation and health rehabilitation should represent a specialist's activity aimed at breaking child's attitudes, ideas, values, stereotypes and motives of deviant behavior and the formation of new ones.

Activities to reform and bring up should be directed towards the elimination of certain attitudes, ideas, values, motives, behavioral stereotypes and the formation of new ones in order to achieve self-realization of the individual in society that can be carried out with social and educational means. This elimination is manifested in a change in attitudes, in rethinking of values and meanings which results in the individual's reformed behavior in accordance with the norms adopted in the social environment, society as a whole. Owing to this activity, a breakdown of previously formed motives and attitudes to deviant behavior takes place.

The need for reforming activities arises in cases of social deviations in children and teenagers' behavior. The assistance rendered to the personality of a minor has here the character of reforming and educational activity. Its goal is to break the manifested elements of readiness for deviant behavior and to form a stable system of norms and values that correspond to the norms and values of society (Belicheva, 1994; Fortova & Eropov, 2016).

Reforming minors' deviant behavior in recreation and health care institutions should include a set of measures directed to changing the established forms of maladaptive behavior, activating personal resources that promote adaptation to environmental conditions and the formation of socially effective behavior strategies. Reforming deviant behavior of minors should provide: a system of educational influences of teachers aimed at improving the child's personality that was incorrectly formed, at changing the qualities, habits and traits that contradict the norms and requirements of society; overcoming internal contradictions, replenishing and reforming the mental development of minors; activation of positive behavior of children and teenagers by enhancing the educational process (Voiskunsky, 2010; Masalimova et al., 2014)

Reforming juvenile deviant behavior should include:

– the analysis of the positive and negative properties of a minor, the study of his needs, deviations in behavior;

– the study of the pedagogical situation among the people around of children and teenagers with the subsequent neutralization or elimination of harmful influences and strengthening the positive effects of the milieu;

– restructuring the negative stereotype;

– changing the habitual behavior of a minor by involving him in new activities.

The essence of reforming deviant behavior of minors in recreation and health care institutions is the normalization of the entire mental life of the child, the accelerated development of the entire positive personality fund. The improvement of character is achieved by all measures that make the behavior of a minor normal and reform him in a social position. Such measures may be social, pedagogical, neuropsychiatric, physical recovery, or they may represent a combination of them.

The main guidelines of psycho-correctional work with deviant minors are the following:

– reliance on individual and group psychotherapeutic work;

– an individual approach to learning and morale building activity, an improvement of educational effects and optimization of interaction.

When organizing reforming work with minors, it is necessary to consider a number of psychological and pedagogical recommendations:

The uniformity of requirements from adults when organizing reforming work with a minor;

The adequacy of the requirements for a minor - compliance with his capabilities, giving him the right to determine his own main interests in life;

Providing emotional comfort to a teenager;

Providing autonomy in such an individual and age form that a minor develops a sense of belonging, an understanding of the significance of his / her own place in life and social role, and in the final educational process led to a change in moral values, increased responsibility and self-confidence.

One cannot expect an immediate effect from psycho-correctional work. It often appears after a rather long period when significant changes have occurred in the minor's personality (Mendelevich, 2001).

Results and Discussion

Leisure time during holidays is a socio-pedagogical phenomenon, the effectiveness of which is due to a variety of possible forms of learning and educational activities, the intensity of communication between children and adults during this period. The most familiar form of recreation for children at the present stage are children's health camps of suburban, sanatorium-resort types, labor and recreation camps. Modern concepts of arranging recreation and health improvement for children and teenagers view children's recreation in recreation camps not as a special pedagogical system or methodology, but as an inseparable part of the whole life of a child, where spiritual-esthetic, rational-cognitive, ideological and moral principles are harmoniously combined, this is child's learning to live in the most direct, natural way. The camp creates favorable opportunities to attract all children to physical culture and sports, tourism, environmental work, to expand and deepen knowledge about the world, to develop children's creative abilities, and to organize socially useful work. Taking into account the wishes of children and parents, specialized groups, sessions, camps, as well as groups of different age groups, teams can be organized.

When organizing work with minors in a recreation and rehabilitation institution, it is necessary to consider the following:

1) the experience of independence. The atmosphere of children's living together gives them the opportunity to learn about their life experience in a peer group away from home, to develop behavioral skills in a team.

2) entertainment and recreation. Children gain valuable and useful leisure experience, which is remembered for a lifetime.

3) the experience of democracy. Children with different education in the camp are given the opportunity to live in a real democratic community.

4) children's amateur activities. Participation in camp programs should be related to the interests and needs of the child. Only in this case, children will take an active part in the planning and implementation of the ideas of the camp life.

5) friendship with adults. Relations with young leaders of groups - for most children, are a new kind of relationship with adults. A good leader is an adult friend who loves children, understands their individuality, helps them, makes suggestions, listens and guides.

6) individual maturation and development. The camp should give the child a chance to discover their potential, experience personal initiative and gain respect for their behavior.

7) the experience of health-saving. In the camp, children develop habits of a safe and healthy lifestyle, implement them in real life, and this happens not at the level of talks, but expressed in real actions.

8) development of new skills and interests, improvement of the previous ones. Various activities in the camp are highly appreciated by children afterwards.

9) development of spiritual life and values. In the camp, children are aware of many moral concepts, not so much through training, as in real life situations.

10) development of a sense of responsibility for their actions; the experience of independent decision making; the experience of respecting the rights of others; the experience of interpersonal relationships and adaptation in the team; environment conservation skills. The provision of educational work in a children's

camp should include a sound system of teachers' actions directed to streamlining the value choices of joint activities of its subjects. When organizing educational work, it is required to consider the following essential characteristics of the educational process, which are most significant when it is organized in a children's health improving camp.

Firstly, the educational process in a children's camp is not a direct impact on the child but reflects the levels of social interaction of various subjects: individual (specific people), group (micro-groups and micro-teams) and social institutions of education (school, family, friends, etc.). Some ties exist and are maintained directly, others indirectly.

Secondly, the content and nature of the interaction between groups and individuals in the educational process are due to social values, ideas about the norms of joint activity. The ideas embodied in the content of the educational process in a children's camp also determine the attitude of children and adults to the outside world, and ultimately, to themselves.

Thirdly, when organizing the process of morale building activity one should take into account the peculiarities of the temporary association of children (short duration of functioning, heterogeneity of the composition, relative autonomy of existence, the collective nature of life, the completed cycle of development).

In the content related side of children's life in health care institutions, the following aspects should be present:

Health improving - this is the optimal mode of their physical exercises, body hardening, balanced nutrition, the rational daily regimen.

Compensatory. In the system of provision of summer recreation for children and teenagers, the principle of succession and continuity of communication and upbringing is valid, contributing to the comprehensive development of the personality of children and teenagers, performing a compensatory function in relation to school and allowing children to relax, remove physical and mental overload, creating new conditions for enriching experience, application of new knowledge and skills, developing children's self-realization, initiative and amateur activities.

The areas of morale building work with children and teenagers in a children's camp: mental development as mastering the foundations of sciences, laying the foundations of the scientific worldview, experience of rational cognitive activity, development of children's intellectual culture and their creative potential.

The content side of the life of recreation and health care institutions for children is provided by the participants of the educational process: the children's team and the teaching staff. The key links in the system of morale building are minors with deviant behavior and a teacher of a health care institution.

The manifestation of the forms of deviant behavior in minors is a consequence of violations of the psychological atmosphere of society. This is connected with a range of reasons: moral principles are falling apart, the function of the school to bring up and foster is weakening, free time during the holidays is not controlled by parents, children's leisure activities are not well organized, various deviant manifestations in the behavior of minors are activated. It is impossible to solve all these problems within the school, so there is a need for non-formal education that is able to organize a child's free time with the opportunity to develop skills and interests. One of the types of non-formal education is a recreation and education camp. The main purpose of this camp should be organized recreation and the creation of an environment in which the child is given an opportunity for self-knowledge, self-development, self-awareness as a part of society and determining roles for himself. Thus, in the course of working with minors in recreation and health care institutions, the following measures should be carried out with each child: to form the need to be a "personality"; creating conditions for the involvement of children in development activities; to create conditions that allow children to be aware of new social roles; to create conditions to participate in the measures for protecting the environment; to help in searching for people of the similar opinion and attitude; assistance in developing self-organization; to arrange health improving recreation: morning exercises, swimming, sports games; to providing an opportunity to participate in competitions, to know the joy of success; to provide an opportunity to participate in games and events that give pleasure and good mood.

With proper organization of psychological and pedagogical activities, recreation and health care institutions provide a favorable atmosphere for self-education and self-knowledge of the minor's personality. When providing recreation and rehabilitation of minors, all the leading activities become available: sports, communication, educational, labor, esthetic, cognitive and artistic and creative ones. Thus, the educational system of recreation and rehabilitation should be an ordered set of components directed to identifying and developing positive personal qualities, maintaining physical fitness and a positive psychological state of children during their holidays.

Conclusions

Improving the activities for the purpose of attracting institutions that provide recreation and health care for children to prevent juvenile delinquency during the holidays remains an urgent problem today. To solve this problem, the prevention of juvenile delinquency should be considered today not as an isolated set of measures, but as an inseparable part of the single educational process, designed to ensure the solution of common objectives of socialization and education of the younger generation with the maximum use of available funds of educational, cultural, social and state organizations.

Prevention of juvenile delinquency should include:

1) cooperation of law enforcement agencies, cultural, educational, scientific centers, public and state institutions in the planning, organization and maintenance of preventive activities;

2) the development and use of adequate criteria to evaluate preventive activities with designated institutions and organizations;

3) professional training programs for specialists who are able to provide social, psychological, pedagogical assistance to children with difficulties in social adaptation;

4) the provision of continuous information interaction between all institutions and subjects of prevention.

Thus, when organizing various types of leisure activities for minors in various institutions, it is necessary to take into account a social recovery of children and teenagers, which will ensure socialization and rehabilitation of minors prone to commission of offenses and crimes or those who have already committed a crime.

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Modernization of Preschool Education: Information and Communication Competences of a Teacher

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Abstract

Modernization of the educational system as it is defined in the Concept of a long-term socio-economic development of RF for the period to the year 2020 is a foundation for the economic growth and social development of society, a factor of the citizens well-being and country security. Modernization touches upon the structure, content and technologies of upbringing and education on all the levels of the educational system.

In the Federal Law "On Education in the Russian Federation" an essential role is assigned to the system of preschool education. On January 1, 2014 the Federal Standard of Preschool Education came into effect.

The relevance of the problem under study is determined by the fact that in light of the adopted national programme for modernization of preschool education the information and communication expertise of a teacher takes one of the lead places. The contemporary researchers specify the information expertise of a teacher among the baseline competences.

The need to study the given problematics is conditioned by discrepancy between the necessity to introduce information and communication technologies into the professional and educational activity of a teacher in a preschool educational organization and the low level of maturity of competences and motivation to master and introduce them.

The objective of the paper consists in substantiation of conditions for development of the information and communication expertise of a teacher in a preschool institution in light of modernization of the preschool educational system.

The lead approach to the research of the problem is a pedagogical experiment consisting of the summative, formative and controlled stages enabling to reveal the maturity level of the information and communication competences of a teacher and the level of motivation to introduce into proper professional and educational activity.

The authors have analyzed the problems of modernization and informatization of a preschool educational system on the modern stage, professional expertise of a teacher as a basis for establishing new quality of education, and information and communication technologies of a preschool educational organization. The research of introduction of information and communication technologies into the educational process of a preschool educational organization was conducted, and model of managing the process of development of the information and communication expertise of a modern teacher was proposed.

The academic novelty of the research is that there were revealed the organization-pedagogical and psychological conditions required for the efficient management of the process of development of the information and communication competences of a teacher in a preschool educational organization in light of modernization of the preschool educational system.

The materials of the paper can be useful for building the information and educational environment in a preschool educational organization, as well as for planning the activities of methodological departments of the preschool education management.

Keywords: modernization, preschool education,teacher, information and communication expertise, competences.

Introduction

The primary objective of the Russian educational policy is to ensure modern quality of education on the basis of retention of its fundamental nature and compliance with the urgent and long-range requirements of a person, society and state. The goal of the education modernization consists in creating a mechanism of sustainable development of the educational system.

The preschool age is the crucial period for the personality development of a child. To achieve the optimum level of development of each preschool age child that will allow him/her to be successful at school is one of the priority objectives of the preschool education development in the Russian Federation. It cannot be settled without a flexible multifunctional system of a preschool education securing the constitutional right of every citizen of the Russian Federation for the generally accessible and free preschool education [1].

The system of a preschool education is a social institute of prime importance and necessary condition for the normal social development. The logic of modern development of the Russian education assumes the focus on new goals and realias which determine the life of society [2].

On September 1, 2013 the Federal Law "On Education in the Russian Federation" came into effect [3] where an essential role is assigned to the system of preschool education. On January 1, 2014 the Federal Standard of Preschool Education came into effect [4].

Modernization of the education system as it is defined in the Concept of a long-term socio-economic development of RF for the period to the year 2020 is a foundation for the economic growth and social development of society, a factor of the citizens well-being and country security. Modernization touches upon the structure, content and technologies of upbringing and education on all the levels of the educational system [5].

The modern model of education focused on the education quality enhancement is presented in the Concept of a long-term socio-economic development of RF for the period to the year 2020. "The developing society requires modern equipment, moral and entrepreneurially-inclined people who can take responsible decisions in a situation of choice forecasting their potential consequences, are good at cooperation, and distinguished by mobility, dynamism and constructiveness.."

The primary objective of the educational policy in the sphere of preschool education is to ensure the guarantees of an accessible and quality preschool education providing equal starting conditions for the subsequent successful education of a child at school.

The accessibility at that is characterized by the possibility to choose the nursery school, and quality – by the possibilities and capabilities of a child to master programmes on the subsequent levels of education. In order to improve the quality of the educational service the following is required: participation of citizens in the development of preschool education (evaluation of the education quality, formation of the education content, investment in the preschool education); extension of organizational forms of preschool education; elaboration and introduction of a new system of labour remuneration of nursery teachers; introduction of a normative per capita financing in the system of preschool education.

Such key qualities for the present society as creativity and capability for the search of knowledge are already formed at the age of 3–6 years. Therefore the contemporary model of education assumes high technologies for development of imagination, literacy and other basic skills of children. The modern educational standards are based on transition from the attitudes of memorizing bulk information to mastering new types of activity – project-oriented, creative and research.

A variety of problems facing a modern teacher requires of him/her the knowledge of information technologies, ability to efficiently cooperate with other people, fully use personal resources, willingness to implement proper educational path securing successfulness and competitiveness [6].

Therefore training of specialists in the sphere of preschool education acquires special value. Currently not just a nursery teacher but research-teacher, psychologist-teacher and technologist-teacher is in demand.

The primary directions of modernization of a preschool education are as follows:

- full coverage of children aged above three by preschool education;
- change of the financing system of preschool institutions: transition from the municipal to the regional level;

- ensuring standartization of preschool education since the preschool education becomes a part of the general education, its first step;
- learner-centered education of preschoolers;
- renewal of resources of the educational environment;
- creation of new mechanisms for the education quality assessment;
- introduction of new forms of social partnership;
- informatization of the educational space (systematization, renewal of information resources, development and approval of technologies of the multimedia support of the educational process, elaboration of a system of a consulting methodological support in the sphere of modern communication technologies being mastered by teachers and application thereof in the educational practice of a preschool educational institution, creation of a bank of electronic educatory and developing cycles, programmes, didactic and methodological materials on the basis of introduction of information technologies into the activity of a preschool educational institution);
- provision with sports facilities and modern playgrounds, education and laboratory equipment and means of transportation;
- creation and running of proper web-sites for preschool institutions;
- creation of resource centres in regions, coordinating the development processes in a preschool educational institution to reveal and support gifted children at an early age, and their professional development;
- contentment of the population with the quality of preschool education;
- activation of the development of a preschool educational institution by means of joint work with parents and municipal community;
- improvement of professional training of teachers of preschool institutions; the reform of salary and elaboration of professional standard for the teachers occupied in preschool education is instrumental in it [7].

Under conditions of preschool education modernization the problem of health preservation and promotion becomes especially acute. The issues of the formation of healthy lifestyle by the rising generation are not discussed in the modern didactics any more, but are considered universally recognized. They are elevated to a state policy.

The Law "About the Education in Russian Federation" defines preschool education as a full-value and the first level of the general education system (chapter 2, p.10) and one of the objectives of nurseries is to preserve and promote the health of children (chapter 7, p. 64). Moreover, in the Federal National Requirements to the structure of the primary educational programme of preschool education, the educational sphere "Health" was detached for the first time as an independent sphere with the priority objective to shape initial notions about healthy lifestyle [3,4].

On the modern stage of development and modernization of the Russian education, the psycho-pedagogical studies raise the issue of the necessity to highlight the objective of healthcare of children and reduction of diseases through the development of motivation for healthy lifestyle, and creation of conditions in educational institutions for preservation and promotion of children' health [8].

The modern children were born and live in the information society where the information and educational environment is already actively formed and functions beginning from the first element of continuous education — preschool educational institutions. The key objective of the information and educational environment in a nursery is to generate the potential for the enriched development of a child's personality and prepare it to life in the information society. For this purpose taking into account the specific nature of the preschool childhood it is required to familiarize children with the elementary foundations of the information culture. It is important to develop their interest to the modern technologies, essential scientific discoveries, gradually enrich their notions in the area of information and communication technologies, develop knowledge and skills, generate the need to use the modern equipment and advanced technologies in various types of activity.

In modern information society the civilization development is based on the information processes where information and communication technologies are widely used. Introduction of the information and communication technologies into all spheres of human activity resulted in the occurrence and development of the global process of informatization.

In its turn the process provided an impetus for the development of the education informatization which is one of the key conditions for reforms and modernization of the system of domestic education since it is the educational sphere which trains and educates people who not only form a new information environment of society but have to live and work in this new environment themselves.

Russia just as many other countries of the global community pays more and more attention to the problem of education informatization which is considered as one of the most critical strategic problems of the civilization development.

The education informatization shall be understood to mean the purposeful activity to develop and introduce the information and communication technologies having the following directions:

- in the educational process to prepare a person to life and activity under the conditions of a modern information society; improve the quality of the general educational and professional development of specialists on the basis of a wide use of information and communication technologies;
- in the management of the education system to enhance efficiency and quality of the management processes;
- in the methodological and research-pedagogic activity to improve the quality of teachers' work; develop and introduce new educational technologies on the basis of use of information and communication technologies [9].

An essential direction in the development of educational organization in the sphere of information and communication technologies (ICT) is the development of expertise of teachers and heads of the educational organization. The process implies the creation of the information space inside the educational organization.

J. Raven defines the expertise as a special human ability required to perform a specific action in a specific subject area including narrowly-specialized knowledge, skills, ways of thinking, and readiness to bear responsibility for one's actions.

N.F. Efremova adhering to synergetic approach defines competences as "generalized and profound mature qualities of a person, the ability to use and apply the obtained knowledge and skills most flexibly;" "a set of knowledge and skills enabling a subject to adjust to changing conditions, the ability to act and survive in the given conditions" [10].

In the periodical press the problem of development and introduction of the information and communication technologies in preschool educational organizations has been discussed for already several years. The lead domestic and foreign scholars, specialists in the area of preschool education express their viewpoint "pro and con" of the information and communication technologies. In general, the scholars note the developing role of the computer-based play structure in a nursery in activity with children. It is emphasized that "the society informatization sets an objective for the nursery school teachers to become a guide for a child into the world of new technologies, and an instructor in the choice of computer games, and shape the foundations of the information culture of a child's personality" [11-15].

The information space shall be understood to mean a team of like-minded people willing, able and having certain conditions for the development and formation of the information model of the educational organization, use of information and communication technologies in the educational process and in management of the educational organization, and successfully developing the electronic cooperation and partnership with the virtual educational pedagogic associations, universities, Ministry, superior governing bodies and administration [16].

The information technology is a complex of methods, ways and means ensuring storage, processing, transfer and display of information, which are oriented at enhancement of efficiency and labour productivity. At the present stage the methods, ways and means are directly interconnected with a computer (computer technologies) [17, 18].

Communication technologies determine the methods, ways and means of human interaction with the external environment (the reverse process is also important). Computer takes its place in these communications. It provides comfortable, individual, diversified and highly intellectual interaction of the communication objects. While combining information and communication technologies, projecting them on the educational practice it should be noted that the primary objective of introduction thereof is human adaptation to life in the information society.

It is totally clear that the information and communication technologies become the key tool to be used by people not only in professional activity but in daily life as well [19, 20].

However, as of today there is no clear system to develop such expertise while methodological recommendations and textbooks available represent some sketchy data without distinct structure and logic. Such textbooks are hard to use and do not represent any possibility to develop the information and communication expertise by a teacher on such a level that is declared in the regulatory documents.

The contemporary researchers specify the information expertise of a teacher among the baseline competences [21-23]. In other words teachers with the help of information technologies should be able to search, analyze, select, process and transfer the required information on their own.

The information and communication expertise of a teacher shall be understood to mean "the ability and readiness to arrange one's professional pedagogic activity using the means of information and communication technologies; implement the information interaction between all participants of the educational process" [20, 24].

In the Occupational Standard of a Teacher (as of October 18, 2013, No. 544n) a group of requirements to a modern teacher in the area of competences associated with the information and communication technologies is specified [7].

According to the document a teacher of the preschool educational organization shall have the following information and communication competences:

- all-user information and communication expertise;
- general pedagogic information and communication expertise;
- subject-specific pedagogic information and communication competence (reflecting the professional information and communication expertise of the respective sphere of human activity);
- implementation of contemporary including interactive forms and methods of educational activity using them both on the lessons and in extracurricular activity;
- know the information and communication technologies required and sufficient for planning, implementation and assessment of the educational activity with infants and preschool children;
- have basic skills of working with text-processing programmes, spreadsheets, e-mail, browsers and multimedia facilities.

The objective of the paper consists in substantiation of conditions for the development of the information and communication expertise of a teacher in a preschool institution in light of modernization of the preschool educational system.

The academic novelty of the research is that there were revealed organization-pedagogical and psychological conditions required for the efficient management of the process of development of the information and communication competences of a teacher in a preschool educational organization in light of modernization of the preschool educational system [29].

Research hypothesis: on the stage of modernization of the preschool educational system, the management of the process of development of the information and communication competences of a teacher in a preschool educational organization will be efficient if:

- teachers have a mature motivational readiness to master the information and communication competences;
- diagnostic methods will be elaborated to determine the indicators of teachers' skill level in information and communication competences;
- a programme ensuring consistency of development of the information and communication competences of a teacher in a preschool educational organization will be developed;
- conditions were created for the practical introduction of information and communication technologies by teachers into the educational space of a preschool educational organization.

Determination and approbation of these conditions is instrumental in:

- development of the motivational and psychological readiness of a teacher in an educational organization for professional development in the area of information and communication technologies;

- creation of the optimum model for management of development of the information and communication expertise of a teacher;
- development of a special programme with due account for the initial level of competences; creation of a motivational system for teachers;
- technical equipment of work places;
- systemic nature of studies on certain subject-matter with the subsequent introduction of the knowledge obtained into practical activity;
- entering amendments in the system of methodological work;
- creation of the situation of success, demonstration of achievements.

Thus, the review of the available research and methodological literature and modern regulatory documents in the sphere of modernization of preschool education persuasively shows the necessity of introduction of the information and communication technologies into the educational process and professional activity of a teacher of a preschool educational organization [25-28]. Accordingly, the information and communication expertise of specialists working in a system of preschool education is moving to the foreground.

Materials and Methods

The research activity was conducted on the basis of a Municipal Budgetary Preschool Educational Institution Nursery No. 277 of the urban district of Ufa city in the Republic of Bashkortostan and Municipal Budgetary Preschool Educational Institution Nursery No. 326 of the urban district of Ufa city in the Republic of Bashkortostan from November 2014 to April 2017.

25 teachers from the Municipal Budgetary Preschool Educational Institution Nursery No. 277 of the urban district of Ufa city in the Republic of Bashkortostan (experimental group) and 25 teachers from the Municipal Budgetary Preschool Educational Institution Nursery No. 326 of the urban district of Ufa city in the Republic of Bashkortostan (control group) as well as heads of the above mentioned institutions took part in a multiple-stage research.

The lead approach to the research of the problem was a pedagogical experiment consisting of the summative, formative and controlled stages.

Objective of the summative stage: to reveal the level of maturity of the information and communication competences of teachers. The following research methods were used on this stage:

- analysis of the psycho-pedagogical, methodological, regulatory and professional literature;
- questionnaire survey of teachers;
- interviewing;
- practical tasks;
- mathematical methods of processing of the research results;
- analysis, synthesis and generalization of results.

The objective of the formative stage of the research was to check the efficiency of work on management of the process of development of the information and communication expertise of a teacher in a preschool educational organization. On this stage a programme for the development of the information and communication competences of a teacher of a preschool educational organization was developed.

The research technique included 2 parts.

1. Theoretical part: theoretical course, discussion, answers to the questions, testing;
2. Practical part: independent work on the task, homework.

The tasks are classified in terms of the maturity level of the initial competences and are arranged successively.

The studies were conducted once a week with the teachers of the experimental group according to the plan, with the sub-group of teachers who had the first level of maturity in competences.

All practical skills were reinforced in independent activity in addition to the organized lessons. Lessons lasted 60 minutes.

On completion of each subject matter the testing was conducted in a form of a written assignment or test questions.

Alongside with the programme development we performed a job to create the motivation system to master the information and communication technologies and introduce into activity.

The financial incentive was realized by the administration of the preschool educational organization in form of a personal allowance to the teachers actively mastering and using the information and communication technologies from the payroll budget and from the fund of the activity yielding extra income. The mechanisms of non-financial motivation were also used.

There was also developed a model to manage the development of the information and communication expertise of teachers.

The innovative project “Electronic Didactic Games as a Means for Development of an Intellectual Potential of a Preschooler” was developed with the purpose of further introduction of the information and communication technologies into educational activity of a nursery. The primary goal of the project is to create conditions for the development of intellectual abilities in the process of independent design of electronic didactic games. The trainees had a possibility to master skills in the programme for presentations Power Point.

The activities were conducted to create and equip the developing objective-spatial environment. Teachers had at their disposal multimedia equipment including projection device, display screen, speakers, laptop computer; interactive board with a set of programmes, and laptop computers for use while formalizing the required documents, individual work with children, monitoring etc.

In the course of research activity we elaborated practical recommendations for teachers on creation of the information educational space in a preschool educational organization.

Objective of the controlled experiment: to check the efficiency of the elaborated model for management of development of the information and communication expertise of teachers.

In order to determine the efficiency of the work conducted we used the same diagnostic material as on the summative stage of the research activity.

On completion of studies teachers were offered to answer the questions of the same questionnaire as on the summative stage of the research activity.

Afterwards, the questionnaires of teachers were analyzed, and based on the answers conclusions were made about the level of maturity of the information and communication expertise of teachers on the controlled stage of the research activity.

Thus, we used the following complex of research methods: analysis of the psycho-pedagogical, methodological and professional literature on the problem under research, study of the pedagogical experience, analysis, synthesis, generalization, pedagogical observation, pedagogical experiment, sociological survey, conversation, interviewing and questionnaire survey of nursery teachers.

Within the frameworks of the research the questionnaire consisting of four sections was elaborated.

1 section. Knowledge of the basics of work with computer.

2 section. Ability to use office technologies to prepare various didactic and methodological materials.

3 section. Knowledge of the basics of work with the Internet.

3 section. Work with the information resources.

4 section. Motivational readiness.

The teachers were offered to specify the competences they have using the following answers:

- know;
- apply in practice on a regular basis;
- do not know, but willing to learn;
- do not know, not willing to learn;
- learn by myself.

The obtained research results enabled to analyze and make conclusions about the level of maturity of the information and communication expertise of teachers.

The reliability and accuracy of results was ensured by a sufficient amount of initial data, examples and calculations. While building a model of sampled population the method of quota sample was used. Among the quoted attributes the following were distinguished: age, level of the information and communication expertise, motivation to master and introduce the information and communication technologies in the professional and educational activity.

The respondents in experimental and control groups were divided into 2 groups: group 1 – teachers at the age of 20 – 40 and group 2 – teachers at the age of 40 and above.

Among those who participated in the research the fullness of quoted attributes in the experimental group was: 36% of teachers at the age of 20 – 40 and 64% of teachers at the age of 40 and above.

Among those who participated in the research the fullness of quoted attributes in the control group was: 40% of teachers at the age of 20 – 40 and 60% of teachers at the age of 40 and above.

Results

As a result of the research conducted there were determined three levels of maturity of the information and communication expertise of teachers of a preschool educational organization.

1. The basic level of maturity of the information and communication expertise including:

- knowledge of the computer operation basics (operation basics with the operating system, creation of simple documents by means of the text processing programme, creation of simple presentations);
- knowledge of the Internet operation basics (e-mail, information search);
- knowledge of the information systems capabilities;
- ability to create simple didactic and methodological materials using office technologies;
- knowledge of basic principles of introduction of digital educational resources into the education process;
- positive motivation to obtain knowledge in the sphere of information and communication technologies.

2. General level of maturity of the information and communication expertise:

- ability to efficiently search information in different sources, including the global Internet, electronic editions;
- critical view of the information found; selection of the information that can be trusted;
- ability to select the methods of the information representation with due account for the capabilities of the hardware and software;
- ability to install and remove applications and electronic educational resources;
- ability to use office technologies to prepare various didactic and methodological materials;
- ability to create and edit texts containing graphic elements, tables, schemes and formulas; to prepare various document templates in the word processor for the academic process;
- ability to create computation tables using formulas and built-in functions, construct graphs and diagrams in a spreadsheet;
- ability to create educationally efficient presentations (for the educational activity, speeches on a teachers' council and teacher-parent meeting, for presentation of proper educational experience etc.).
- knowledge of the methods of creation of proper Internet-resources for academic purposes;
- active participation in networking cooperation with parents and colleagues;
- knowledge of methods of using the ICT in the project and research activity;
- sustainable interest to ICT use in the educational process;
- aspiration to obtain the required knowledge in the sphere of ICT independently.

3. Professional level of maturity of the information and communication expertise.

- ability to arrange an efficient personal information space and information space of pupils within the frameworks of the information space of the educational institution;
- ability to create proper information resources for academic purposes using various software tools;
- knowledge of methods to generalize the experience of efficient use of ICT in the educational activity;
- ability to arrange an efficient information interaction in the global network with all participants of the educational process.

The analysis of results of the summative stage of research showed the lack of maturity of the required competences among 64.0% of teachers in the experimental group and among 35.0% of teachers in the control group. On this stage of research, teachers with professional level were not revealed in any of the presented groups. It is worth mentioning also that the low level of motivation to master and introduce the information and communication technologies is particularly noted among teachers with immature zero level of competences.

On the controlled stage of research the data was obtained testifying that 65.0% of teachers from the experimental group had a basic level of the information and communication expertise; 25.0% of teachers had a general level of the information and communication expertise and 10.0% of teachers had a professional level of the information and communication expertise (Fig. 1).

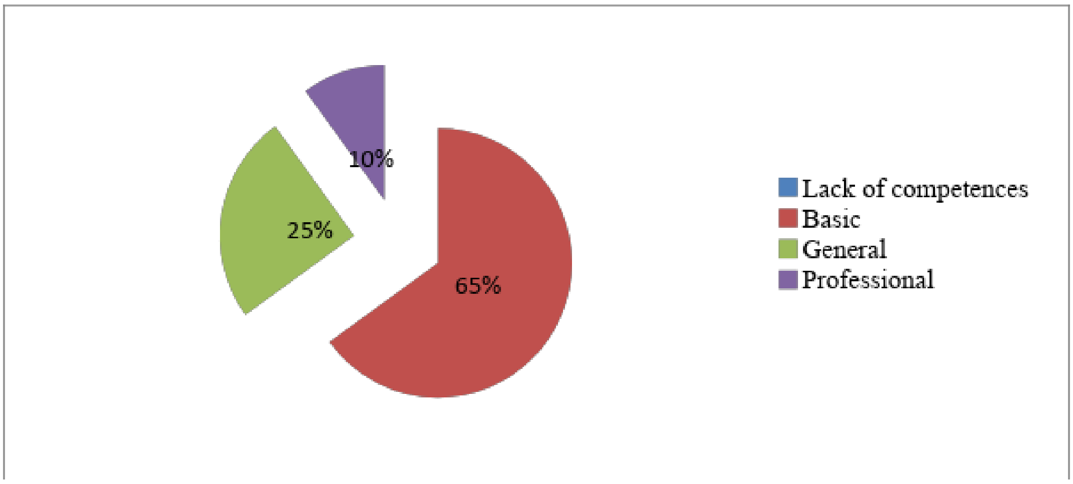

Fig. 1. The results of study of the maturity levels of the information and communication expertise among teachers from the experimental group

Fig. 2 shows comparative results of the levels of maturity of the information and communication competences of teachers from the experimental group on the summative and controlled stages of research testifying that the indicators of the basic, general and professional levels of the information and communication expertise of teachers grew significantly.

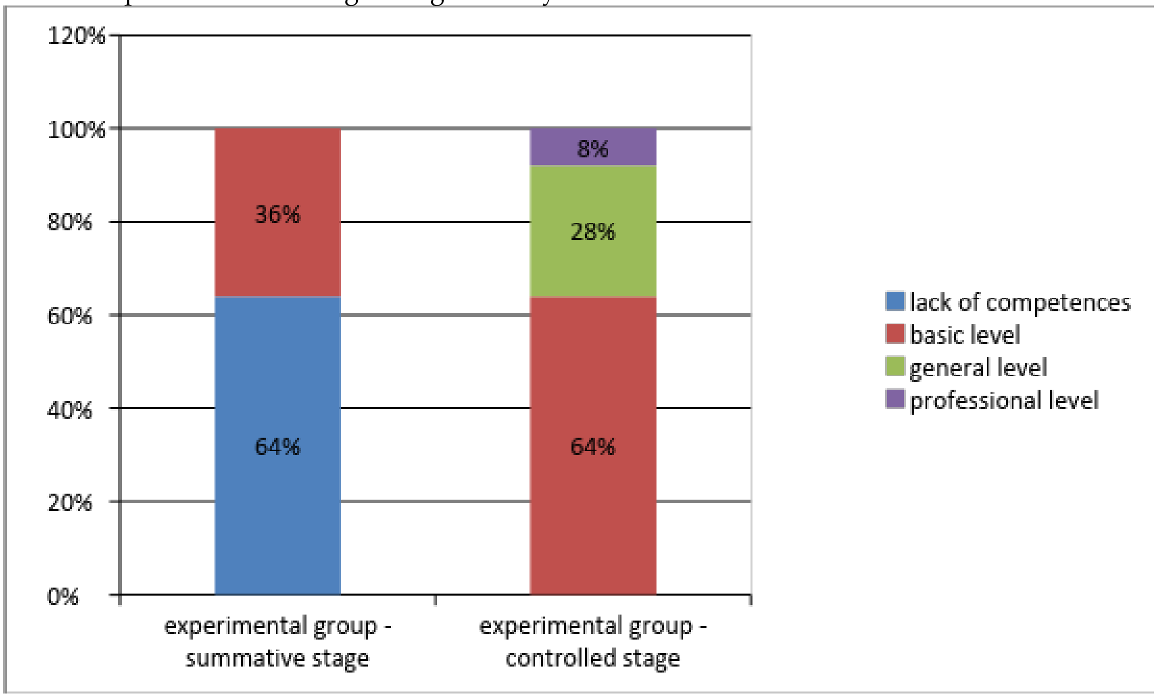

Fig. 2. The results of study of the maturity levels of the information and communication expertise among teachers from the experimental group on the summative and controlled stages of research

The results of the research data of the control group showed that 12.0% of teachers had a general level of the information and communication expertise; 60.0% of teachers from the controlled group had a basic level of competences; and 28.0% of teachers lacked such competence. Nobody from the control group had a professional level (Fig. 3).

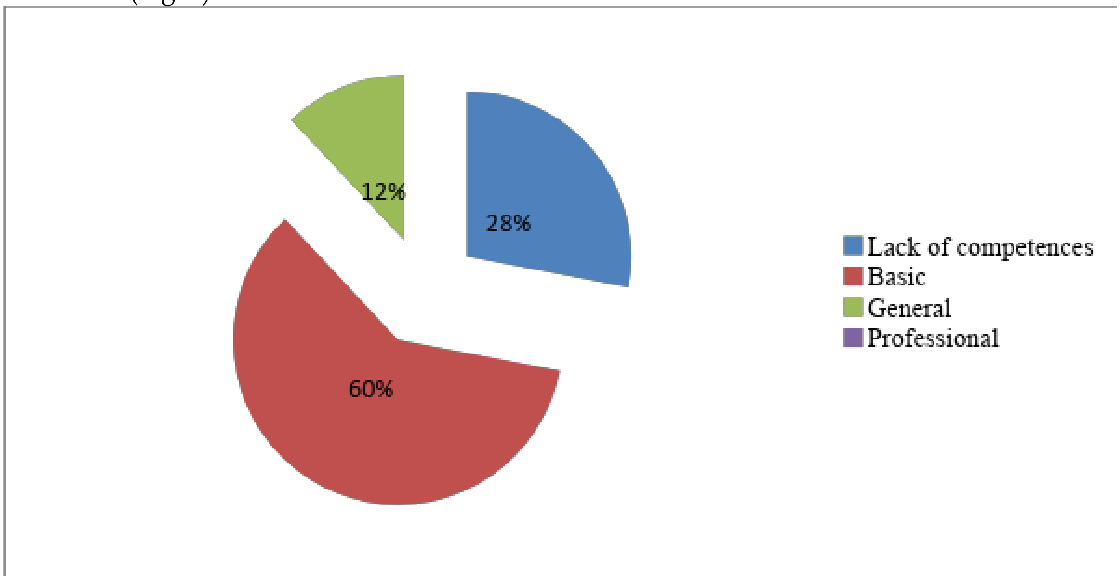

Fig. 3. The results of study of the maturity levels of the information and communication expertise among teachers from the control group

Fig. 4 shows comparative results of the maturity levels of the information and communication competences of teachers from the control group on the summative and controlled stages of research testifying that the indicators of the basic, general and professional levels of the information and communication expertise of teachers from this group did not undergo any significant change in terms of the competences development. Only a minimal shift is noted in the sphere of development of the information and communication competences among the small percent of teachers from the control group on the controlled stage of the research activity.

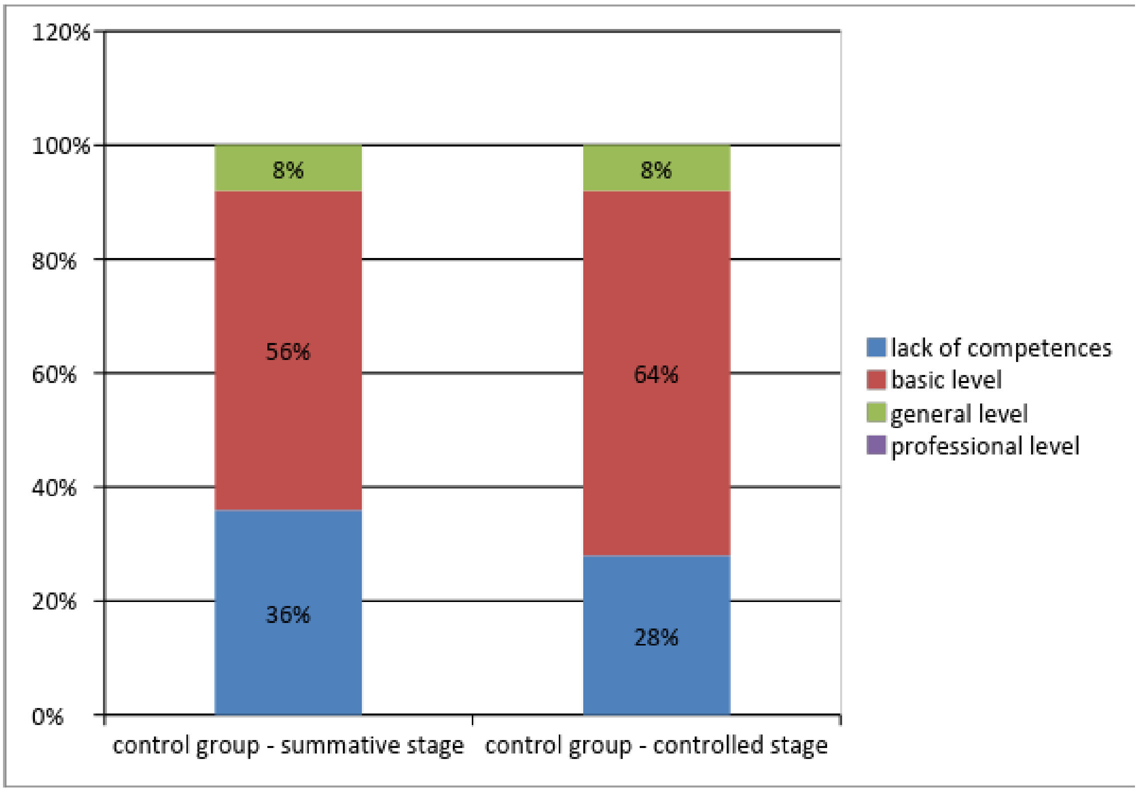

Fig. 4. The results of study of the maturity levels of the information and communication expertise among teachers from the control group on the summative and controlled stages of research of the teachers from the control group

Study of the motivation levels of teachers from the experimental and control groups to learn and introduce the information and communication technologies into the educational process and professional activity showed that there were significant changes in the motivation level of teachers from the experimental group.

There was registered positive motivation in the experimental group in 100% of cases among teachers at the age of 20-40 and in 86.0% of cases among teachers at the age above 40. There was registered positive motivation in the control group in 85.0% of cases among teachers at the age of 20-40 and in 50.0% of cases among teachers at the age above 40.

Sustainable interest to learn and introduce the information and communication technologies into the educational process and professional activity was revealed in 100% of cases among teachers at the age of 20-40 and in 68.0% of cases among teachers at the age above 40 (experimental group). In the control group there was noted a sustainable interest in 85.0% of cases among teachers at the age of 20-40 and in 50.0% of cases among teachers at the age above 40.

Aspiration for the independent study and introduction of the information and communication technologies into the educational process and professional activity was revealed in 65.0% of cases among teachers at the age of 20-40 (experimental group) and in 58.0% of cases among teachers at the age above 40. In the control group the aspiration for the independent study and introduction of the information and communication technologies into the educational process and professional activity was revealed in 53.0% of cases among teachers at the age of 20-40 and in 33.0% of cases among teachers at the age above 40.

Lack of interest to study and introduce the information and communication technologies into the educational process and professional activity was revealed in 25.0% of cases among teachers at the age of 20-40 (control group) and in 33.0% of cases among teachers at the age above 40.

The obtained data of analysis of the maturity level of the information and communication expertise and motivation level of teachers from the experimental group testify the efficiency of the developed model of management of the process of development of the information and communication competences of teachers in a preschool educational organization.

Discussion

The results of the summative stage of the research activity showed that the maturity level of the information and communication expertize of the teachers from the experimental and control groups on the initial stage is fairly low.

Also the low level of motivation to master and introduce the information and communication technologies is noted on the initial stage among teachers at the age of 40 and above.

These initial data were laid as a basis of the programme "Development of the Information and Communication Expertise of a Teacher in a Preschool Educational Organization" and developed motivation system for teachers.

During the formative stage of the research activity there were provided the following required conditions facilitating the development of motivational and psychological readiness of a teacher of an educational organization for professional development in the area of information and communication technologies:

- creation of an optimum model for management of development of the information and communication expertise of a teacher;
- development of a special programme with due account for the initial level of competences;
- creation of the motivation system for teachers;
- technical equipment of work places;
- systemic nature of studies on certain subject-matter with the subsequent introduction of the knowledge obtained into practical activity;
- creation of conditions to master the knowledge obtained;
- entering amendments in the system of methodological work;
- creation of the situation of success, demonstration of achievements.

On the stage of the controlled experiment the results were obtained reflecting the growth of the maturity level of the information and communication competences and motivation among teachers from the experimental group, whereas the same indicators of the teachers from the control group practically did not change.

The modern information society sets a task for the educational institutions to train specialists capable of:

1) adjust flexibly to changing life situations obtaining the required knowledge on one's own, and applying them skillfully in practice to settle the diverse emerging problems in order to be able to find one's place throughout the whole life;

2) have independent critical thinking, ability to see the emerging problems in reality and search for rational solutions using modern technologies; be fully aware of where and how the knowledge obtained can be used in reality; be able to generate new ideas, and think in a creative manner;

3) to deal with the information skillfully (be able to collect facts required for settlement of a certain problem, analyze them, hypothesize a solution, make the required generalizations, comparisons with the similar or alternative solutions, establish statistical regularities, make reasoned conclusions, apply the conclusions obtained to reveal and settle new problems);

4) be communicative, easy to get on with in different social groups, be able to team up in various spheres.

The results of the research activity enabled to confirm the hypothesis: management of the process of development of information and communication competences of a teacher in a preschool educational organization is efficient if teachers have a mature motivational readiness to master the information and communication competences; diagnostic methods to determine the level of mastery of the competences were developed; conditions were created for practical introduction of information and communication technologies by teachers into the education space of a preschool educational organization.

Conclusion

The developed model for management of the process of development of the information and communication expertise of teachers included a set of special measures facilitating introduction of the information and communication technologies into the educational process.

It includes documentation maintenance in electronic form, creation of a multimedia library with a selection of video plots, preparation of multimedia presentations for teacher-parent meetings and teachers' councils.

The following master classes were arranged during the research activity: "Development of Interactive Physical Activity Breaks," "Creation of Cartoons in Power Point Programme," "Development of Trivia Games on the Basis of Microsoft EXEL Spreadsheet," open displays of educational activity using laptop computers and interactive board, online conferences "Introduction of ICT into the System of Preschool Education," "Informational Expertise of a Teacher as One of the Lead Directions of Self-Development," "Game Computer Technologies."

The teaching personnel took an active part in the Internet contests where it placed. These are such contests as "A Teacher of the XXI Century," a contest of methodological elaborations the on artistic and aesthetic development, festival of innovative practices, "information and communication technologies in education" workshop and other.

At the same time there was specified a brand of the nursery "Interactive Childhood," and were developed and introduced into practice the methodological development "Computer Technologies as a Means of Development of Artistic and Creative Skills of a Preschool Child," innovative project "Electronic Didactic Games as a Method of Development of the Intellectual Potential of a Preschooler" and the programme of additional education on robotic technology on the basis of LEGO Education designer. At the same time the activities were performed to establish a single information and education environment of a preschool organization.

The developed and approved programme "The Development of the Information and Communication Expertise of a Teacher" and research materials can be used by methodological departments of the Republic, city, district and specific educational organization.

The use of the information and communication technologies in the educational process of preschool educational organizations is an imperative of our time enabling to engage children into active work and arouse the aspiration to obtain knowledge.

The positive aspects of using the information and communication technologies are that in the process of work on computers memory and attention of children improve. Computer is indispensable in this case since it transfers information in a form attractive for a child which not only accelerates memorizing of the content but also makes it meaningful and long-term. Children's working on computer is important for motor development as well. In any games children should learn to press certain buttons with their fingers, which develops minor muscles of hands. Dealing with the electronic computing machines arouses vivid interest of children as a play activity first and academic afterwards.

However while working on computer the human body is subjected to certain loads characterized by mental, visual and physical strain.

Today the information and communication technologies, especially the Internet, become a centre of attraction for children thanks to accessibility and appeal especially in metropolitan cities turning into an essential element of socialization, and replacing traditional forms of social activity (walks and games outdoors, reading books etc.) by new ones, formed by modern technologies. The interest to this subject-matter is essentially associated with the problem of security of children in the virtual space, since the Internet is not only an area for development of children but also a risk area for their psychic and physical health and social well-being [26, 27].

The older the child, the more Internet resources he/she uses, therefore the higher the risk to encounter negative and hazardous information.

But active use of a computer in the academic and corrective process arouses concern of both parents and teachers regarding the impact on the health of children.

Being a public resource, the Internet represents an essential method of personal and professional communication and provides incredible opportunities for discoveries and creative activity. However, its use is associated with certain risks and malicious intents. It is an open Window to the world which belongs to adults as well and contains unsuitable materials for children. The major part of the materials available on the Internet is improper for the minors. In this regard, one should follow certain safety rules which are comparable to the driving regulations and shall be observed irrevocably.

And most importantly, one should remember: "A child learns what he/she sees at home!" For this very reason when children start dealing with the global Network the rest of the family members should be an example for him/her.

The information and communication technologies are necessary, but time of the Internet use should be limited and websites for children are required.

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Models of simplified pre-trial proceedings in Continental Europe and the United States: comparative analysis

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Abstract

The urgency of the problem under investigation is caused both by the dynamics of the criminal procedure legislation, accompanied by implementing international experience in differentiated criminal proceedings in the Russian legal field, as well as by the difficulties arising in the activities of criminal justice authorities during simplified investigation (according to Chapter 32.1 of the Criminal Procedure Code of the Russian Federation). The purpose of the article is to characterize (on the basis of an integrated approach) the problems of criminal procedure regulation for preliminary investigation in Europe and the United States, and to work out the best practical ways for treating controversial situations arising in case of simplified proof. The leading approach to this problem is the comparative legal method which was used in studying foreign legislation regulating the reduced form of pre-trial proceedings in criminal cases. Analysis of crime data is based on the statistical method, on questioning 80 law enforcement officers and judges, and on analyzing materials of 58 criminal cases where the inquiry was conducted in a simplified manner. The study revealed that the Russian model of pre-trial proceedings differs significantly from foreign ones, and taking into account the essential features of the subject and procedure, it can be determined as mixed, combining elements of the Anglo-American and Continental models. The increase in criminal cases carried out with deadline violations, as well as in unsolved crimes of small and medium gravity testifies to the need to optimize pre-trial proceedings and to create an effective evidence mechanism to simplify the procedure for conducting an inquiry. The materials of the present study can serve as a basis for constructive scientific discussion and further development of the differentiation of the criminal procedure form, as well as for practical recommendations on applying Chapter 32.1 of the Criminal Procedure Code of the Russian Federation and on clarifying certain regulations.

Keywords: pre-trial proceedings, simplified inquiry, accused, criminal case, crime, indictment.

Introduction

The prompt and qualitative inquiry guarantees the legality and validity of decisions made in the criminal case, and, accordingly, guarantees restoring the violated rights and freedoms of citizens. At the moment, the issues related to improving the effectiveness of the preliminary investigation in the context of differentiation of its forms aimed at reducing the time, financial and other costs associated with pre-trial proceedings have been actualized. After the introduction of Chapter 32.1 of the Criminal Procedure Code of the Russian Federation which regulates the production of simplified inquiries, it became necessary to adapt scientific thought to new legal conditions for evidence-based activities, both within the framework of a unified inquiry and in its reduced form.

Statistical data indicate that the inquiry is in demand as an independent form of investigation, taking into account the gravity of the committed act. Thus, in 2015, 2,166,400 crimes were registered of which 887,800 crimes were initiated and investigated in the form of preliminary inquiries, which amounts to 75.5% of the whole array of criminal cases. In 2016, similar indicators were at the level of 76.8% (950.7 thousand crimes out of 2352.1 thousand recorded crimes) [1]. The apparent increase in crime in recent years with an increase in crimes investigated in the form of an inquiry led to a significant increase in the burden on investigators. This fact, combined with the decline in the quality of pre-trial proceedings noted in recent years [2] predetermined the need to search for the optimal form of preliminary investigation, which is a top priority task not only for the legislator, but also for the procedural science. The lack of a clear doctrinal model, in our opinion, entails inconsistency, proliferation and contradictory legal regulation of the production of inquiry.

In addition, in the special literature there are proposals to merge the investigation and inquiry into the general procedure of preliminary investigation [3], which requires a careful analysis of the general and specific features of each of these forms of investigation, as well as the practice of applying the procedural law in the continental and Anglo-American systems.

Traditionally, in the foreign criminal procedure legislation, the principle of procedural economy is the determining in building a model of (pre-)trial proceedings. This is not surprising, since it fits into the overall integration process of the criminal procedure legislation development, reflected in international legal acts. In 1987, the process of streamlining criminal proceedings with varying degrees of intensity in individual countries was legally enshrined in the Recommendations of the Committee of Ministers of the Council of Europe No. 6 R (87) 'Concerning the simplification of criminal justice', where it was indicated that red tape in the investigation of criminal cases inevitably discredits the criminal justice, and also affects the proper administration of justice. The main directions of increasing criminal justice effectiveness were: developing simplified criminal prosecution, introducing combined inquiries, expanding the scope of implementation of alternative methods for resolving criminal and legal conflicts [4]. Simplification of pre-trial proceedings should, in the opinion of the international community, be carried out with the essential observance of the basic rights and freedoms of citizens, set out in Chapters 5 and 6 of the Convention for the Protection of Human Rights and Fundamental Freedoms [5].

Methodology

The methodological basis of the research is the dialectical method of cognition, as well as general theoretical methods based on it: analysis, synthesis, induction, deduction, ascent from the abstract to the concrete, etc. The validity of the conclusions and recommendations contained in the article is provided by the integrated application of general and private scientific methods: logical, comparative legal, statistical, sociological and others.

When studying the essence of a simplified model of pre-trial proceedings, system-logical analysis and synthesis were used, which made it possible to identify the characteristics of a simplified inquiry (which has the traits inherent in the protocol form of pre-trial materials preparation). The study of theoretical problems of differentiation of the criminal procedure form was carried out using the method of ascent from the abstract to the concrete, which made it possible to determine signs and limits of inquiry simplification in the Anglo-American and Continental systems of law. Comparative legal method was used in studying foreign and Russian experience of simplifying the criminal procedure form. The empirical part of the study is based on the application of the statistical method, on questioning 80 law enforcement officers and judges, and on analyzing 58 criminal cases, examined in accordance with Chapter 32.1 of the of Criminal Procedure Code of the RF.

Results

A comparative legal analysis of simplified pre-trial proceedings models revealed the main trends of deviation from the unified procedure: reduction of the procedure terms in a criminal case; and changing the range of the rights and duties of participants in criminal proceedings.

Implementation the international principle of a reasonable period of criminal proceedings (Chapter 6.1 of the of Criminal Procedure Code) in the Russian legislation was a prerequisite for introducing a simplified inquiry institute, and the stage of gathering evidence was significantly simplified, which had a direct impact on the legal status of the participants in the criminal process.

The process of differentiating forms of criminal justice with the aim of increasing its efficiency should be developed by introducing new forms of pre-trial proceedings borrowed them from previous domestic and existing foreign experience, in particular the protocol form of pre-trial materials preparation, taking into account the current provisions of the Constitution of the Russian Federation.

Discussion

Various aspects of pre-trial proceedings in the form of inquiry at different times became the subject of independent scientific research. Taking into account the accumulation of practical experience and the doctrinal development of the conceptual nature, the research range of the preliminary investigation was consistently expanded, and significant theoretical and practical recommendations for improving the inquiry were proposed, which determined the dynamics of this procedural institution development. It should be noted that a comparative legal analysis of various forms of pre-trial proceedings in Russia and abroad at different times was conducted by S.V. Bobotov, K.F. Gutsenko, L.V. Golovko, M.A. Peshkov, N.N. Polyansky, B.A. Filimonov, MA Cheltzov-Bebutov, A.I. Lubensky, etc. Certain issues of inquiry proceedings taking into account the recent legislative innovations are considered in the works by V.A. Azarov, E.H. Arestova, S. S. Bezrukov, N.V. Bulanova, V.N. Grigoriev, A.C. Esina, S.P. Efimichev, M.M. Kuzembaev, V.M. Lukin, S.L. Maslenkov, A.G. Mamontov, I.A. Morozkina, N.I. Revenko, G.I. Sedova, V.V. Stepanov, etc. However, it is necessary to focus on the fact that the institute of inquiry is in constant dynamic development, which actualizes the need to develop an effective mechanism for investigating crimes of small and medium gravity, referred to the competence of the relevant bodies. In this regard, in spite of the extensive bibliography, further scientific development in line with the indicated problem are in demand. In addition, beyond the scope of scientific research are many questions of comparative legal study of various models of simplified pre-trial proceedings in Europe and the United States, the peculiarities of implementing certain provisions of foreign legislation in Russian criminal proceedings, and the analysis of the essential characteristics of a simplified inquiry.

Preliminary investigation in the vast majority of national legal systems can be determined as an inquiry effectuated (unlike the Russian model) mainly prior to initiating criminal proceedings and having a pronounced summary character.

Let's consider several inquiry models existing in the foreign criminal procedure legislation. The most typical example of speeding up the process of investigation is the criminal procedure adopted in France; it had the greatest influence on the organization of pre-trial stages of criminal proceedings in almost all of Europe, including Russia. At present, the inquiry in France is regulated by the Criminal Procedure Code of 1958 having a section on 'Inquiry and Identity Verification' [6]. A distinctive feature of the inquiry in the normative act under consideration is that it does not form a single stage with the investigation but is conducted prior to the initiation of criminal proceedings for the purpose of identifying the person who committed the crime without issuing a final procedural act (in the case of Russian criminal procedure legislation, it is before the initiation of criminal proceedings). It should be noted that the form of criminal proceedings under consideration almost completely excludes any rights of persons involved. Only the bodies of inquiry have actual powers, and the suspect as the procedural figure is not mentioned at all in the corresponding chapter of the Criminal Procedure Code of France.

In Austria, a preliminary investigation is carried out in a single form – as an inquiry. It should be noted that urgent investigative actions related to the identification of the person who committed the crime, as well as of other circumstances, are conducted by the police prior to the initiation of criminal proceedings and are completed by the transfer of all the materials to the prosecutor. This specificity, in our opinion, is due to the existence of 'free evidence' which is not related to the procedural form and is not regulated by law. In order to establish the circumstances of the crime, the body of inquiry has the right to conduct any investigative and operational-search activities. The prosecutor involves an investigating judge if interrogating the accused and key witnesses in the case is necessary. The end of the inquiry is possible either through the initiation of a public accusation, or by case termination [7, 8]. In the first case, the prosecutor makes an indictment which indicates the information about the accused, the place and time of the crime, the qualification of the act, and lists the evidence collected. The indictment together with the materials of the criminal case goes to the court. The usual inquiry is carried out within 15 days and the judicial (with the involvement of the investigating judge) within up to 30 days (Chapter 174 of the Criminal Procedure Code of Austria [9, 24].

An approximately identical model of inquiry is contained in the criminal procedure legislation of the Netherlands. Pre-trial verification of the circumstances of the crime committed takes place before the decision to initiate a criminal case, therefore, is not subject to the requirements of the criminal procedure form reduced to 7 days and ends with the written protocols being forwarded to the prosecutor to resolve the issue of prosecution. The prosecutor, having made a decision to initiate a criminal case, has the right to involve an investigative judge to produce the necessary investigative actions, thus complicating the procedure of inquiry, or to send materials to the court with an indictment if the circumstances of the crime are obvious [10, 23].

Pre-trial proceedings are completely absent in cases of crimes of minor gravity, according to Chapter 447 of the Criminal Procedure Code of the Republic of Poland [11]. The accelerated proceedings are sufficiently popular if the person does not have the status of a suspect, and so is the opportunity to exercise the right to defense until the case termination (Chapter 331 of the Criminal Procedure Code of the Republic of Poland). In this case, the investigation should be completed within 2 months; the prosecutor can extend this period to 3 months. When sending a criminal case to court, investigative bodies are obliged to immediately notify the public prosecutor about this, and also present all the evidence collected.

Free evidence is used in an inquiry under the legislation of the Czech Republic [12, p. 27, 13, p.7]. The authors of this paper believe the analogy of this procedure is the verification of the crime report conducted in the manner provided by Chapter 144 of the Criminal Procedure Code. Such conclusion can be drawn on the basis of the list of activities that constitute the process of free evidence under the Czech law, namely: the obtaining and seizure of objects and documents, the seizure of funds in a bank account, securities, real estate, other assets or their equivalent, the obtaining of explanations, experts opinions, seizure of samples for comparative study, examination, and detention of a person. The law stipulates the inadmissibility of interrogation and identification, except for the cases when it is impossible to postpone and effectuate them in the trial. The period of simplified pre-trial proceedings is not more than 14 days since the date of notification of suspicion. If simplified proceedings cannot be completed, the prosecutor subject to the circumstances of the case extends the term for another 10 days or instructs the appropriate police authority to initiate criminal proceedings and conduct a preliminary investigation.

In accordance with Chapter 314 of the Czech Code of Criminal Procedure, if at the end of the simplified proceedings the police does not decide to terminate the criminal case, they submit to the prosecutor a summary of the results indicating the crime which court evidence substantiate the suspicion [14, p. 81].

Special studies on the comparative legal analysis of pre-trial proceedings in Russia and European countries point out that in the framework of simplified criminal proceedings in different countries of Europe, 15 to 22% of crimes of small and medium gravity are annually solved [15, p. 150], which indicates the high efficiency and practical relevance of simplified proceedings. The questioning of the criminal justice bodies employees showed the overwhelming majority of the respondents (83%) believe it is the preliminary verification of the crime report which is the most effective way to establish the circumstances of the crimes of small gravity. In this regard, part of the respondents (43.6%) supported the restoration of the institution of a protocol form of material preparation that existed in the previous legislation and was designed in analogy with the pre-trial proceedings provided for by the French criminal procedure law.

The police inquiry in the criminal proceedings of the USA has significant differences, primarily due to the Anglo-American legal system which is based on the use of precedent as a source of criminal procedure law. A distinctive feature of the organization of pre-trial proceedings in the United States is the absence of a single normative legal act regulating this activity [16, 14]. However, this does not mean the absence of any regulation – legal regulation is carried out by federal legal acts which are considerably general in nature, as well as laws and administrative legal acts of the state. Thus, in fact, there are 50 legal systems (by the number of states).

Another peculiarity is the strong differentiation of bodies authorized to conduct a preliminary investigation. In the absence of a central agency with police functions, the leading investigative body is considered to be the Federal Bureau of Investigation (FBI). At the same time, there are other police forces that are part of the structure of various federal agencies (for example, the Drug Enforcement Administration (DEA) and the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF), along with the FBI in the structure of the US Department of Justice), state authorities or local authorities, and investigating crimes within their competence.

Officers of US police agencies are assigned both tracking and investigative powers. Since in the criminal process of the United States, as in a number of European countries, there is no stage of initiating criminal proceedings, an inquiry is reminiscent of a pre-investigation check conducted by domestic operational investigative bodies with the possibility of implementing the entire range of investigative actions. In this case, the actions of police officers restricting the constitutional rights of citizens (for example, search and arrest) are possible with the permission of the attorney and the court. Observance of the rights and freedoms of citizens, enshrined in the Constitution of the United States or the Constitution of the individual state, is perhaps the only restriction in the choice of means and methods for conducting inquiries by the US police. Among the procedural measures limiting the constitutional rights of citizens, the search and arrest was subject to most detailed regulation. The procedure for the implementation of these measures is regulated in Title 18 of the Code of Laws of the United States [17] and the Federal Rules of Criminal Proceedings [18], as well as a number of decisions of the Supreme Court of the USA [19].

An essential distinctive feature of the inquiry carried out by the US police authorities is the absence of the need to observe the procedural form and to compile the procedural documents. Fixing the progress and results of the investigative actions is carried out by the policeman in the notebook and the final report on the investigation of the criminal case which are official documents yet not a source of evidence according to the Russian criminal process; nor is the protocol, the compiling of which in the process of investigating a crime is provided for by laws of some US states. These documents can be used by the police in the process of obtaining evidence of a particular crime and are of an auxiliary nature. On the basis of these documents, the head of the police body checks the sufficiency of the materials received and decides on the further 'fate' of the case: either to transfer it to the attorney for the prosecution or to solve at the level of the inquiry body ('police settlement of a recognized criminal conflict') [20, p. 17].

Such order of inquiry is conditioned, in our opinion, by another approach to determining the essence of evidence and proof. First of all, it is characterized by a presumption that 'state officials always act lawfully'. On the other hand, there is strict control by the attorney who enters the process from the moment of arrest or charge. Evaluating the collected evidence from the point of view of the legitimacy of the methods for obtaining them (admissibility), the attorney has the right to refuse the evidence which was obtained by questionable methods. If the attorney finds the evidence admissible and sufficient for pressing charge, they make an indictment and pass it to the judge. It should be noted that the attorney decides to initiate criminal prosecution only if they believe they are able to win the case [25, 26].

Along with the findings based on the investigation materials, the police submit to the Attorney's office a request for an arrest warrant or search warrant. Without the attorney's consent, direct appeal for the warrant to the magistrate judge is practically useless, since the prosecutor's subsequent refusal to effectuate prosecution on the basis of an order issued without his consent deprives this order of meaning [21, p. 79].

The materials of the investigation for which the offender was not established are not sent to the attorney but remain in the police. However, the US law does not provide for the possibility of suspending the inquiry due to the failure to identify the perpetrator, as well as for the need to extend the terms of the inquiry or to decide upon refusing to open a criminal case, which essentially distinguishes the pre-trial proceedings from the Russian model of inquiry.

The differentiation of the preliminary investigation in the Russian criminal process is in line with the general tendency to simplify (accelerate) the criminal justice process in order to optimize the form of proceedings in criminal cases of various categories. An analysis of the development dynamics of the criminal procedure legislation allows concluding there are two unified procedures (preliminary investigation and inquiry), the procedural rules of which are gradually converging, as well as the simplified inquiry. The main criterion for differentiation in this case is the level of complexity of establishing the circumstances of the criminal case. The simplified pre-trial proceedings implemented in the criminal procedure law has certain specific features, including: 1) the limitattions for a simplified inquiry expressed as a set of grounds and conditions for its proceedings; 2) a significant reduction in the time of the preliminary investigation; 3) restriction of the subject of proof solely to circumstances related to the crime, the nature and extent of the harm caused, and also the person's guiltiness, which accordingly reduces the number of investigative and other procedural actions conducted by the investigator within the framework of the investigation under consideration; 4) the consequence of a simplified inquiry in a reduced form which is the reduction of the trial stage provided for by Chapters 316 and 317 of the Criminal Procedure Code of the RF.

Conclusion

Comparative legal analysis of the criminal procedure legislation of the countries of continental Europe allows stating that the introduction of simplified inquiries into Russian legislation and the gradual approximation of the procedures for preliminary investigation and inquiry are in line with the general world trend of optimizing pre-trial proceedings in criminal cases. The speed and effectiveness of the activities of the criminal justice authorities in modeling the stages of initiating a criminal case and preliminary investigation by introducing 'free evidence' is achieved by significantly shortening the terms of the preliminary investigation, which is often conducted prior to the initiation of the criminal case, or prior to its transfer to the investigative judge. As a guarantee of the realization of the rights and freedoms of citizens that are not subject to restriction in accordance with Chapters 5 and 6 of the Convention for the Protection of Human Rights and Freedoms, the legislation of the majority of the countries of continental Europe provides for the procedural possibility of a transition from a reduced to a unified procedure under certain grounds and conditions.

An analysis of the procedural order of the preliminary investigation in the form of an inquiry allows asserting that it retains a number of specific features which make it possible to delimit it from a preliminary investigation. These are as follows: 1) criminal cases being in the investigative bodies' jurisdiction; 2) the term of the inquiry; 3) he procedural status of the person against whom the inquiry is conducted; 4) application of preventive measures in the course of the inquiry; 5) the end of the inquiry by an indictment. The indictment contains two separate procedural decisions: on involving a person as a defendant with the formulation of the final charge, which is the result of the prosecutorial activity in the course of pre-trial proceedings, as well as the decision to end the preliminary investigation with the formulation of conclusions, which, according to its results, will be presented to the court.

Recommendations

The materials contained in the present study can be useful for further scientific research of the problems of differentiating the criminal procedure form and of optimizing the inquiry procedure. According to the authors' opinion, they enrich scientific knowledge about simplified forms of criminal justice, which should be oriented not only to increasing its effectiveness in terms of financial, resource and time costs, but also to solving the tasks formulated in Chapter 6 of the Criminal Procedure Code of the RF. The conclusions and recommendations formulated in the work can serve as a basis for constructive scientific discussion and further development of the theoretical foundations of the problems raised.

The practical value of the materials lies in the possibility of their use in the activities of the criminal justice authorities, as well as in the further reform of the criminal procedure legislation. The provisions formulated in the study can be used in teaching a course in the criminal process and relevant special courses for students of law schools, as well as in advanced training of practitioners.

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Criminological policy and legislation in the area of combating crime related to trafficking in persons

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Abstract

1. The objective of this publication is to once again focus on the issue of improving the combating trafficking in persons from the perspective of global approach - developing the optimal integrated policy model that includes a number of elements (subsystems).

2. The methodology used by the author includes, first of all, an interdisciplinary analytical approach along with the system-structural-functional characteristic of genetically related elements of a single complex system as a product of theoretical modeling.

3. In accordance with the author's approach, the global and national policies on criminal and penal law, criminally-remedial, operational search and criminalistical subsystems should be included among the subsystems of the policy on combating crime related to trafficking. Author also underscores the necessity of clear reflection of the official terminological turnover within the framework of an integral conceptual-categorical apparatus of the Concept of Legal Policy of the Republic of Kazakhstan.

4. Addressing to further theoretical modeling of trafficking crime prevention policies, the issue of the concept, content, and position of criminological policy in the structure of an anti-criminal state mechanism is being considered. Hence, the researcher focused on the correlation of penal and criminological policies; in this reference there are two polar scientific contemplations (where penal policy is a part of the criminological structure and vice versa), which also evolved due to the discrepancy between criminal law and criminological science. Therefore, the legal writer expresses solidarity with the position of leading experts on the necessity to strengthen integration between relevant branches of science, including such challenging areas as criminal science and criminology of penal law (justice). Based on the fundamental scientific concepts, the author presents the structure of criminological legislation in the area of combating trafficking crime; and also underscores the criminogenic gap expressed in the absence of a basic law on combating trafficking.

5. The results obtained will serve the purpose in the area of law-making, law-enforcement and human rights policies, aimed at ensuring the proper level of criminological security of the personality, society and the state.

6. The social consequences of the development and implementation of a holistic concept of anti-crime policies related to trafficking in persons will be expressed in enhancing the effectiveness of law enforcement in protecting citizens from relevant criminal encroachments.

Keywords: Criminological policy, Penal policy, Criminological law, Criminological legislation, Human trafficking.

Introduction

2017 was the year when the Action Plan of the Government of the Republic of Kazakhstan to Combat and Prevent Human Trafficking Crimes, approved by the resolution of Kazakhstan Government (decree no. 23) on January 28, 2015, was completed. The Action Plan included the following key areas: policy-making on improvement and alignment of legislation, which consequently contained such sections as standard-setting work on the improvement and alignment of legislation (4 paragraphs); organizational and practical activities for the combating trafficking in persons (8 paragraphs, including 7 sub-paragraphs); organizational and practical measures in rendering of assistance to victims of trafficking (6 paragraphs); cooperation with the proper authorities of the CIS member states and international non-governmental organizations (6 paragraphs), organizational and preventive countermeasures on trafficking (6 paragraphs); advisory and scientific-methodological support (4 paragraphs); and human resourcing (3 paragraphs) [1, P. 211-223]. It stands to reason that it will be subjected to a thorough analysis by the interdepartmental commission, following which the final documents with practical recommendations will be adopted.

The author of this article as a member of the expert council of the Commission on Human Rights under the President of the Republic of Kazakhstan is up to take part in this legislation, as well as he participated in the international presentation of the analytical report on "Current Problems in the Protection of the Rights of Migrant Workers and Victims of Trafficking in Persons in the Republic of Kazakhstan" held on September 14, 2017 in the Ministry of Foreign Affairs. This report also states that "In this respect, Kazakhstan has to solve a complex problem of the creation of a modern migration management system that would prevent an outflow of skilled personnel abroad" (Analytical Report: Current Problems in the Protection of the rights of Migrant Workers and Victims of Trafficking in Persons in the Republic of Kazakhstan, under the general editorship of Kuanysh Sultanov and Tastemir Abishev, Astana, 2017. 179 p.: Commission on Human Rights under the President of the Republic of Kazakhstan) (Page 6).

All of the above aspects of diverse activities testify, or at least give grounds to assert about the prerequisites for the formation of a separate direction - criminological policy in the area of combating criminal challenges and threats, where human trafficking occupies one of the leading positions. And this is of the constant attention of the relevant UN structures; besides, the Republic of Kazakhstan has become the President of the United Nations Security Council since January 1, 2018.

The forth planned systematic and effective countermeasures of crime in modern conditions are mainly dependent on the quality of modeling and modernization of criminological policy as one of the subsystems of global criminal (penal/executive) policies.

At the official level, this aspect is constantly prevailing not only under attention of the government and criminal justice, but also is a subject of a "field practice". This is evidenced by the establishment of the Interdepartmental Research Institute of the Academy of Law Enforcement Agencies under the General Prosecutor's Office of the Republic of Kazakhstan. Those establishments have already conducted a number of meaningful and constructive dialogue platforms, training seminars and meetings. Among them are the International Scientific Conference "From criminological legislation to the combat crime justice (problems of law criminology)" (held on May 19, 2017 by Kostanay *akimat*; prosecutor's office of Kostanay region and Kostanay branch of Chelyabinsk State University); International Scientific Conference "Actual issues of public security and combating crime" (November 16, 2017, Academy of Law Enforcement Agencies of the Prosecutor General's Office of the Republic of Kazakhstan); Legal Forum on Criminology "The suspect and the accused: are their rights really protected?" (December 14, 2017, also by Academy of Law Enforcement Agencies of the Prosecutor General's Office of the Republic of Kazakhstan); and joint meeting with the Prosecutor's Office of the Kostanay region under the name of "Crime Prevention through Criminological Conceptual Foresight" (December 25, 2017, Astana - Kostanay, Academy of Law Enforcement Agencies of the General Prosecutor's Office).

From the point of view of theoretical and instrumental analysis, the criminological direction of the counteraction policy should have its own legislative basis, which should represent the new branch - criminological law, - a proposed product of the Neva-Volgian scientific school; criminology of law (by D.A. Shestakov); or criminology of penal law (justice) (by S.F. Milyukov). As an apotheosis of the entire process of theoretical modeling in this area it is possible to consider the construction of a single law system to counteract crime. Therefore, it is entirely essential to agree with Anatoly P. Danilov that "foreign colleagues are lacking similar proposals; and the Russian criminological theory is ahead of its western development" [2, page 71].

Results obtained from the conducted sociological survey, in which the legal writer participated as a respondent, are also very challenging. The majority of the respondents (55 individuals or 65.5%) required the adoption of a single crime prevention legislation (as stated by the above-mentioned researcher); 13 people among them had a degree (81.3% of the total number of such) [3, p. 72]. The concept of Yuri D. Goncharov is essentially similar; and excellent in content. In the structure of combating crime he allocates laws on counteraction and prevention policy [4, p. 264; p. 89].

However, in context of this report the dominant object will be such an object of study as the policy on criminology, which has not only been insufficiently developed, but has not yet firmly established itself in the corresponding literature; and has not received in-depth study and development. At the same time, it is naive to ignore the fact that the policy in the area of combating crime existed and exists in any civilized state - and not only there. This goal is pursued in many studies, such as the one by Elizbieta M. Gozdziak, Elizabeth A. Collett, Research on Human Trafficking in North America: A Review of Literature // International Migration Volume 43, Issue 1-2, January 2005, P. 99-128 DOI: 10.1111 / j.0020-7985.2005.00314.x), p 99, advising to "note of the research gaps that need to be filled in order to establish appropriate and effective policies and programs for trafficked victims".

Yes, there are differences in approaches and results; however, this is a separate issue. Since the moment of realization of ensured protection necessity of a person, society and the state from criminal threats and challenges, counteract measures immediately appear. And the process of institutionalization, reformation and modernization takes place up to date.

In this respect the causes and factors are taken into account; it is ought to agree with Jill Robinson, stated that "at the institutional level of trafficking is viewed as a vastly complex social problem with structural (macro) level causes" (Public Perceptions of Human Trafficking in Moldova // Psychosocial Intervention Vol. 20, No. 3, 2011. P. 269-279 http://dx.doi.org/10.5093/in2011v20n3a4) (p. 270).

However, we cannot confine ourselves with a study of determinants only, since we are setting a global task to develop models of criminological policy and legislation. In this direction, one should be guided by international experience. As it was fair-mindedly noted by Jeana Fowler, Nicolette Che and Lindsay Fowler that "… most developing countries have yet to develop their national machineries to be strong enough to protect and rehabilitate victims" (Jeana Fowler, Nicolette Che, Lindsay Fowler // Innocence lost: The rights of human trafficking victims. Proceda Social and Behavioral Sciences 2 (2010) 1345-1349) (p. 1243).

John Barner, David Okesh and Meghan A. Camp are of the same opinion: "Many international anti-trafficking efforts are veered towards the criminal aspect of the phenomenon while placing less emphasis on the psycho-social services that victims and survivors require" (John Barner, David Okesh and Meghan A. Camp., Socio-Economic Inequality, Human Trafficking, and the Global Slave Trade // Societies. 2014, 4 (2), 148-160; doi: 10.3390 / soc4020148) (p. 145).

Louise Shelley, focusing attention on the transnational nature of this phenomenon, notes that: "By defining human trafficking as a crime problem rather than as a migration, human rights or security issue, the international community is recognizing that criminal law and law enforcement institutions must play a key role in addressing the problem of transnational human trafficking" (Louise Shelley / Human Trafficking in Human Trafficking (Maggie Lee Routledge (2007) P. 117 - 232).

Seo-Young Cho and Krishna Chaitanya Vadlamannati emphasize the complexity of the problem: "Over the past few years, the growing worldwide phenomenon of human trafficking has baffled many policy experts working on this problem" (Vadlamannati, Krishna Chaitanya and Cho, Seo-Young, Compliance for Big Brothers - An Empirical Analysis on the Impact of the Anti-Trafficking Protocol (January 5, 2017), European Journal of Political Economy, Vol. 28, 2012. Available at SSRN: https://ssrn.com/abstract=2894424) (p. 24).

Materials and methods

A review of doctrinal approaches and views in corresponding literature shows that in Kazakhstan, unlike the Russian Federation, the question of the essence, role and purpose of criminological politics is not so actively and widely discussed (what reflects the current state of domestic criminological science). The corresponding scientific knowledge area in our republic is connected with the names of many outstanding criminological scientists, and, of course, has its own serious basis; and therefore, appears to be a topic of a separate analysis. It should be noted that in this case neither in textbooks [5] and study guides [6], nor in monographic [7], dissertational [8] or grant [9] studies, criminological politics is not clearly distinguished and not covered in detail. Unfortunately, a number of scientific articles devoted to the problems of criminal policy (by concept and content) and strategies for combating crime do not contain information on criminological policy. In particular, it is possible to mention current publications by R. Dzhansaraeva [10], A. Eshchanova [11], M. Zholumbaeva [12] and R. Mukanova [13]. A monograph by Zh. Zhunusov and single purpose publications by professors T. Akimzhanov and G. Rustemova can be considered as an exception. More about them is discussed below.

Results

Statute: Criminological policy is a self-sufficient direction of state-legal activity in the area of combating crime, including the one related to trafficking in human beings; with its tools in the form of criminological legislation.

Nature: Criminological policy has a genetic relationship with the criminal law, a number of points of contact within the aspects of criminalization and decriminalization of acts that represents the fundamental foundations of criminal policy.

Concept and essence: Criminological policy is scientifically grounded activity of authorized state bodies, institutions, and their officials, concerned public organizations in the area of crime prevention, including a complex of criminological legislation measures relevant to international standards.

Criteria for optimal criminological policy (the concept of M. Kleimenov is taken as reference point):

1) Correspondence of national ideology, which is a synthesis of traditional national values of the country, including the inadmissibility of encroachment on personal freedom;
2) Increase of the spiritual and moral potential of society; implementation of cultural and moral policies in the direction of humanistic personal qualities education, including overcoming the deviations of the consumer society;
3) Attention priority to the prevention of crimes, including those related to trafficking in persons in the context of increasing the supply of "human commodity" to many foreign countries;
4) Severance of business and government by excluding the participation of civil servants in entrepreneurial activities, as well as of businessmen "bearing the same representation" in government;
5) Elimination of all legal immunities, with exception of diplomatic immunity;
6) Establishment of procedures for the public certification of certain categories officials with the participation of community leaders;
7) Formation of a curtain structure for revision of the property status and sources of income of state officials and employees of governmental organizations and institutions regardless of the form of ownership; as well as the compliance of their expenditures with legal income;
8) Strengthening of the state response and regulation of the economy;
9) Improvement of state social policy, elimination of unemployment, indigence and poverty; restoration of labor resources;
10) Reduction of alcohol and narcotics consumption;
11) Strengthening of the family values;
12) Protection of children from all kinds of exploitation, physical or psychological abuse, corruption and depravation;
13) Maintenance of the state of publicity and scientific character at legislative acts preparation;
14) Introduction of the institute of criminological expertise of normative legal acts;
15) Integrated utilization of all legal means (criminal law, administrative law, civil law, etc.) for the purpose of combating crime;
16) Correction of strains in the human resources policy in federal, regional and municipal authorities, law enforcement and judicial bodies; exclusion of corruptive practices of cronyism and nepotism;
17) Optimization of processes of criminalization and decriminalization;
18) General social responsibilities of business;
19) Further development of criminological legislation;
20) Protection of potential and rehabilitation of real victims of crime;
21) Education in the law;
22) Improvement of criminological management;
23) Decriminalization of regions, branches of economy and fields of activity;
24) International engagement and cooperation in the detection, suppression and prevention of crimes, including those related to trafficking in persons.

The purpose of criminological policy: generation of effective ways to identify the causes and prevent crimes, including those related to trafficking; and to contain it at a socially acceptable level in terms of adequacy to its resource arsenal.

The tasks of criminological policy: generation and provision of updated criminological information on the nature, causes and state of criminality to the concerned recipients; creation of a basis of approaches and methods for criminological estimation of the "cost of crime to society", its causal-relevant complex and personality characteristics of the perpetrator ("portrait of an offender"); definition of crime prevention measures; forms and methods development for managing subjects of crime prevention (governmental bodies, educational and other institutions and establishments) in order to implement their tasks to combat crime.

Criminological legislation: system of international and domestic legal acts of criminological content and orientation, enacted by the Republic of Kazakhstan.

To criminological legislation in the area of combating crime related to trafficking in persons:

International Legislation

- The 1926 Geneva Convention to Suppress the Slave Trade and Slavery
- The 1949 Convention for the Suppression of the Traffic in Persons and of the Exploitation of the Prostitution of Others
- The 1956 Supplementary Convention on the Abolition of Slavery, the Slave Trade, and Institutions and Practices Similar to Slavery
- The 1957 Abolition of Forced Labor Convention
- The 1979 Convention on the Elimination of All Forms of Discrimination Against Women
- The 1980 Hague Convention on the Civil Aspects of International Child Abduction
- The 1999 Convention concerning the Prohibition and Immediate Action for the Elimination of the Worst Forms of Child Labor
- The 2000 United Nations Convention against Transnational Organized Crime
- The Protocol to Prevent, Suppress and Punish Trafficking in Persons Especially Women and Children, supplementing the 2000 United Nations Convention against Transnational Organized Crime
- The Protocol against the Smuggling of Migrants by Land, Sea and Air, supplementing the 2000 United Nations Convention against Transnational Organized Crime
- The 2002 Brussels Declaration on Preventing and Combating Trafficking in Human Beings
- The 2005 Council of Europe Convention on Action against Trafficking in Human Beings
- The 2007 Council of Europe Convention on the Protection of Children against Sexual Exploitation and Sexual
- The 2005 Agreement on Cooperation of Member States of the Commonwealth of Independent States in the fight against trafficking in human beings, human organs and tissues
- "On the Program of Cooperation of the Member States of the Commonwealth of Independent States in Combating Trafficking in Human Beings for 2014-2018" CIS Heads of State Council Decision

International Bilateral Agreements

- The Agreement between the Government of the Republic of Kazakhstan and the Government of the Federal Republic of Germany on cooperation in combating organized crime, terrorism, and other serious criminal offences
- The Agreement between the Government of the Republic of Kazakhstan and the Government of the Islamic Republic of Iran on cooperation in combating organized crime and terrorism
- The Agreement between the Government of the Republic of Kazakhstan and the Government of the Republic of Bulgaria on cooperation in combating terrorism, organized crime, illicit trafficking of narcotic drugs, psychotropic substances, their analogues, precursors, and other types of crime
- The Agreement between the Government of the Republic of Kazakhstan and the Government of Romania on cooperation in combating organized crime, illicit trafficking of narcotic drugs, psychotropic substances and precursors, terrorism and other dangerous crimes
- The Agreement between the Government of the Republic of Kazakhstan and the Government of the

Republic of Poland on cooperation in combating organized crime and other types of crime

● The Agreement between the Government of the Republic of Kazakhstan and the Government of the Arab Republic of Egypt on cooperation in the field of fight against terrorism, organized crime, illicit trafficking of narcotic drugs and psychotropic substances, and other types of crime

● The Agreement between the Government of the Republic of Kazakhstan and the Government of the Republic of Croatia on cooperation in combating organized crime, illicit trafficking of narcotic drugs and psychotropic substances, terrorism and other types of crime

● The Agreement between the Government of the Republic of Kazakhstan and the Government of the Slovak Republic on cooperation in combating organized crime, terrorism, illicit trafficking of narcotic drugs, psychotropic substances, precursors and other types of crime

● The Agreement of the Government of the Member States of the Commonwealth of Independent States on the exchange of information in the field of combating crime

● The Agreement between the Government of the Republic of Kazakhstan and the Government of the French Republic on cooperation in combating crime

● The Agreement between the Government of the Republic of Kazakhstan and the Government of the Italian Republic on cooperation in combating organized crime, illicit trafficking of narcotic drugs, psychotropic substances, precursors and chemicals used for their manufacturing, terrorism and other types of crime

● The Agreement between the Government of the Republic of Kazakhstan and the Government of the Republic of Estonia on cooperation in combating organized crime and other types of crime

● The Agreement between the Government of the Republic of Kazakhstan and the Government of the Kingdom of Spain on cooperation in combating crime

● The Agreement on cooperation between the General Prosecutor's Office of the Republic of Kazakhstan and the General Prosecutor's Office of the Republic of Belarus

Domestic Legislation

● The concept of legal policy of the Republic of Kazakhstan for the forthcoming period

● The Presidents of the Republic of Kazakhstan Plan of the Nation “100 concrete steps on the implementation of the five institutional reforms” (launched on May 20, 2015)

● “On the Prevention of Offenses” Law of the Republic of Kazakhstan

Historically the aforementioned were preceded by following conceptual and strategic documents:

● State program of legal reform

● The concept of legal policy

● On the State program of the first-order measures for combating crime and strengthening the status of law and order in the Republic of Kazakhstan for 1993-1995

● On the State program of the Republic of Kazakhstan for combating crime for 1997-1998; and the reference direction of law enforcement activities up to the year 2000

● On the program of combating crime in the Republic of Kazakhstan for 2000-2002

● On the program of crime prevention and fight against crime in the Republic of Kazakhstan for 2003-2004

● On the program of crime prevention and fight against crime in the Republic of Kazakhstan for 2005-2008

● On the field program of the offenses prevention in the Republic of Kazakhstan for 2011 - 2013

Law-Enforcement Practice

● Statistical data analysis on the state of crime related to trafficking in human beings for 2010-2012; and 11 months of 2013.

● The brief on judicial practice in criminal cases related to trafficking in human beings for 2013 and 2014 (stipulated by articles 125, part 3, paragraph “b”; 126 p. 3 “b”; 128, 132-1, 133, 270, 271 CC).

● The brief on the provision of the rights of victims in cases of human trafficking (based on the criminal cases reviewed in 2014-2015) on the legislation enforcement that establishes responsibility for trafficking in human beings.

Discussion

Traditionally, the fundamental criterion for distinguishing sub-systems of criminal policy is the existence of independent branches of law and legislation. Therefore, it seems logical that, according to L.D. Gaukhman, and S.V. Maksimova: “The subsystems include the criminal law, criminally-remedial and penal enforcement policies. These subsystems correspond to independent branches of legislation - criminal, criminally-remedial and penal, each of which, having its own subject and method, performs its specific tasks in the field of combating crime” [14, p. 57; p. 575].

In this reference, the following statement by V.S. Dzhatiev is truly eloquent: “Criminology is not tied to any particular branch of law; therefore, it is not customary in Russian legal doctrine to speak about the criminological policy of the state. I consider this restraint to be erroneous and even harmful, since it does not stimulate the state to perceive and implement the recommendations of criminologists. Without examining in depth the issues of the criminological policy of the state, I, nevertheless, have long been determined in a principled approach to assessing its essence. At the same time, I cannot name any special scientific publication devoted to this issue” [15, P. 33-34].

I.N. Kondrat expressing the similar position, when he considers as basic the six-element (legal, processual, preventive, penal, investigative and organizational) structure of the criminal policy by A.I. Aleksandrov [16, p. 99]; and emphasizes that “if we turn to the two final elements of the criminal policy - criminal preventive policy and criminal-organizational policy - we have to state that they are perhaps developed surprisingly weaker than others” [17, p.160].

G.R. Rustemova does not share such skepticism arguing that “criminological politics as an integral part of the criminal policy as a whole has found its place in criminological science” [18, p.19].

The idea of Russian and domestic criminologists about preserving the discussion of the issue of criminological legislation and its legal nature in the context of correlation with criminological policy (which is also called preventive or precautionary), has not lost its relevance.

Among domestic researchers B.Zh. Zhunusov is one of the first who turned to this problem at the doctoral dissertation level, and in the context of the relevant monograph noted the following: “It seems theoretically and practically justified to proceed from the fact that there is a single criminal policy - a policy in the field of combating crime with the help of criminal law measures - and its subspecies (subsystems, constituent parts): criminal law, criminal processual, penal and criminological policies” [19, p. 42]. The significance of this monograph is difficult to overestimate, however, from the moment it was published it took almost 12 years, and therefore, a number of provisions require a rethinking in accordance with the changed realities and the implemented and planned political and legal reforms. As known, a number of updated anti-criminal codes were adopted on the platform of the next concept of the country's legal policy. Continuous update of law enforcement reform within the framework of the triune modernization of politics, economy, and public consciousness that began in 2017 is still being implemented. Throughout recent history, it has been essentially important to study the best practices of the states of the near and far abroad. And of particular importance among them is Russia, with which centuries-old ties are established, which is reflected in the formation and evolution of the political and legal system, including some certain continuity. In this reference, a comparative legal method is put forward. A Coryphaeus of domestic criminology - U.S. Dzhekebaev emphasizes: “When developing, adopting and issuing legislative acts, it is desirable to focus on the Model Criminal Code for the CIS countries; it will be inevitable to study the legislative experience of Russia and other foreign states” [20, p. 42]. This idea is also holds truth in the problem of combating crime related to trafficking in persons. As it is known, the CIS Inter-parliamentary Assembly has developed model laws in this area, but not all of them are accepted by post-Soviet countries, including the Republic of Kazakhstan. In this reference, other saying of the aforementioned scientist's warning about the omissions of the 1994 reform is quite relevant: “One of the reasons for the incomplete implementation of the program of judicial and legal reform in the life of society was the insufficient development and application of the experience of social and legal reform conducted by others developed in solving similar problems” [21, p. 4].

Today, in the context of developing an optimal model of crime prevention policy, including in the area of trafficking, it is important first of all to have a clear understanding of its structure.

So, the outstanding criminologist E.F. Pobegailo as components, branches, subsystems of a single policy in the area of combating crime, distinguishes: criminal-law (narrowly defined as criminal), criminal-processual (procedural), criminal-executive (penal) policy, criminological (preventive) and legal-administrative policy [22, P. 9-10]. N.A. Lopashenko writes in his monograph: "Within the framework of the state policy in the field of combating crime, it is possible to allocate a criminal-law (criminal), criminal-procedural, criminal-executive (penitentiary) and criminological policies" [23, p. 22]. E.V. Kobzeva notes that "in criminal law, in the broadest sense of the word, only such constituent elements as (again, in different variations) criminal-law, criminal procedural, criminal-executive (penitentiary), criminological (preventive) versions of policies should be included" [24, p. 82]. Yu.I. Bytko believes that "... a policy called criminal in the broad sense, it is advisable to define as a policy to counteract crime. Within the framework of this policy, it is necessary to distinguish the following types: criminal (policy in the area of criminal law rulemaking), criminal law enforcement (policy in the area of criminal legislation application by courts), criminal executive (policy in the area of court convictions execution), and criminological (in the areas of resocialization of persons who have served criminal penalties; and other measures for the prevention of crimes)" [25, p.147]. According to L.I. Belyaeva the criminal policy "... includes: a) prevention, i.e. preventive policies, sometimes it is called criminological; b) criminal law policy; c) criminal procedural policy; d) operational search policy; e) criminal-executive policy" [26, p. 24]. V.A. Blinnikov proposes a six-element structure of criminal policy, which consists, as he calls, from the following trends: criminal law, criminal executive, criminal procedure, criminalistics, criminological and law enforcement [27, p. 29].

I.V. Shalakhin states that "whereas, the policy of restricting and preventing crime ... includes criminal policy, as a nucleus, a core element that determines the state's line with regard to active offensive influence on crime" [28, p. 87].

Thus, it can be noted that such elements (subsystems) of criminal policy as criminal law, criminal procedure, and criminal executive are most often singled out by scientists. The least frequent in the relevant literature (including challengeable one) are criminalistics, legal-administrative, operational-search, criminal-organizational, judicial and law enforcement policies. In addition, the reason for the discussion is the correlation between criminal-law and criminological, between criminological and victimological; and criminal procedural and operational-search policies.

In this regard, the opinion of I.M. Kleymenov is quite convincing, stating that "criminological policy is included in the content of the criminal policy - insofar as the prevention of crimes is connected with state coercion" [29, p. 96]. In all fairness, it should be said that Kleimenov distinctly declares independence of criminological policy in regard to criminal. Moreover, he is convinced that "criminal policy is part of the criminological one because the latter also relies on social policy" [30, 55]. A similar opinion showed by V.A. Shunyaeva, who, in particular, notes that criminological policy "is rooted in criminal policy", and then transformed "into an independent direction of state policy, which is based on criminological ideas on the implementation of the criminological security concept " [31, p.177]. In Kazakh science, T.K. Akimzhanov also considers: "the very concept of criminological politics appears most general in relation to such categories as criminal, criminal-executive, criminal procedural and other policies, since by semantic meaning it contains an indication of scientifically grounded activity on crime counteraction, development and implementation of measures on crime prevention, which is also covered by the subject area of criminology" [32, 54]. In the foreign criminology, the issues of criminological politics are given attention in correlation with the productivity of criminological research. In this regard, let us cite a number of interesting judgments on this subject by scientists from different countries of the world published by very authoritative scientific journals. Just note that in many respects they have similar views.

So, Alfred Blumstein writes: "There should be a natural symbiosis between the research process and the policy process. Research should be directed at issues that concern policy-makers, and policy-makers should want to seek guidance from research findings in order to attain more effective and efficient policies. This is certainly an appropriate and important ideal relationship. It is widely seen in technological areas, it is the norm in other social sciences such as economics, and one would hope that would be the case in criminology" (Alfred Blumstein. Interaction of Criminological Research and Public Policy//Journal of Quantitative Criminology, 1994 – Springer, December 1994, Volume 12, Issue 4, P. 349–361) p. 349.

Leslie Sebba notes that "The question arises, however, as to whether and to what extent there is any connection between the policy reforms and the research. This question arises, of course, in other areas of criminological policy—as, indeed, in other areas of social policy" (Leslie Sebba. On the relationship between criminological research and policy: the case of crime victims// Criminology and criminal justice. Vol. 1, issue 1, P. 27-58, issue published on February 1, 2001 https://doi.org/10.1177/1466802501001001003) p. 27.

Kevin D. Haggerty emphasizes that "The long-standing relationship between criminal justice policy and the advice of criminologists has been ruptured in the past two decades" (Kevin D. Haggerty. Displaced Expertise Three Constraints on the Policy relevance of Criminological Thought //Theoretical Criminology. Vol. 8, issue 2, P. 211-231, issue published on May 1, 2004, https://doi.org/10.1177/1362480604042244 & Criminal Justice).

David F. Greenberg is concerned that "ever since criminology became a distinct discipline, criminologists have hoped to promote the adoption of what they have considered to be rational, effective methods for dealing with crime" (David F. Greenberg. Criminological research and crime control policy: not a marriage made in heaven//Criminology & public policy. Vol. 5, issue 2, P. 203-212, issue published on May, 2006, DOI: 10.1111/j.1745-9133.2006.00374.x) p. 203.

As will be noted below, in domestic science, as well as in foreign science, there are common problematic issues of optimal interaction between criminological theory and criminological politics.

In any case, behind all this there are challenging questions of localization, purpose and interactions of these versions of policies, their legislative tools and fundamental foundations. The mostly relevant appears the study of the correlation and productive interaction of criminology, criminal law and criminal politology.

In this regard, as noted by I.A. Zinchenko and A.Yu. Trapitsyn, the basis of the concept of criminal policy should be a clear criminological idea, citing the following quote as an argument: "The criminal law policy is criminological, - writes M. M. Babaev, - and criminological policy is a normative. And that contains a pledge and a condition of effectiveness for each of them" [33, P. 87-88]. Over the years, Babaev, as such an idea offers the concept of criminological security. By the way, in Kazakhstan, at the level of a doctoral dissertation V.V. Root developed this idea, making it fundamental.

Generally, as it was rightly noted by A. G. Bezverkhov, today "the methodology and methodic of criminal law, political and criminological research is also different" [34, p. 33], and, therefore, it does not contribute to their rapprochement, not to mention the development of joint products. Whereas, A.I. Boyko writes that "with regard to the current unsatisfactory situation with the crime counteraction, the reproach should be addressed to representatives of criminal law and criminology, who often does not locate the general subject of their research" [35, p. 37]. After all, as Y. V. Golik quite accurately remarked, "in recent years there has been a certain gap between criminology and criminal law. Development (if it can be called development) of criminal law went without any connection with criminological research, and in criminology a whole direction emerged, defending its right to understand what is criminal and what is not. Such positions, being brought to the extreme, cannot help improve the situation in the fight against crime" [36, 53]. Further, he calls for the consolidation of the efforts of specialists. V. A. Nomokonov shares the same opinion, when rightly points out that "the development of the criminal law and criminological science of our country naturally led to the conclusion that it is necessary to provide them with a closer interconnection, even a certain integration, in the framework of a broader theory, concept, paradigm" [37, p. 196]. As such, it is worthy to present the theory of criminology of the law and criminology of criminal law (justice). We are entirely agree on that with S. F. Milyukov, that "we must do everything possible to complete the formation of this branch of scientific knowledge and the legislative implementation of the ideas of Russian and foreign criminologists, tested by life, as soon as possible" [38, 52].

In this regard, there is mention-worthy statement by M. M. Babaev and Yu. E. Pudovochkina that "the first step in this direction can be the development of a roadmap for the integration of criminal law and criminology, the definition of those key points of their contact, which should be paid the closest attention in the organization and conduct of scientific research" [39, p. 41].

According to B.Zh. Zhunusov, "criminological policy can be designated as the direction of the state activities to eliminate causes and develop measures to prevent crime" [40, P. 36-37].

A similar interpretation can be found in works by G. Rustemova, who believes that the criminological policy "is first and foremost activity of the state in eliminating the factors of committing crimes and implementing measures on crime prevention" [41, p. 19].

Criminological or preventive policy is a policy in the area of crime prevention, encompassing norm-setting, defining the direction and ways of implementing criminological prevention of antisocial phenomena, as well as the direction of practical implementation of preventive activities; and management of this practice. Criminological policy is the closest thing to what is called a strategy to combat crime. It is well-known, that prevention is the most effective remedy to counteract criminal manifestations [42, p. 10]

The most profound researcher of this phenomenon M.P.Kleimenov gives the following broad definition: "Criminological policy is scientifically grounded policy, consistent with international standards and legislative requirements, purposeful and systematic activity of state and municipal bodies, political institutions, business entities, public organizations, religious associations and citizens in reducing crime and decriminalizing public relations by social and legal means, provision of vital personal interests, society and the state from internal and external threats" [43, p. 225].

He argues about two models of criminological politics known in history - totalitarian and liberal, each of which is characterized by 16 attributes.

However, as the author believes, none of the models is optimal, since both do not meet the requirements (criteria) he put forward, a number of which, to a certain extent, are similar to those that are characteristic of the liberal one. The latter takes place in transit societies and states.

Criteria of the optimal criminological policy by M.P. Kleimenov [44, P. 229-231] are as follows:

1. Correspondence of national ideology, as a synthesis of traditional national values of the country;
2. Increase of the spiritual and moral potential of society; implementation of cultural and moral policies in the direction of humanistic personal qualities education;
3. Attention priority to the crime prevention;
4. Severance of business and government by excluding the participation of civil servants in entrepreneurial activities, as well as of businessmen "bearing the same representation" in government;
5. Elimination of all legal immunities, with exception of diplomatic immunity;
6. Establishment of procedures for the public certification of certain categories officials with the participation of community leaders;
7. Formation of a curtain structure for revision of the property status and sources of income of state officials and employees of governmental organizations and institutions regardless of the form of ownership; as well as the compliance of their expenditures with legal income;
8. Strengthening of the state response and regulation of the economy;
9. Improvement of state social policy, elimination of unemployment, indigence and poverty; restoration of labor resources;
10. Reduction of alcohol and narcotics consumption;
11. Strengthening of the family values;
12. Protection of children from all kinds of exploitation, physical or psychological abuse, corruption and depravation;
13. Maintenance of the state of publicity and scientific character at legislative acts preparation;
14. Introduction of the institute of criminological expertise of normative legal acts;
15. Integrated utilization of all legal means (criminal law, administrative law, civil law, etc.) for the purpose of combating crime;
16. Correction of strains in the human resources policy in federal, regional and municipal authorities, law enforcement and judicial bodies; exclusion of corruptive practices of cronyism and nepotism;
17. Optimization of processes of criminalization and decriminalization;
18. General social responsibilities of business;
19. Further development of criminological legislation;
20. Protection of potential and rehabilitation of real victims of crime;

21. Education in the law;
22. Improvement of criminological management;
23. Decriminalization of regions, branches of economy and fields of activity;
24) International engagement and cooperation in the detection, suppression and prevention of crimes.

According to V. A. Blinnikov, the goal of the criminological policy is to develop effective ways to identify the causes and prevention of crimes that will allow keeping crime at a level appropriate to the objective capabilities of society to oppose it.

The author believes that the objectives of this policy line are: “to formulate and disseminate ideas about the real nature, causes and state of crime, to develop the foundations, approaches and methods of studying crime, its causes, the identity of the offender, and to determine crime prevention measures, forms of development and methods of management of crime prevention subjects (state authorities and administrations, educational and other institutions and establishments) with a view of a resolution for opposing tasks of counteracting crime” [45, p. 33].

With reference to our topic, the Commission on Human Rights under the President of the Republic of Kazakhstan rightly noted: “One of the key elements in successful prevention of trafficking in persons is effective legislation. In recent years, Kazakhstan has taken a number of steps in this area” [46, p. 86]. This is very relevant in the view of the globalization of crime, especially the organized one, which many scholars are paying attention to. Among other relevant aspects, criminologist Ya. I. Gilinsky refers to “... the globalization of organized crime (drug trafficking, human trafficking, etc.)” [47, p. 93].

Relying on the latest developments of scientists (in particular, by D. A. Shestakov and M. P. Kleimenova) this document definitely can be attributed to criminological legislation. Author is convinced that such an industry exists at the time and is actively developing as a “system of international, federal and regional normative legal acts of criminological content and criminological orientation”, and whoever ignores this fact - does nothing for national security [48, p.183]. In this regard, the following idea by Shestakov gained practical importance: “The definition of the content and the boundaries of the criminological legislation, the formulation of the question of its incorporation, which has already begun, have made it possible to make a preliminary outline of its structure. The author of these notes identified groups of criminological norms established by legal acts on: 1) strategies for combating crime, 2) criminological expertise, 3) countering specific types of crime, and 4) having a victimological orientation” [49, p. 326].

Conclusion

In foreign criminology, as the analysis has shown, the issues of criminological policy are more developed, although there are problems of further modernization and optimization of the interaction between theory and practice.

In the domestic legal system, and first of all in the legal doctrine, it is still necessary to conduct a large-scale and complex activity on the design of the criminological policy model.

In this regard, along with the best foreign experience, as a fundamental theoretical and methodological basis for criminological policy in the field of combating crime, including those related to trafficking, it is necessary to select the following developments:

1) *M. M. Babaev, A. G. Bezverkhov, A. I. Boyko, Yu. V. Golik, I. M. Matskevich, V. A. Nomokonov, Yu. E. Pudovochkin* and other authors of the materials of the 10th Russian Congress of Criminal Law on the theme "Criminological Foundations of Criminal Law" (May 26-27 of 2016, Moscow State University);

2) *M. P. Kleimenov* on the essence (scientific validity, compliance with international standards and national legislation, systematic and purposefulness in reducing crime and decriminalization of the society, ensuring criminological security), criteria for optimality (24 indicators), topical areas (crime prevention, improvement of legislation, optimization of law enforcement activities, criminological management, the international cooperation);

3) *D. A. Shestakov, M.P. Kleimenov, S. F. Milyukov and D.Yu. Goncharova* on criminology of the law, criminology of criminal law (justice), criminological law, the system of legislation on combating crime;

4) *O. N. Vedernikova, A. G. Kibalnik and I. M. Kleimenov* on comparative criminology and international criminal law, legal and criminological systems;

5) *A. B. Bekmagambetov* on criminological and criminal law systematization of acts related to trafficking in persons (the first key aspect) [50, P. 209-218]; and the structure of the policy of counteraction (the second key aspect) [51, P. 34-39; 763-772].

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Constitutional reforms in Kazakhstan: real parliamentarism or a means to preserve political stability?

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Abstract

The purpose of the article is to analyze the content of the constitutional reform carried out in the Republic of Kazakhstan in early 2017. In the author's opinion, the changes introduced into the basic law of the Republic of Kazakhstan reflect the general tendency of the former post-Soviet countries, in which a formal increase in the elements of parliamentarism takes place through the expansion of powers of national legislative bodies. The article illustrates this by the example of amendments made to the basic laws of the post-Soviet countries in the first decade of this century.

The methodological basis of the research is the dialectical approach to the cognition of legal phenomena, allowing to analyze the process of their functioning in the context of the objective aggregate and subjective factors, as well as the postmodern paradigm, which makes it possible to research the legal reality at various levels.

The central place in the constitutional reform was occupied by the redistribution of powers between the supreme bodies of state power in favor of increasing the parliamentarism elements. The competence of the parliament was significantly expanded by reducing the scope of authority of the head of state. The author claims that the uncertainty of the provisions of the basic laws of the post-Soviet countries, adopted in the 1990s, regarding the definition of the type of the republic, was related to the preservation of the maximum possible choice of the way for the further development of young political systems. At the same time, it should be noted that when introducing various models of government in the process of constitutional changes, the main mistake was made, which consisted in fixing only the formal, external properties of the democratic system and did not provide for those substantive and internal opportunities that actually determined the main purpose of the separation of power.

The author concludes that the results of the constitutional reform that took place in Kazakhstan in early 2017 can only be seen after several years. This is confirmed by an analysis of changes introduced in late 2008 to the Constitution of the Russian Federation. Constitutional reform, increasing the role of the government, formed by the parliament and accountable to it, ultimately should increase the role of the political component of parliament, and increase the democracy of the national electoral system. But its effectiveness will be largely determined by the goals that the highest state power wants to achieve: a real democratization of life or another populist reform of the administration system.

Keywords: Constitution, constitutionalmodernization, parliament, executive power, constitutional reform, form of
government

Introduction

Modern parliaments are an integral part of the system of multi-level government, which involves the joint solution of strategic tasks by various public authorities, the expansion of the circle of actors involved in the development and adoption of political and legal decisions. If previously representative institutions were monopoly spokesmen for public interests, nowadays civil society institutions and social networks are successfully competing with them. In this regard, in modern democracies there is a tendency to weaken the position of parliament in the system of higher public authority bodies. The most important political and legal decisions are increasingly taken without its participation, which is due to reasons both objective and subjective. The development of integration processes, the formation of international and supranational centers of lawmaking (the World Trade Organization, the European Union, the Eurasian Economic Community), universal and regional structures that develop norms and standards, etc.) limit the capacity of national parliaments to implement independent lawmaking [5, p. 48].

Against the background of this process in many countries of the post-Soviet space in the 21st century, there is an increase in the elements of parliamentarism through the expansion of the powers of national legislatures. From a formal point of view, the reform of the public administration system in the post-Soviet countries reflects the trend of expanding parliamentary system that has been realized over the past decades and which has been designated as the "renaissance of parliamentarism" [20, p. 4]. It is this that demonstrates the emergence, in connection with the integration with Europe, of a supranational, international parliament - the European Parliament.

The process of expanding the powers of parliament began at the end of the 20th century and is the fourth stage in the development of the world parliamentarism. During the first stage (the 14th-18th centuries), the parliament was formed as a state authority. The second stage (the end of the XIII- early XX centuries) is called the golden age of parliamentarism. In the legal literature of that time it was noted that "electivity creates a close moral connection between the parliament and people and is the source of the political power of representation" [15, p. 182]. The formation of the parliament at that time took place on the basis of censored electoral law, which enshrined the interests of the emerging bourgeoisie.

The third stage (1920s-1960s) Is characterized by the fact that the parliament gives way to the dominant role in the political life of the executive power. The reason for this was the limited social base of existing parliaments, since 10-15% of the country's population participated in their elections. Parliaments either turn into decorative, non-influential bodies in countries with a totalitarian regime, becoming a cover for the dictatorship of the party and its leader, or were suppressed by the executive in democratic states. Among politicians and scientists there is a new view on the role of parliament in the life of the state and society. For example, the English professor Robert Yewdall Jennings wrote that the task of parliament is not in the leadership of the country, but in influencing and controlling the activities of the government. The French sociologist Raymond Aron noted that the parliament should be retained in order to create an average person's conviction that the government does not rule the country uncontrollably and serves as a screen for covering up the work of the national government [27, p. 440-441]. In connection with the emergence of an electoral system based on universal, equal, direct submission of votes, since the 1960s begins a new stage in the development of parliamentarism, which consists in its revival.

Materials. The methodological basis of the research is the dialectical approach to the cognition of legal phenomena, allowing to analyze the process of their functioning in the context of the objective and subjective factors aggregate, as well as the postmodern paradigm, which makes it possible to research the legal reality at various levels. Special attention is paid to a comparative analysis of the provisions of the basic laws of a number of CIS countries.

In 2004, on the initiative of L. Kuchma, the Constitution of Ukraine was amended to weaken the presidential power, which in 2010 President V. Yanukovich unsuccessfully tried to abolish [19]. In December 2016 citizens of Kyrgyzstan voted for amendments to the Constitution, significantly expanding the powers of parliament and government. These amendments should have entered into force in December 2017.

Any reform of public authority, associated with a certain stage in the development of statehood, is aimed at removing the contradictions existing therein. At each stage of the dialectical development of the system, it is required to isolate the basic social contradictions that determine its forward movement, to predict their deployment and the possibility of growing into social conflicts, to develop and implement state measures that promote a certain (for a given stage of the dialectic contradiction) stability of the social system [25, p. 7].

Quite often, the initiative of carrying out constitutional reforms appears during the periods of the change of the head of state. This can be demonstrated by the example of Uzbekistan. President of Uzbekistan Sh.M. Mirziyoyev spoke in his inauguration speech on December 14, 2016 about the need for a dialogue between the authorities and the population and the expansion of the role of the deputy corps of the national parliament. Until September 2, 2016 this post was occupied by Islam Abduganievich Karimov, who from 1989 to 1991 was the first secretary of the Central Committee of the Communist Party of Uzbekistan, and in 1990 headed the government of the country. On August 31, 1991 Uzbekistan declared independence and officially withdrew from the USSR. On December 29, 1991, I.A. Karimov was elected as the president of the country. After his death on September 2, 2016, by joint decision of the Legislative Chamber and the Senate of the Supreme Assembly (Oliy Majlis) of the Republic of Uzbekistan, the duties of the President were temporarily assigned to the Prime Minister of Uzbekistan Shavkat Miromonovich Mirziyoyev, who first headed the government in 2003 on October 19, 2016 at the VIII meeting of the Movement of businessmen and business people - the Liberal Democratic Party of Uzbekistan, Sh.M. Mirziyoyev was nominated as a candidate for the presidency of the Republic of Uzbekistan, and easily won the elections on December, 14. As a result, in Uzbekistan there was a transfer of power to a new head of state.

Results. In the Republic of Kazakhstan, the constitutional reform of 2017 was the next stage in the implementation of the policy of the head of state. On December 15, 2016, at a solemn meeting dedicated to the twenty-fifth anniversary of Kazakhstan's independence, President Nursultan Nazarbayev voiced the idea of the need for a constitutional reform, one of the tasks of which is the redistribution of powers between the branches of power. On January 26, 2017, it was announced about a general discussion prepared by the Constitutional Commission, amendments to the Constitution of Kazakhstan[1].

The practice of discussing draft basic laws is a tradition for post-Soviet states. Its foundation was laid back in the first half of the 20th century, when the Constitution (Basic Law) of the USSR was adopted in 1936. The Stalinist leadership, with the aim of legitimizing it in the eyes of ordinary Soviet citizens, initiated a procedure for general discussion of the draft regulatory legal act, in which, according to official figures, at least 75 million people, or about 80% of the adult population of the country participated [12, p. 125]. At present, these figures are very difficult to verify. S.A. Avakyan notes that the figures quoted in the studies are more arbitrary and cannot be verified "at that time, and later, the official did not spare colors, drawing a picture of approval, general joy and constructive discussion of the draft Constitution" [1, p. 67]. The result of a nationwide discussion of the draft Constitution of the USSR was that most Soviet citizens are sure that the adoption of the Basic Law took place with their participation. But, noting the positive consequences of the constitutional reforms of the 1930s (discussion of the draft Basic Law, direct elections of deputies to the Supreme Soviet of the USSR), it should be emphasized that the Soviet leadership did not set the goal of creating a real opportunity for citizens to participate in the process of making publicly-authoritative decisions. Elements of the discussion were used during the campaign for the Constitution of the Russian Federation in 1993, which began after the publication of its draft[2].

The draft Constitution of the Republic of Kazakhstan was also subjected to a nationwide discussion. It was held from June 30 to July 30, 1995. During the national discussion in more than half, namely, 55 articles, 1100 amendments and additions were made. According to Kazakhstan jurists, when developing and adopting the current Constitution, a new format was applied. Preparation of the project was carried out by a narrow group of legal experts, headed by N.A. Nazarbayev. Then the composition of developers was expanded at cost of new professional lawyers. The main provisions were presented to the participants of the Assembly of People of Kazakhstan and supported by them. Then followed a very intense discussion by the citizens of the country, work on the registration of proposals and direct approval of the document by the people in the course of a direct expression of will in a referendum. Thus, due to the format "President proposed, and the people of Kazakhstan adopted a new Constitution", the document was strictly scientific; including the consolidation of universally recognized values, taking into account Kazakhstan traditions, determining the scope, subject and methods of constitutional regulation of specific groups of relations, exhaustive regulation of the fundamental rights and freedoms of human and citizen; an optimal form of government was elected, in the context of the principle of unity and separation of state power, it is clear for everyone that the provisions and norms are set out. The quality of the document largely became the principal guarantee of the subsequent for the supremacy and direct action of the Basic Law, fulfillment of the

[1]Order of the President of the Republic of Kazakhstan "On the nationwide discussion of the draft Law of the Republic of Kazakhstan" On Amendments and Additions to the Constitution of the Republic of Kazakhstan ". Draft Law "On Amendments and Additions to the Constitution of the Republic of Kazakhstan" // Kazakhstanskaya Pravda. 2017. January 26.

[2]Rossiyskaya Gazeta dated November 10, 1993.

role of the basis for improving the entire legal system of the country, and the conscious constitutionally-lawful behavior of participants in constitutional and legal relations [16, 34, 35].

Discussion of amendments to the Constitution of the Republic of Kazakhstan marked the beginning of a new constitutional reform, promised by the effective head of state as early as 2015, during his election campaign[1]. For three months, during which there was a discussion of amendments to the Constitution of the Republic of Kazakhstan, about six thousand proposals were received. A rather short period of discussion determined a small number of proposed changes. During the discussion of the draft basic law in 1995, almost thirty thousand proposals and comments were made to the draft. At the same time, as experts say, this happened in an era when the main means of communication were paper letters, not Internet services[2]. The relatively small number of changes proposed during the discussion demonstrates it, to some extent, a formal character.

The reform touched a quarter of articles of the Constitution of Kazakhstan. The chairman of the Joint Commission for drafting the draft law "On Amendments and Additions to the Constitution of the Republic of Kazakhstan" for the second reading, the Majilis deputy Nurlan Abdirov noted that initially the draft submitted by the head of state provided for 26 amendments to 19 out of 98 articles of the Constitution. The final version of the Law contained 33 amendments to 25 articles of the Constitution[3]. According to the general rule, fixed art. 90 of the Constitution of the Republic of Kazakhstan, the procedure for amending the Constitution is a republican referendum. In connection with the need to speed up the procedure for amending the Constitution of Kazakhstan, the President, using the powers given to him, proposed to introduce amendments through the adoption of a law on amendments and additions by the parliament. The law adopted by the Majilis was signed by the head of state on March 10, 2017[4].

The main directions of the constitutional reform in Kazakhstan in 2017 were defined back in 2007, when the powers of the Parliament were expanded, which was given the right to agree and finalize the candidacy of the Prime Minister; the role of political parties in forming the legislative body increased; influence of local representative bodies strengthened. The Senate was entitled to issue laws during the temporary absence of the Majilis, caused by the early termination of its powers. In addition to legislative functions, the upper chamber of parliament, in addition to legislative functions, began to participate directly in the personnel policy of the state by giving consent to the appointment by the President of the head of the National Bank, the Prosecutor General, the chairman of the National Security Committee, the election of the chairman and judges of the Supreme Court, participating in the formation of the Constitutional Council, the Commission, the Accounts Committee for Control over the Execution of the Republican Budget. In fact, these changes laid the foundation for possible further democratic construction in the country, in the political system of which the elements of authoritarianism were rather vividly manifested [36, 37].

The central place in the constitutional reform of 2017 was occupied by the redistribution of powers between the supreme bodies of state power in favor of increasing the elements of parliamentarism. The competence of the parliament was significantly expanded by reducing the scope of authority of the head of state. For example, the head of state lost the right to issue decrees having the force of law, his right to legislative initiative was limited, etc. The Constitution of the Republic of Kazakhstan introduced provisions strengthening the positions of local self-government bodies, independence of the judiciary.

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[1]http://www.akorda.kz/ru/speeches/internal_political_affairs/in_speeches_and_addresses/vystuplenie-prezidenta-respubliki-kazahstan-predsedatelya-partii-nur-otan-nnazarbaeva-na-xvi-sezde-partii

[2]https://www.ritmeurasia.org/news--2017-03-16--konstitucionnaja-reforma-v-kazahstane.-prodolzhenie-sleduet-28978

[3]Kazinform // http://www.inform.kz/ru/samuyu-tochnuyu-statistiku-po-popravkam-v-konstituciyu-ozvuchil-mazhilismen-abdirov_a3006784

[4]Law of the Republic of Kazakhstan dated March 10, 2017 No. 51-VI LRK "On Amendments and Additions to the Constitution of the Republic of Kazakhstan" // Official website of the President of the Republic of Kazakhstan // http://www.akorda.kz/ru/official_documents/constitution

Despite the fact that significant changes were made to the system for realizing the powers of the supreme bodies of state power, the amendments did not affect the provisions of Art. 2 of the Constitution of the Republic of Kazakhstan, which fixes the presidential republic as a form of government. Development of this position finds in Art. 40 of the Constitution of the Republic of Kazakhstan, which determines the place of the President in the system of public authorities, instituting it as the head of state and the highest official.

Kazakhstan scientists note that the common features of the presidential republic, which, with some modification, found reflection in the Constitution of the Republic of Kazakhstan, justified themselves. So, after the self-dissolution of the Supreme Council of the Republic of Kazakhstan of the XII convocation and the temporary delegation of certain powers of the legislature to the President, he quickly and at a high enough quality level adopted hundreds of decrees on important issues of state life that have the force of constitutional laws and laws of the land. This showed the presidential capacity and capabilities in the field of lawmaking and was of great importance in strengthening the presidential system of government [21, p. 98].

It should be noted that the definition in the main law of the type or character of the republic[1] for the countries of the former USSR is the exception (Republic of Kazakhstan, Republic of Tajikistan) rather than the rule. The majority of states are limited to the statement of the republican form of government (Georgia, Kyrgyz Republic, Uzbekistan, etc.). Uncertainty of the provisions of the basic laws of the post-Soviet countries regarding the definition of the type of the republic adopted in the 1990s was associated with the preservation of the maximum possible choice of the way for the further development of young political systems. At the same time, it should be noted that when introducing various models of government in the process of constitutional changes, the main mistake was made: only formal, external properties were introduced and the content and internal opportunities that really determine the main purpose of the separation of power are not stipulated. the hands of one subject and each branch of government must restrain and balance the other. The conclusion reached with regard to Georgia's legal system can be extended to these countries: "The main problem of the Georgian Constitution, created by dozens of changes, is a system malfunction in the power delimitation model, an impractical, superficial deterrence-balancing mechanism that does not really ensure the balance of political power" [7, p. 81].

It is too early to speak about the effectiveness of reforming the system of state power in Kazakhstan. The transformation of the social order, according to Joseph Schumpeter, is a continuous process, but very slow [30, p. 530]. In this regard, not one year will pass, when its results will be revealed, and it will be possible to answer the question about the coincidence of the goals announced at the beginning of the reform and the goals achieved at its completion. Such a conclusion can be made by analyzing the consequences in the political life of Russia, which were achieved following the introduction of changes made in the December 2008 in the Constitution of the Russian Federation.

On December 30, 2008, the President of the Russian Federation signed the Laws of the Russian Federation on amendments to the Constitution of the Russian Federation concerning changes in the terms of the powers of the head of the Russian state and the State Duma[2], and the control powers of the State Duma with respect to the Government of the Russian Federation[3]. The laws on changing the terms of the powers of the highest state bodies bore a general character that specified for Russian legislation. Of particular importance was the Law conferring control over the State Duma of the Federal Assembly of the Russian Federation in relation to the Government of the Russian Federation. In accordance with it, the State Duma

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[1]The term "system of government" is also used in the literature to characterize the republic's type. N.A. Sakharov notes that "it is more correct from the point of scientific terminology to talk about the presidential, semi-presidential, parliamentary system of government." See: The Presidency Institute in the Modern World. M .: Yurid. lit., 1994. P. 3.

[2]Law of the Russian Federation on the amendment to the Constitution of the Russian Federation dated December 30, 2008 N 6-FCL "On changing the term of office of the President of the Russian Federation and the State Duma" // Rossiyskaya Gazeta. N 267. 2008. 31 Dec.

[3]Law of the Russian Federation on the amendment to the Constitution of the Russian Federation dated December 30, 2008 N 6-FCL "On Ruling Powers of the State Duma in Relation to the Government of the Russian Federation" // Rossiyskaya Gazeta. N 267. 2008. 31 Dec.

has the right to consider the annual reports of the Government of the Russian Federation on the results of its activities.

Due to the fact that unlike the Republic of Kazakhstan, the Constitution of the Russian Federation, while fixing the republican form of government, does not determine the type or character of the republic, there is no single point of view on this issue among scientists. In the late 1990s, Professor M. Ganino of the University of Milan wrote that in the Russian government there are 50% of the elements that belong to the French model, 30% are from the US model, 20% come from the imperial tradition. Voicing his opinion, M. Ganino noted that the Russian form of government "is not connected with Western models, it is an independent and original model, because it assumes new forms of state structure and completely new forms of separation of powers" [6, 110].

A similar position is expressed by the majority of Russian jurists. Professors M.I. Kukushkin and A.N. Kokotov note that an analysis of the provisions of the Russian Constitution allows us to conclude that there is a mixed republic in Russia [13, p. 106]. The combination of the parliamentary and presidential republics is characterized by the Russian government and other authors [3, p.123; 13, p. 152]. The mixed character of the Russian republic is most clearly manifested in the most important sign that determines the form of the republic: the procedure for the formation of a supreme executive body [26, p. 272; 4, p. 332]. In the appointment of the Chairman of the Government of the Russian Federation, according to Art. Art. 111 of the Constitution, the head of state and parliament takes part. Although, as noted in the literature, it is the President of the Russian Federation who has a significant influence on the process of forming the Government of Russia [11, p. 73], and the influence of the State Duma is rather limited [18, p. 136].

Another important feature of the mixed republic is dualism of executive power, which consists in the simultaneous existence of a head of state, endowed with certain powers of the executive, and the chairman of the government. In accordance with Art. 32 of the Federal Constitutional Law dated December 17, 1997, No. 2-FKZ "On the Government of the Russian Federation", the President of Russia directs the activities of federal executive bodies responsible for defense, security, internal affairs, justice, foreign affairs, emergency prevention and disaster management etc.

The consolidation in the Constitution of the Russian Federation of compulsory reporting by the supreme executive body to the State Duma increased the elements of parliamentarism, made them more pronounced in the Russian form of government and, in fact, placed the Government accountable to the President of the Russian Federation in the background.

An analysis of constitutional norms and federal legislation allows us to conclude that there is a mixed republic in Russia, which, after making amendments to the Constitution of the Russian Federation in 2008, began to be inclined toward a parliamentary one. The government was formed by the head of state and the parliament, but formally the supreme executive body is accountable to the State Duma. For the further active development of the parliamentary republic, it was necessary in the future to link the institution of government accountability to the State Duma with the possibility of expressing its distrust.

The consolidation of the mandatory reporting of the supreme executive body to the State Duma in the Constitution of the Russian Federation increased the elements of parliamentarism, made them more pronounced in the Russian form of government and, in fact, placed the Government accountable to the President of the Russian Federation in the background. Securing the elements of a parliamentary republic in the constitutional system of Russia was not a novel in law-making policy. The beginning of approbation of elements of this form of government in Russia at the level of the subjects of the Federation can be considered the adoption of the Federal Law of December 11, 2004 No. 159-FL "On Amendments to the Federal Law" On the General Principles of the Organization of Legislative (Representative) and Executive Bodies of State Power of the Subjects of the Russian Federation "and the Federal Law "On Basic Guarantees of Electoral Rights and the Right to Participate in the Referendum of Citizens of the Russian Federation ", which abolished direct elections of the heads of executive power subjects of the Russian Federation. The Russian citizen was given the powers of the highest official of the subject of the Russian Federation on the proposal of the President of the Russian Federation by the legislative (representative) body of state power of the subject of the Russian Federation. If the constitution (charter) of a constituent entity of the Russian Federation provided for a bicameral legislative (representative) public authority, the decision to confer on the citizen of the Russian Federation the powers of the highest official of the subject (the head of the highest executive body of state power of a constituent entity of the Russian Federation) is adopted at a joint session of the chambers. Despite the fact that the legislator used the notion of "empowerment" in this case, in fact, when the position of the head of executive power of a constituent entity of the Russian Federation was filled, the institute of multi-stage elections was applied: the highest official of the subject of the Russian Federation was elected by deputies of the legislative (representative) body of the constituent entity of the Federation. The nominee in this case was proposed by the President of the Russian Federation.

The waiver of the procedure for empowerment occurred in 2012, with the adoption of Federal Law No. 40-FL dated May 2, 2012 "On Amendments to the Federal Law "On General Principles for the Organization of Legislative (Representative) and Executive Bodies of State Power in the Subjects of the Russian Federation " and the Federal Law "On Basic Guarantees of Electoral Rights and the Right to Participate in the Referendum of Citizens of the Russian Federation", which enshrined direct elections of the heads of constituent entities of the Russian Federation. In accordance with the Federal Law No. 30-FL dated April 2, 2013 “On Amending Certain Legislative Acts of the Russian Federation”, the alternative to direct elections of the head of the Russian regions was the model of multi-stage elections: subjects of the Russian Federation in their constitutions (charters) may provide for the possibility of election the highest official of the subject of the Russian Federation (the head of the highest executive body of state power of the subject of the Russian Federation) deputies of the legislative (representative) body of state authority of the Russian Federation.

In the context of the development of elements of parliamentarism in Russia, the amendment concerning the increase in the term of office of the head of state looked more adequate. In most countries with this form of government, the term of office of the head of state is more than four years. For example, in accordance with art. 60 of the Constitution of Italy, the Chamber of Deputies and the Senate are elected for five years. The extension of the term of office of the head of the Russian state and the discrepancy between the electoral cycles of the State Duma and the President of the Russian Federation would only help the latter to fulfill the functions of a political arbiter in the system of supreme bodies of state power. This can be more in line with the essence of the current Russian Constitution, which was laid by its authors. S. Shakhrai, who is one of them, repeatedly noted that the President of the Russian Federation, according to their plan, had to have "sleeping" powers, to be a political arbiter who had to use his powers only in difficult situations [29, p. 7].

Since the introduction of these amendments to the Constitution of the Russian Federation, which were the first for it, almost ten years have passed. Despite the expansion of the powers of the State Duma of the Russian Federation, there has been no increase in parliamentarism in real political life. In the scientific literature it is recognized that the positions of the Federal Assembly in the system of power, indicated by the norms of the Constitution, are still noticeably weaker than those of the head of state. The most serious restriction of the autonomy of the Russian parliament was the creation of a virtually one-party system, under the control of which there was both the entire "power vertical" and any of the horizontal slices of public power in Russia. While this hierarchically organized political force retains its influence, legal instruments aimed at limiting the executive and "presidential" branches of power will not be needed for the Federal Assembly [23, p. 43].

The control powers of the State Duma, stemming from the annual obligation of the Government of the Russian Federation to report to it, have not developed properly. The reports of the Government have not yet become "a socially and politically significant event in the life of the country" [28, p. 119]. The weakness of this legal institution is due to the lack of legal consequences of the reports. In fact, certain information is brought to the notice of parliamentarians, which does not oblige or induce them to anything [9, p. 25]. The low effectiveness of the institutions of parliamentary responsibility of the Government of the Russian Federation minimizes it in the system of separation of powers, and the model of "strong head of state" remains the basis of the Russian form of government.

In this context, the position of a number of authors who believe that in the content of constitutional reforms in many modern states, in which democratic institutions began to develop in the 1990s, is fair, there is a deep tension between the obligations to democracy and the procedures for amending the constitution.

Often amendments are adopted that follow formal democratic procedures but are aimed at achieving anti-democratic or "offensive" constitutional goals, that is, to help current presidents extend their term of office, remove parliamentary or federal scrutiny from the executive branch and limit or suspend basic human rights. [33, R. 606-607]. The scientific discussion is ongoing, which is still going on about the approach to be followed in constitutional matters, in order to prevent unlimited discretionary judgments [17, p. 14].

Drawing parallels between constitutional reforms in Russia and Kazakhstan, it can be concluded that an analysis of the changes that have been made to the Constitution of the Republic of Kazakhstan shows that, without formally changing the form of government, they laid the foundation for the transition to a mixed republic. As the political practice of Russia shows, it is with the mixed republic, unlike other types of republics, that the model of a strong head of state receives maximum development. In modern legal science, the elements of this form of government in the new democracies have been called "semi-representationalism." It can be considered fair that the constitutional model quickly imported by these new democracies is neither American-style presidential... nor a limited parliamentary model.... Rather semi-representationalism - an underestimated constitutional type, which is most often associated with the French Fifth Republic - is rapidly gaining momentum. This constitutional type unites the popularly elected head of state with the head of government who is responsible to the popularly elected legislature, which makes the theory conceptually and analytically different from the other two basic constitutional types that exist in the modern world. After the collapse of the communist regime, semi-presidential candidates were chosen by many post-Soviet countries. It is reflected in the constitutions of Belarus, Croatia, Poland, Romania, Russia and Ukraine. In the 1990's this constitutional type was perceived in many countries of Africa and Asia and even some Latin American states [31, p. 93-94].

The new version of the Constitution of the Republic of Kazakhstan consolidates the participation of the parliament in the formation of the government, which is one of the defining features of the parliamentary or mixed republics. In accordance with art. 65 of the Constitution, the Prime Minister makes proposals on the structure and composition of the Government only after consultation with the Majilis. The exception are the ministers of defense and foreign affairs, who are appointed by the head of state independently, that is, parliamentary influence does not extend to the sphere of foreign policy and the power block.

The construction of a system of dualism of the executive power is aimed at singling out of the competence of the head of state the powers related to the management of the socio-economic sphere and referring them to the competence of the Government. In accordance with art. 44 of the Constitution, the competence of the President remained the main issues of defense, foreign policy, public administration, the protection of the Constitution and ensuring effective work between the branches of power. The implementation of the constitutional reform has led to the fact that the Government, taking the necessary decisions within the framework of a certain policy of the Head of State, bears full responsibility for the state of affairs in the socio-economic sphere. In fact, it turns out that there are two officials in the state, empowered by the highest executive power: the President and the Prime Minister.

The development of parliamentarism confirms the expansion of the responsibility of the Government and the entire system of the executive branch of power, their accountability to the Parliament, the inclusion of the latter in the process of dismissing ministers from office. So, following the results of hearing the report of a member of the Government by a majority of at least two-thirds of the total number of chamber deputies, each of the chambers has the right to receive an appeal to the President on the release of this official in the event of his failure to comply with the laws. In this case, the President dismisses a member of the Government. The guarantee of the institute of parliamentary responsibility is the exclusion from the Basic Law of the provisions providing for the right of the President to reject the appeal of the deputies of the Chamber to dismiss a member of the Government, that is, the relevant appeal of the Chamber to the Head of State for the release of a particular member of the Government is subject to adoption.

Guaranteeing mechanisms for the implementation of the vote of no confidence in the members of the supreme executive body is a further development of the institution of parliamentary control, which, according to Kazakhstan scientists, has been actively used in recent years. Procedures related to the implementation by the chambers of the control function of the Parliament of the Republics include the consent of the Senate for the appointment by the President of the Republic of the Chairman of the National Bank, the Prosecutor General, the Chairman of the National Security Committee of the Republic, etc. [24, 91].

The constitutional status of the parliament was substantially adjusted. In the old version of the Constitution, the Parliament was formalized as a representative body exercising legislative functions. In the current version, its functions were clarified: the Parliament of the Republic of Kazakhstan is the highest representative body of the Republic exercising legislative power. The absence of a new version of the Constitution of Kazakhstan of the president's right to issue decrees having the force of law, as well as delegating legislative powers to the president, is aimed at guaranteeing the legislative powers of the parliament. Such authority was granted to the Head of State by the Supreme Council of the Republic of Kazakhstan in 1993. During the validity of the relevant law in 1995-1996, the President adopted more than 130 decrees, which had the force of constitutional and customary laws. These decrees formed the legal basis for a new state building, facilitated the launch of market reforms[1].

In this context, the increase in the powers of the legislative branch is a positive moment, excluding the President's right to declare the consideration of the draft law urgent. This right has already been repeatedly criticized by the parliamentarians, as it did not always allow for a comprehensive study and comprehension of the relevant draft laws. The changes introduced increased the responsibility of Parliament for the adoption of qualitative laws. At the same time, the head of state retained the right to determine the priority of passing bills in the Parliament.

Discussion. The emergence of significant powers of the parliament in relation to the government entails the need to reform the party system in Kazakhstan, which has common features with Russia. Electoral legislation and legislation on political parties contributed to the formation in both states of a multi-party system with one dominant party – *Yedinaya Rossiya* in the Russian Federation and *Nur Otan* in the Republic of Kazakhstan. The process of unification of various political parties was conditioned by the exclusion from the electoral legislation of these countries of the legal norms permitting the creation of electoral blocs. In the mid-2000's in both states a proportional electoral system was established as the basis for elections of one of the chambers of national parliaments. In the State Duma of the fifth and sixth convocations, the political party *Yedinaya Rossiya* had the majority of seats - 315 and 238, respectively. In the State Duma of the seventh convocation, which was already formed on the basis of the Federal Law dated February 22, 2014 No. 20-FL "On Elections of Deputies of the State Duma of the Federal Assembly of the Russian Federation", which consolidates the mixed electoral system, *Yedinaya Rossiya*, headed by the Chairman of the Government of the Russian Federation, has 343 seats from 450 places (76.2%) [14, p. 945]. Currently, the party "Nur Otan" occupies 84 of 107 seats in the lower house of parliament (Majilis) (78.5%), its chairman is N.A. Nazarbayev himself.

President of the American Political Science Association Edwin Korvin said in the first half of the 20th century that the constitution "is not the cause, but the consequence of civil and political freedoms; it grants rights to the people, but it is the creation of its power itself"[32, p. 69-70]. Projecting this point of view on the problem under consideration, one can state the opinion that the democratic nature of the constitutional legislation can not always ensure the existence of a democratic regime. Moreover, as noted in the literature, the authority of post-Soviet parliamentarism is gradually falling due to the formalization of representation. The post-Soviet parliamentary system operates by ignoring the very essence of constitutionalism, which is its integral part [2, p. 133].

Conclusion. Constitutional reform that took place in Kazakhstan increasing the role of the government, formed by the parliament and accountable to it, ultimately should increase the role of the political component of the parliament, and increase the democracy of the national electoral system. But its effectiveness will be largely determined by the goals that the highest state power wants to achieve: a real democratization of life or another populist reform of the system of state administration. It is rightly asserted that even repeated national elections conducted in conditions of voluntary participation and providing citizens with unlimited opportunities to receive information can justify specific decisions that the winners

[1]http://www.inform.kz/ru/konstitucionnaya-reforma-potrebuet-ot-politpartiy-modernizacii-kasym-zhomart-tokaev_a2995755

will take in the future[1]. In modern times, there are many examples of how an authoritarian system was replaced by a plebiscite system, associated with democracy, but degenerating into despotism and tyranny of one kind or another[2]. Under conditions of real political competition, the parliament of Kazakhstan can become a full-fledged representative body, supported by broad social strata. The head of state, while formally remaining the head of the executive power, actually gradually goes beyond the separation of powers, implements strategic fictions, transferring most of the powers to the government, acting as the supreme arbiter in relations between the branches of power.

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The Activities of the Russian Imperial Political Agency in the Bukhara Emirate in the Second Half of The XIX Century at the Beginning of the XX Century

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Abstract

This article examines official documents and letters of leaders of various organizations of Russia sent directly to the Russian Imperial Political Agency (Political Agency), which was established on the territory of the Bukhara Emirate. Correspondence between different departments is analyzed, on the basis of those documents that are currently stored in Tashkent, in the Central State Archive of the Republic of Uzbekistan (CSARU).

It is emphasized that all relations between the Bukhara Emirate with the Russian Empire and the Turkestan governor-general went through the correspondence of a diplomatic representative. By the decree of Tsar Alexander III in Bukhara, in the beginning of 1885, a Russian representative office was established - the Russian Imperial Political Agency, headed by a political agent appointed by the Ministry of Foreign Affairs and subordinated to the Turkestan Governor-General and, consequently, the Military Ministry and the Ministry foreign affairs. The Agency was entrusted with the relations with the Bukhara government on all the most important issues in the sphere of politics, economy, science, security, etc. Attention is drawn to the fact that Russian advisers were assigned as the "political agents" to control the ruler of the Bukhara emirate, and in foreign policy Bukhara was completely dependent on Petersburg.

It is noted that the political agency was supposed to exercise control over the emir and his ministers regarding all issues that affected their relations with Russia. Historical sources of that period note that the Russian scientific societies are preliminary. the first stage of their research was carried out on the territory of the Turkestan Governor General, and in the second stage, as archival documents show, Central Asia studies were conducted directly in the territories of the Bukhara Emirate and the Khiva Khanate, rich in natural and material wealth, which at that time were particularly attractive for those gaining weight Russian merchants.

Keywords: Russian imperial political agency,Bukhara emirate,emir, kushbegi, letters.

Introduction

At the beginning of the XIX century. on the territory of Central Asia, there were three independent states in the person of Khiva, Kokand khanates, and also the strongest of them Bukhara emirate. This region, not yet sufficiently studied, attracted the attention not only of neighboring states, but also was in the sphere of geopolitical interests of the world's largest powers, and Russia, which showed interest in the Central Asian region, trying to establish economic relations with it, and, most importantly, to study the possibility of its subsequent conquest and development. Since the second half of the XIX century. the situation began to change dramatically because of the British Empire's desire to get ahead of Russia and penetrate the region through the territory of India and Afghanistan. Rivalry with England has become one of the reasons for the activation of Russian foreign policy towards the countries of Central Asia. The confrontation between the two empires was called the "Great Game". Particularly close interest of the Russian Empire to the region of Central Asia in the X1X century. is explained by a number of important factors, among which is the development of capitalist relations, which encouraged the conquest of new territories that would become a source of raw materials, as well as a market for the sale of industrial products. In addition, by this time, the import of cotton from North America to the Russian Empire was reduced due to the civil war in the United States in 1861-1865, which led to a crisis in the rapidly growing cotton industry in Russia. In addition, the khans of Central Asia imposed customs duties on Russian merchants, which forced them to turn to intermediaries in the face of Kazan and Ufa merchants. For the above reasons, a note was sent to the Ministry of Foreign Affairs, which indicated the need to create favorable conditions for the Russian merchants in the khanates. These ideas were supported by influential publications, a number of newspapers and magazines in Russia.

In the second half of the XIX century. the relationship between the Russian Empire and the Bukhara Emirate is formed on the basis of two treaties of June 23, 1868 and under the agreement of September 24, 1873, concluded in Shakhrisabs. According to the agreement concluded in 1868, the upper reaches of the river. Zarafshan, together with the Samarkand and Kattakurgan lands, retreated to Russia; Emir was charged with paying the Russian Empire an indemnity, and now Russian subjects were given the opportunity to have a caravan-saray in the emirate, acquire real estate and conduct unimpeded trade. The Treaty of 1873 consisted of 18 articles, in which much echoed with the treaty of 1868, but nevertheless in the new treaty there were a number of major innovations. So, according to the 15th article, the Bukhara Emirate was allowed to have its permanent representative in Tashkent, who was supposed to live there at the expense of the emir and in the Emir's house. According to Article 16 of the treaty, the tsarist government was to have its political representative in Bukhara.

In a word, the imperial Russian center has an ever-growing interest in the region and, along with the strengthening of the activities of the tsarist diplomats, an extensive study of the state of Central Asia began, including involving representatives of the scientific community. So, with the establishment of vassal dependence on the Russian Empire, the process of comprehensive study of the Bukhara emirate was activated. Scientists had to solve specific tasks for the development of the territory and natural resources of the emirate, exploring geology, geography, soil, flora and fauna, etc.

In the XIX century. Bukhara Emirate was the largest centralized state and occupied quite a large territory, the emirate's border ran along the territory of Iran, Khiva Khanate and Kazakh zhuzes with a total area of more than 200 thousand square meters. km. The center of the Bukhara emirate was the Zarafshan valley with such large cities as Samarkand, Bukhara, Penjikent, Ura-Tube, Karshi, etc. People of different nationality lived in Bukhara: Uzbeks, Tajiks, Kazakhs, Kyrgyz, Turkmens, Karakalpaks, Jews, Persians, Arabs, Gypsies. The national majority of Uzbeks-1.5 million people.[1]

From 1800 to 1836, three Russian embassies arrived in Bukhara. Bukhara Emirate, in turn, only from 1836 to 1843 equipped three embassies in Russia for talks with the tsarist government on expanding Russian-Bukhara trade ties. Both sides - both Russia and Bukhara were interested in maintaining and expanding embassy and trade relations. From Bukhara, cotton, silk, paints, dried fruit, dressing gowns were exported to Russia, and ready-made factory products were imported in large quantities from Russia to Bukhara. Armenia Vamberi wrote that in Bukhara there is not a single house, not a single tent, where there would be no Russian product[2].

Thus, for the above reasons, the Bukhara emirate, which is not part of the Turkestan governor general, is one of the most important priorities of the policy pursued toward the eastern states by the Russian Empire at the end of the 19th and beginning of the 20th century. The Central Asian region is at the center of attention of scientific societies and individual Russian scientists with the task of mastering information about minerals and natural resources of the territory, as well as finding opportunities to use them in the interests of the Russian state. The imperial government used not only the military, but also scientific societies and their members who carried out all-round active activities within the Emirate of Bukhara to carry out the tasks set.

Methodology

The methodological basis of the research was made up of dialectical methods of scientific cognition. During the writing of the article, special methods of scientific cognition were used: the study and analysis of documents, synthesis, analogy and comparison, the unity of theory and practice, the need to take into account the general and special in the classification of archival documents. Historical and comparative legal methods are widely used. In the course of the study, the historical process of expanding the Russian Empire was considered, including the states of Central Asia, in particular the Bukhara Emirate, the interaction of

[1] Tukhtametov T.G. Russian-Bukharian relations in the late XIX-early XX centuries. Tashkent. 1966. P.14
[2]Vamberi A. Journey through Central Asia. M., 1865. C.213.

institutions of power on both sides, ensuring its normal functioning. In order to identify the most effective and effective provisions of the topic studied, a large number of individual scientific publications and other works were studied and analyzed. Investigation of the most important sources revealing the activities of various expeditions aimed at comprehensively studying the Bukhara emirate at the end of the 19th and beginning of the 20th century, in particular the official diplomatic correspondence of that time, is the purpose of this article.

Among the many sources, a special place is occupied by the correspondence of representatives of the Russian Imperial Political Agency in Bukhara with the government of the emirate.

As evidence of this, the following arguments can be cited:

1.In the correspondence, the attitude of the leaders of the government of the Bukhara Emirate and the Russian Imperial Political Agency;

2.This correspondence collected primary information about the purposes for which the Russian scientific societies and individual researchers conducted a study of the territory of the Bukhara Emirate;

3. Correspondence provides an opportunity for in-depth research and understanding of those aspects of events that are not registered in other sources of that period.

Results

The study of the documents of the Russian Imperial Political Agency in the Bukhara Emirate in detail demonstrates that the activities of representatives of the Russian scientific community in the territory of the emirate are mainly connected with the collection of information in such areas as ethnography, study of archaeological and historical monuments, local studies, research in zoology, and geodetic observations.

As a result of studying the archival documents of the Turkestan Governor General, the Russian Imperial Political Agency and the kushbegi emirate, kept in the Central State Archives of the Republic of Uzbekistan, it became known that for each expedition held in the territory of the emirate, correspondence was conducted between the official agencies of the administration of the Russian Empire and the government of Bukhara the emirate.

Along with this, it was found out that the official letters selected in the process of research, according to the significance of the issues discussed in them, can be divided into two groups. The first group can include letters addressed to official representatives (Turkestan Governor General and Russian Imperial Political Agency) for conducting activities in the territory of the Bukhara Emirate, and the second group consists of correspondence between representatives of the Russian Imperial Political Agency and the government of the Bukhara Emirate.

The letters of the first group on content consist mainly of letters about the organization of expeditions of scientists, sending them to the corresponding region and assisting them in this. But the main task related to the performance of expeditions is reflected in the correspondence between the kushbegs of the Bukhara Emirate and the Political Agency of the Russian Empire. Because this correspondence is important, in the sense that it includes the peculiar approaches of the expedition, the attitude of the government of the emirate to this event and contains detailed information on obtaining an official permit.

Among the documents of the Russian political agency and the office of the emirate's kushbegi, there is no complete collection of letters on the planned and some conducted studies on the territory of the emirate. There is no correspondence, all institutions related to any expedition. It mainly includes letters from organizations that sent expeditions, letters sent to the Turkestan Governor-General or the Political Agency.

But even in this case, letters are of exceptional importance. Because they contain brief, but very valuable information about societies and scientists who have explored this territory. This information will help us to make a base (chronicle) of historical information about the date and purpose of expeditions. During the research, both types of letters were studied in detail.

Studying the historical informative value of letters gave us the opportunity to find out that as a result of correspondence between the Russian political agency and the government of the emirate, under the auspices of the Imperial Russian Geographical Society, the Russian Imperial Archaeological Society, the Russian Imperial Academy of Arts, the Russian Entomological Society, the Russian Committee for the Study of the Middle and Eastern Asia in historical, archaeological, linguistic and ethnographic respects, based on St. Their activities were conducted by societies organized in scientific and educational centers.

At the same time, the branches of these societies and organizations, for example, such territorial branches as the Turkestan branch of the Imperial Russian Geographical Society[1], Turkestan circle of lovers of archeology[2], Bukhara branch of the Society of Oriental Studies[3], Military-topographical department of the Turkestan Military District[4], Turkestan Public Library and Museum[5] took an active part in the implementation of this activity.

Secondly, based on the study of correspondence, we were able to identify the names of researchers and scientists who were pioneers, and as representatives of the above organizations conducted research in various scientific directions in the territory of the emirate.

Discussion

Letters between the Russian political agency and the government of Bukhara on the activities in the territory of the Bukhara emirate.

In preparing the correspondence in the Russian Imperial Political Agency, a general order was introduced, in particular: first, on the organization of the expedition and the permission of the scientific community to conduct it, the chairman of the society informed the government officials about all this in advance. In many cases, the management of the company put similar questions in official letters sent to the first department at the Ministry of Foreign Affairs and to the Turkestan Governor-General;[6] Secondly, after the reception by the Chancellery of the Turkestan Governor-General letters about the assistance of the expedition of the scientific society, officials proceeded to resolve this issue. If the objectives of the expedition affected the territory of the emirate, the administration of the office appealed to the Russian political agency in Bukhara through letters; Thirdly, the most important aspects of the organization of the expedition's activity on the territory of the emirate were reflected in the correspondence between the kushbegs of the Bukhara Emirate and the Russian political agency. Since the tasks of organizing the expedition in the above cases were usually solved at the internal level. The decision on issues related to the implementation of the activities of the expedition, usually found its solution in the third group of letters of correspondence. It was thanks to the letters of this group that it was possible to make changes and additions to the plan of the expedition. Correspondence of this kind is of great importance in covering the history of scientific research carried out in the territory of the emirate.

The analysis made during the study of the correspondence that was conducted between the Russian Imperial Political Agency and the government of the emirate shows that visits to the territory of the Bukhara Emirate by representatives of the Russian scientific community were conducted in accordance with a certain order.

The event was carried out on the basis of bilateral correspondence. The instructions sent to the Political Agency by the lower officials and societies of the Russian Empire served as the basis for a written appeal of the political agent to the government of the emirate. Such a document is recorded as a prior written request in mutual correspondence. The same method of writing such letters is observed in almost all letters. With regard to the content of letters, they can see the appeal of the Political Agency to the emirate with a request to issue permission for conducting scientific activities to a representative of a society or members of an expedition in the territory of the emirate, granting permission (an open sheet) in their name, and issuing instructions to local officials. As an example, letter No. 3684 of June 7, 1912, sent by political

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[1] CSA RU. Form I-3, op.1, d.9, sh.29-31.

[2] CSA RU. Form I-126, op.2, d.7392, sh.1-6.

[3] CSA RU. Form I-3, op.1, d.269, sh.20-21.

[4] CSA RU. Form I-126, op.2, d.687, sh.14-15.

[5] CSA RU. Form I-3, op.1, d.374, sh.67.

[6] In the process of analyzing archival documents of the Political Agency, in addition to this type of appeals, letters of heads of organizations sent directly to the political agency were preserved.

agent A. Somov to the name of kushbegi Mirza Nasrullabiya: "Dear kushbegi Mirza Nasrullabiy. The Russian entomological society informed me that at the end of June this year Kirichenko Alexander Nikolayevich, representative of this society, will be sent to Babatag and Termez for the purpose of entomological research, near the eastern territories of Bukhara[1]. Notifying you of the above, Mr kushbegi ask you to instruct him on the provision of comprehensive care and let me know about it. I wish you the health and mercy of His Holiness Emir, I await your response. Political agent: signature (A. Somov)[2] ."

From the letters sent back to the political agent sent to the emirate's kushbegi, the government of the Bukhara Emirate assisted the expedition members in the following areas. First, issuing permission (open sheet) to conduct research on the territory of the emirate, secondly, fixing special people behind them, thirdly, distributing instructions about the expedition to the corresponding behemoths of the emir, fourthly, proceeding from the goals and objectives of the scientists or expedition, material encouragement of their activities.

Among the documents of correspondence, the resolutions approved by the seal of the Bukhara emirate's kushbeg for the conduct of research in the territory of the emirate are of particular importance. When studying the history of the relationship between Russia and Bukhara, a correspondence of this kind, dating back to the end of the 19th century. beginning of the XX century., insufficiently investigated. Proceeding from this, we considered it necessary, within the scope of our topic, to consider, in essence, the content of the permits of the kushbegi. This type of document is the primary source in covering the history of research in the territory of the Bukhara Emirate. The open sheet contained, as the permission of the government of the emirate, the provision for carrying out the activities of the expedition, was an accompanying document ensuring the safety of the members of the expedition, and also assigned a special official to the members of the expedition. Here is an example: "Beks and officials of the Bukhara khanate (emirate), know that on the orders of his Holiness the Emir and at the request of the Russian political agency in Bukhara, and also on the orders of the Turkestan governor-general, the Russian official Popov on January 5, 1899, e. On the 5th day of the month Ramadan through Karshi will arrive in Kerki. By order of His Holiness the Emir to provide during the journey to Captain Popov help, Nasriddin the woman has been assigned to him. All the beks in the territory of the Bukhara Khanate must provide all-round assistance to Captain Popov. (On the 29th day of the month Shaban 1316 (December 30, 1898), Bukhara kushbegi, Zhon Mirzaby Divanbegi)"[3]. This document was written in the office of the kushbegi in Persian and was written in Arabic script, and was also approved by the seal of the kushbegi. The document was delivered to the Political Agency through an official assigned to scientists or an expedition that visited the territory of the emirate for research purposes. He was sent as an attachment to the letter kushbegi addressed to the political agent. Through this exchange of documents, representatives of the Political Agency received information about the attitude of the government of the emirate to the implementation of an expedition, permission to conduct it, and also about the official assigned to it. Thus, scientific societies and local officials received information about the response letter of the kushbeg and its application[4].

During its subsequent activities, the Political Agency provided its document in the form of a permit addressed to an official of the emirate assigned to members of the expedition[5]. To start the expedition, the permit (open sheet) issued by the government of the emirate and the certificates provided by the agency were delivered to members of the expedition through an emirate official. Thus, according to the analysis of archival documents, the practical significance of the agency's permits was not higher than an open letter of instruction given out by the emirate's kushbegi and providing permission to conduct activities in its governing region, as well as giving the opportunity to receive appropriate

[1] This means letter No. 75 of June 7, 1912, sent to the name of political agent A. Somov, the head of the society. See: CSA RU. Form I-3, op.1, d. 74, sh.10.

[2] CSA RU. Form I-126, op.2, d.850, sh.10.

[3] CSA RU. Form I-3, op.1, d.9, sh.240.

[4]CSA RU. Form I-3, op.1, d.52, sh.62-,94.

[5] CSA RU. Form I-3, op.2, d.96, sh.421.

assistance on this issue from the beks of this region . Because the certificate provided by the Political Agency consisted of written notes about the attitude of the government of the emirate to their studies and about who the official assigned to persons visiting the territory of the emirate is. The certificate was intended for passage through the Russian settlement and for representatives of institutions in the territory of the emirate and was used only as a reference. Usually the document in the agency was not issued in the form of a certificate, but in the form of a certificate.

One of the agency's certificates was provided by B.A. Fedchenko, said: "This certificate under No. 4198 was provided by the Russian Imperial Political Agency in Bukhara to Fedchenko Boris Alexeevich, the chief botanist of the Imperial St. Petersburg Botanical Gardens, to carry out the task assigned to him on the territory of the Bukhara Emirate. (Signature-stamp)"[1].

On this issue, in the correspondence that was conducted between the Kushbegi and the Russian political agency in May-June 1913, one can learn about the issuance by the government of the emirate of a permit (open sheet) for the activities of the scientist and that Yusufbek was attached to him to conduct this activity world of zabazi. After that, the Political Agency also provided its identity card to the official. Certificate №4199. It was granted to the Bukharan official Yusufbek Mirzabashi, who was appointed to help and accompany the chief botanist of the Imperial St. Petersburg Botanical Garden Fedchenko Boris Alekseevich to carry out the task entrusted to him. (Signature-stamp)"[2].

Usually documents of this kind were signed by a political agent or an agency manager and confirmed by the agency's seal. In the Political Agency, serial numbers were put in the certificates, after which they were given to the appropriate persons. This can be traced to the certificate No. 1785[3], registered in the name of Yodgorbek Mirzabashi - a local official directly assigned to Ya.S. Edelstein and his companion D.I. Mushketov, who arrived in the territory of the emirate for conducting geological observations. Certificate №5691[4], issued in the name of Khongeldibek Mirzabashi, assigned to help the artist PP. Fetisov, who in 1913 arrived to collect information about ancient monuments of art, architecture and ethnography.

Based on the letters of the kushbegi of the Bukhara Emirate sent to the name of the Political Agency, it can be concluded that the government of the emirate almost always assigned its people to scientists or expeditions exploring its territory. The majority of such responsible persons are officials who work in the office of the kushbegi, who work in positions of Mirzabash, jubilee, caravulbeg and mirahura.[5]

The question of fixing the expedition or scientists officials was reflected in a letter kushbegi emirate, sent to the name of a political agent. "You asked me for the appointment of an official to help you for a scientific trip to the regions of Darvaz, Roshan and Shugnan, for a member of the Imperial Geographic Society, and geologist Ivanov. I appointed Astana Mirzabashi. I inform you that I gave him an open letter to the officials of the emirate, which indicated the provision of all-round assistance and unhindered passage of him and the scientist in the specified territories. The 9th day of the month of Muharram, 1313 AH (May 28, 1897), the attitude to the letter No. 2067 - (*it must be understood as a response letter.*)"[6].

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[1] CSA RU. Form I-3, op.1, d.374, sh.132.

[2] CSA RU. Form I-3, op.1, d.374, sh.134

[3]CSA RU. Form I-3, op.2, d.96, sh.18.

[4]CSA RU. Form I-3, op.1, d.374, sh.171.

[5]Mirzabashi is a person holding a position in the emirate's management system. Performed the duties of the manager of the affairs of the office. He was considered an official equal to the rank of sergeant-major in the Russian Empire. The dwellers are both a palace and military official. He was considered an official equal to the rank of second lieutenant in the Russian Empire. Karavulbegi - the chief of the guards and guards. He was a responsible person for peace and tranquility in the state. He was considered an official equal to the rank of lieutenant in the Russian Empire. Mirakhur - a person in this position, at first was responsible for delivering food (straw, hay, grain) to Emir horses. He was considered an official equal to the rank of captain in the Russian Empire. See: Khanykov N. Description of the Bukhara Khanate.Saint Petersburg, type. The Imperial Academy of Sciences, 1843-P.185.

[6]CSA RU. Form I-3, op.1, d.9, sh.26.

In the process of studying the correspondence, it was found out that the government of the emirate at various times worked and participated in activities related to the work of scientists in the study of the territory of the emirate of Mirzabashi Khongeldibek, Kurbonbek, Yadgarbek and Jurabek, Astan, Yusufbek and Abdulhamid, Mirza Nasriddin Haji, Abdukadir and Saidbek zhivachi, the caravulbags Mirza Said, Umarkul, Khoja Jurabek and Muhammadkul, as well as the mirahurs Muhammadbek, Juma Mirza, Bobobek[1].

Proceeding from the above, it can be stated that the kushbegi, when choosing officials for these positions, adhered to the established, certain requirements, for example, most of the above officials were persons with military ranks and were in the service in the emirate management system. This circumstance, on the one hand, ensured the safety and success of the expeditions carried out in the emirate's backyard, on the other hand, when it became known that scientists in their studies were beyond the scope of the tasks and goals, it enabled the assigned officials to take any measures in this direction or urgently report this kushbegi emirate. It is worth noting that the person involved in the affairs of Mirzabashi's office was a very educated man. This person was engaged in gathering information about who the members of the expedition met and what they were talking about, what are their true goals and objectives. The main objective of the people belonging to these two groups was that issues of national importance were excluded from the process of communication between the local population and members of the expedition. To ensure this, they used various means to be permanent witnesses during conversations with representatives of the local population, using certain circumstances, making changes to the expedition route and not accompanying the researchers to regions that were not recommended for visiting.

As a result of a study of written sources of that time it was found out that in the Kushbegi office, 15 specially selected people were on duty to carry out activities to meet representatives of Russian scientific societies, accompany them and carry out the activities necessary for them[2]. On the subject of the meeting of high-ranking personalities visiting the country, carried out selection among officials. Such an event was organized in the office of the Kushbegi, proceeding from the goals and scope of the scientist-researcher. Proceeding from the directions of the expedition, in letters addressed to the Kushbegi by the Political Agency, it was noted that the researchers assigned to A.P. Mikhailov and Ya.S. Edelstein Mirzabashi Kurbonbek and Honlegeldi began to carry out their tasks in the regions of Garm[3] и Karatog[4].

Summing up, it can be noted that a complex of researched letters shows that the government of the Bukhara Emirate not only fixed scientists for the scientists, but also gave appropriate instructions to the beks in the regions. Letters sent to kushbeg beks can be divided into two groups. The archival documents of the agency revealed the existence of letters related to these two groups. The first group of them includes letters for beks with instructions on expeditions with certain areas of research and their purposes, the second group of letters consists of instructions for assisting the expedition during the passage of certain directions of the territory of the emirate[5]. If the first group includes the letters almost all expeditions have been made at the emirate, the second group includes the letters on expeditions whose main aim was to study the Central Asian and neighboring countries with it.

In written appeals sent by the emirate's kushbegi to the name of the beks, it was revealed that there were indications containing instructions for rendering assistance to representatives of the Russian Empire

[1] CSA RU. Form I-3, op.1, d.374, sh.171; Form I-3, op.1, d.9, sh.55; Form I-3, op.2, d.96, sh.19; Form I-3, op.1, d.854, sh.40; Form I-3, op.1, d.9, sh.26; Form I-3, op.1, d.374, sh.134; Form I-3, op.1, d.374, sh.140; Form I-3, op.1, d.9, sh.34; Form I-3, op.1, d.113, sh.39; Form I-3, op.1, d.9, sh.170; Form I-3, op.2, d.96, sh.247; Form I-3, op.1, d.9, sh.73; Form I-3, op.1, d.9, sh.73; Form I-3, op.2, d.96, sh.282; Form I-3, op.1, d.9, sh.101; Form I-3, op.2, d.113, sh. 31; Form I-3, op.2, d.96, sh.425; Form I-3, op.1, d.9, sh.163.

[2] Nechaev A.V. On Mountain Bukhara (travel essays) -St. Petersburg. The typography of M. M. Stasyulevich, 1914.-P.15.

[3] CSA RU. Form I-3, op.2, d.96, sh.22.

[4] CSA RU. Form I-3, op.1, d.39, sh.55.

[5] CSA RU. Form I-3, op.1, d.8, sh.34.

planning a passage through the territory of the Bukhara emirate. After sending such instructions, he informed the Political Agency about this. This can be seen in the example of the next letter. "His Highness the Governor of the Russian Imperial Political Agency in Bukhara. We, according to your letter No. 3019 of May 17, 1913, sent a written order to all the kazis in Karshi, Chardjou, Kulyab, Balzhuvan, Darvoz, Karateghin, Gissar, Dehna, Baysun, Sherabad, Kalif, Kerky, Burdalik, Chirakchi, Guzar, Yakkabagh and Kitab, on providing comprehensive assistance to Lepou Roma Lambertovich during his stay in the territory of the emirate. " (The 13th day of the month of Shawwal, 1331 AH (August 31, 1913))[1].

The practical significance of these instructions can be traced to the example of the activities of persons involved in the research of BA. Fedchenko, N.V. Bogoyavlevsky, A.A. Bobrinsky, L.A. Zimin. They are Khizh-Nazar and Mulla Nozim brothers living in the village of Shigil, not far from Garm, or the representative of the Varkut-Amanbek kishlak, as well as local government officials Eshmuhammad Mirzo, Muhammad and Yusuf Alishah.

Correspondence of representatives of the Political Agency and the Government of Bukhara on material support of scientific expeditions.

Another of the most important issues noted in the correspondence of the Political Agency is the issue of material support for the activities of the expedition by high-ranking officials of the government of the emirate. For example, the Bukhara Emir supported materially the group of expeditions and scientific events of the Turkestan branch of the Imperial Geographical Society, as well as the State Administration of Property and Agriculture in the Turkestan Territory, which conducted research in the territory of the emirate.

In the series of significant expeditions, which received material assistance from the Emir of Bukhara, one can also make expeditions to AP. Mikhailov (1897) and B.A. Fedchenko (1916) In order to support the activities of these scientists, the issue of allocating funds was mainly reflected in the correspondence of the emirate's kushbeg with the Political Agency. For example, the question of allocating the means of the expedition to A.P. Mikhailova, was previously decided in the regional institutions of the Russian Empire. This can be seen from a letter of April 25, 1897, sent by the Vice-President of the Imperial Geographical Society, P.P. Semyonov to him Baron A.B. Vrevsky[2] in which the engineer of the Turkestan mountain district asks him to assist him in organizing the expedition.

Baron A. Vrevsky[3] in his reply of May 20, 1897, sent to the vice-president of the Imperial Geographic Society, P.P. Semenov on this issue sets out the following: "Due to lack of funds in the Turkestan branch of the geographical society for the organization of the expedition, AP. Mikhailova, I turned to Emir of Bukhara. Mr. Emir for the organization of the expedition and during the work on the hiring of labor allocated funds of 1500 rubles. I think that, given the generosity of the Emir and taking into account the rendering of great assistance to the expeditions of the Imperial Geographical Society, sent to the territory of the Bukhara Emirate, you will find it worthy to receive honorary members of the society of Mr. Emir"[4].

Expedition of the engineer of the Turkestan mountain district A.P. Mikhailova, in 1895, studied the content of gold particles in the sand in the territory of Balzhuvan and Darvaz. In 1897, the Bukhara Emir for the organization of a second expedition aimed at studying minerals on the territory of Shugnan and Roshan, allocated to the Turkestan branch of the Imperial Geographical Society through the State Bank of Bukhara region money of 1500 rubles[5]. On this issue in May-August 1897, extensive correspondence was conducted

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[1]CSA RU. Form I-3, op.1, d.374, sh.174.

[2]CSA RU. Form I-69, op.1, d.1, sh.20-21.

[3]Vrevskiy Alexander Borisovich - (1834-1910). In the years 1867-1875. rank 7 officer in the General Staff; in the years 1876-1884. chief of staff of the 7th military (army) corps; in the years 1884-1889. Chief of Staff of the Odessa Military District. In the years 1889-1898. commander of the Turkestan General-Governorship and the Turkestan Military District. In 1898 he was elected a member of the Military Council. In 1906 he finished his military activities

[4]CSA RU. Form I-69, op.1, d.1, sh.22.

[5]CSA RU. Form I-3, op.1, d.9, sh.29.

between the emirate's kushbags and the Russian political agency. In the Emir Abdul Ahadhan was elected an honorary member of the society[1].

At the final stage of the expedition on October 27, 1897, A.P. Mikhailov, sent a letter to V.I. Ignatyev. He was informed that he had met with the Turkestan governor-general and asked the latter to deliver the precious stones found to Emir as a result of the research. But the Governor-General answered him that it would be better if he personally met Emir Bukhara and himself presented him with these stones[2].

The tradition of supporting the Bukhara emir of studies that are of great importance for the economic and social life of the emirate can also be traced in the work of B.A. Fedchenko - the chief botanist of the Botanical Garden named after Emperor Peter the Great, who studied flora in the whole of the Bukharan Emirate. This can be found from letter No. 382 of the State Administration of Property and Agriculture in the Turkestan Territory, sent on January 11, 1916 to the Russian political agency in Bukhara. It contains information about the request of B.A. Fedchenko allocated the government of the emirate in the prescribed manner funds in the amount of 8,000 rubles, to assist and conduct scientific research in the territory of the emirate[3].

Such an event was carried out on the instructions and on the basis of the permission of the Turkestan Governor-General. In order to enforce this instruction, the Agriculture Department sent a copy of B.A. Fedchenko's application to the Russian political agency for representation to the emir. Turning to the range of works planned for the scientist in 1916, we found the following information: the scientist studied all areas and counties of Turkestan in a periodic sequence on the basis of the approved plan for 7 years, that is, until 1915. And, choosing as an object of investigation the plant world of the emirate. Having finished his activities, he announced that his goal was to compile a "Consolidated description of plants" in the flora of territories belonging to the Turkestan tsarist government. The scientist noted that he organized his activities only on the lands where he was sent by the Department for Resettlement, that the territory of the Bukhara Emirate has not been studied: "I am sure that the existing flora of the Bukhara region in studying the flora of the Turkestan Territory is of great importance. Botanical observations in the Bukhara region have not only scientific but also practical significance”[4]. Continuing his thought, the researcher writes about the need to study the forest regions of the emirate. B.A Fedchenko in his application, noting that prior to these four times, albeit in the shortest possible time, conducted a study of the plant world in the emirate's bekstva, makes it clear that in the future this can serve to increase the amount of income from the lands and requests to allocate for expenditures Expedition 8000 rubles. But representatives of the tsarist government chose to solve this problem through discussions and negotiations of the Russian political agency in Bukhara with the emir himself.

To accomplish this goal, the political agent in Bukhara, A. Belyaev, on March 3, 1916, sends a letter No. 1681 to the name of Bukhara's kushbegi Mirza Nasrullah[5]. In order for B.A. Fedchenko's petition sent to the above-mentioned institutions and the allocation of funds in the amount of 8,000 rubles to assist the expedition, the Bukhara Emir did not remain dissatisfied, he noted that the Turkestan governor-general personally asked the emir about it.

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[1]The Turkestan branch of the Imperial Geographical Society was established on the orders of the government on May 20, 1896. Its activity began on November 28, 1896 in the city of Tashkent. Honorary members of this society were different high-ranking people who made a great contribution to the study of the Turkestan region from a scientific point of view. The first political agent of the Russian Empire in the Bukhara emirate, N. V. Charykov, was also a member of the Imperial Geographical Society. Individuals who are members of the society had to pay a membership fee of 10,000 silver rubles each year. See: Lunin B.V. From the history of Russian Oriental studies and archeology in Turkestan (1895-1917). T.: Publishing House of the Academy of Sciences of the Uzbek SSR, 1958.-P.47., CSA RU. Form I-3, op-1, d.8 the reverse side of L.35.

[2]CSA RU. Form I-3, op.1, d.9, sh.135-136.

[3]CSA RU. Form I-3, op.1, d.870, sh.1.

[4]CSA RU. Form I-3, op.1, d.870, sh.2.

[5]CSA RU. Form I-126, op.2, d.875, sh.3.

A reply letter expressing the attitude of the Bukhara emir on this issue was sent to the Kushbegi on March 21, 1916, in the Political Agency[1]. It noted that the emir, given the important practical significance of B.A. Fedchenko's research, gave an indication of allocating 8,000 rubles for the expedition. Kushbegi noted that it is necessary to notify the administration of the emirate of the allocation of funds on the basis of check No. 215503 by the Bukhara branch of the State Bank and on the receipt of these funds by the agency[2].

The second direction of measures to encourage the Bukhara Emir of the activities of representatives of Russian scientific societies and the public was to assist in the publication of scientific works related to the history of the emirate.

In the correspondence between the government of the Bukhara Emirate and the Political Agency of 1917, there is a notice of the government of the emirate to assist in the publication of the publication of the Imperial Geographical Society, connected with the history of Bukhara, ie. finished work "Information on the history of the Sheibanids dynasty: Abdullakhan and Abdulmuminkhan". On this issue, the political agent told the Emir personally at a meeting on January 29[3]. The attitude of the emir to this measure is expressed in the response letter kushbegi Mirza Nasrullabiya of August 31, 1917, sent to the name of a political agent. It noted that the emir gave permission to allocate funds in the amount of 5000 rubles for the publication of the book "Information on the history of the Sheibanid dynasty: Abdullakhan and Abdulmuminkhan", as well as the results of the study of the expedition of medical places in Bukhara[4]. Such information clearly demonstrates the provision of material assistance by the government of the emirate for the development of scientific branches.

The last stage of the correspondence of the Russian Imperial Political Agency was reflected in a letter of thanks sent to the name of the kushbegi of the Bukhara Emirate on behalf of the Russian political agency.

In correspondence, the presence of S.A Lidsky's letters[5], N.V. Veselovskogo[6], T. Ivanova[7], V.I. Lipskogo[8], S.I. Korzhinskogo[9], A.P. Mikhailova[10], Ardakani, M. P. et al[9], Srivastava, D. B.[10], Issaliyeva, A., et al[11], Vajravelu, K.[12], as well as letters of thanks from the leadership of the societies of which they were members. An example of this is the letter of the Russian political agency No. 3295 of August 22, 1897, sent to the name of the Janmirza-biy Divanbegi kushbags: "You, on the basis of my attitude in letter No. 2067, sent

[1]CSA RU. Form I-3, op.1, d.870, sh.5.

[2]Funds allocated by the scholars of the Bukhara Emirate for the study of the territory, through a special check, were delivered to the Political Agency. At the end of the letter it was noted that it is necessary to deliver the kushbegi information on the acceptance by the political agency of these funds. In fulfilling this requirement, the Russian political agency in Bukhara did not always apply to the kushbegi with a new letter, but at the top of the middle part of the reply letter sent to the kushbegi, informed that in accordance with the established procedure, these funds were accepted on the basis of the State Bank's check.

[3]CSA RU. Form I-3, op.2, d.579, sh.4.

[4] CSA RU. Form I-3, op.2, d.579, sh.2.

[5] CSA RU. Form I-3, op.1, d.8, sh.190.

[6]CSA RU. Form I-3, op.1, d.9, sh.90-91.

[7] CSA RU. Form I-3, op.1, d.9, sh.93.

[8]CSA RU. Form I-3, op.1, d.9, sh.80.

[9]CSA RU. Form I-3, op.1, d.9, sh.101.

[10]CSA RU. Form I-3, op.1, d.9, sh.94.

[9] Ardakani, M. P., Lashkarian, A., & Sadeghzadeh, M. (2015). The Translatability/Untranslatability of Poetics: Eliot's" Ash Wednesday" and its two Persian translations

[10] Srivastava, D. B. (2016). ENERGY SECURITY: TODAY AND TOMORROW.

[11] Issaliyeva, A., Ospanova, A. N., & Alibekul, A. (2018). Kazakhstan and GCC: Islamic component in joint collaboration.

[12] Vajravelu, K. (2018). Innovative Strategies for Learning and Teaching of Large Differential Equations Classes.

on the 9th day of the month of Muharram, 1315 (AH) informed that in order to be escorted to the Shugnansky region by the Russian scientist Ivanov (T. Ivanov conducted botanical observations in May-August 1897), he was appointed a companion of Oston Mirzabashi. Oston Mirzabashi, who recently returned, gave me information that Mr. Ivanov expresses his gratitude to the fact that the above-named official in many cases facilitated the journey, thanks to his enterprising, agility and good knowledge of local conditions. I have considered this circumstance above to be brought to you personally. Dear Diwanbegi, for your friendship, I ask you to express to him (Astana Mirzabashi) my sincere gratitude for the fulfillment of the task entrusted to him. I wish you the health and mercy of His Holiness the Emir"[1]. Следует заметить, что такие благодарственные письма обычно посылались после окончания экспедиций учёных и представителей соответствующих обществ, изучавших Бухарский эмират.

Conclusion

Thus, it can be stated that the Russian Imperial Political Agency, established in Bukhara in 1885, had a huge influence on the Bukharian authorities as an official representation of the Russian Empire, whose main functions were to control the government of the Bukharian emirate and the situation on the Afghan border, to protect the interests of Russian trade and industry, as well as the implementation of judicial and administrative-legal activities against the Russians who lived in the territories of the Bukhara Emirate . As a result, the Emirate of Bukhara was included in the system of international cultural and trade and economic relations.

Based on the analysis of archival documents, the following conclusions can be drawn:

In the late 19th and early 20th centuries, the territory of the emirate was studied by scientific societies of the Russian Empire in two directions. First. In the northeastern regions of Bukhara and the western regions of the Pamirs, botanical, geobotanical, geological, geophysical and geological surveys were conducted in the regions of Gissar, Baysun, Karshi, Kitob, Yakkabag, Shakhrisabz, Karategin, Kalaya Khum, Karatag, Kobodiyon, Darvoz, Balzhuvan, Shugnan and Roshan geodesic research;

The second. The territory of the central region of the Bukhara Emirate was studied mainly in archaeological, ethnographic, topographic and local history purposes.

Third. Despite the fact that during this period the Russian Scientific Society studied the territory of the emirate as part of colonial policy, approval and clearance of the emirate's government to carry out this research, the development of science officers, played a positive role, becoming a starting point for further development of the territory of the Emirate of Bukhara. Contribution to the formation of local archeology of the region by such researchers as B. Petrov, N.F. Sitnyakovsky, N.I. Veselovsky, L.A. Zimin, I.A. Kastene, N.N. Shcherbin-Kramarenko, E.E. Pirlik, as well as merit in the study of material culture, economy of the population of the emirate and the spiritual heritage of such scientists as P.P. Fetisov, S.G. Rybakov, A.A. Bobrinsky, N.V. Bogoyavlevsky, S.M. Dudin, N.F. Burdukov confirm the above.

[1] CSA RU. Form I-3, op.1, d.9, sh.90.

Fourth. Scientists engaged in research on the territory of the Emirate wide range of geo, eco and biobogatstv of strategic importance, carried out his research in the interests of the empire, as a result of their activities were discovered new species of plants made discoveries in the field of botany, Geobotany, geology, geophysics and geodesy, maps of locations of such minerals as gold, oil, nephrite, and coal were drawn up, new methods of their extraction were improved.

Fifth. The activities of such companies and expeditions were interested not only the tsarist government, but the government of the Emirate, as the Emir of Bukhara financially supported data expedition and allowed them the freedom to operate in the entire emirate, and are assigned to them Bukharan officials.

The sixth. To conduct research on the territory of the emirate, both parties observed the established procedure, fixed in the instructions related to issues affected in the correspondence and their implementation.

Seventh. There were appeals of Russian scientists to the Bukhara emir and kushbegi with suggestions on how to improve the use of natural resources. And also with the growth of active economic ties with Russia, the development of industry and the emergence of the local bourgeoisie, the need for literate people is growing, there is a need to study secular sciences in the Bukhara emirate itself. Although the main type of school in Bukhara remained maktabs - primary religious schools. In 1894, the first Russian-native school appeared here. By the end of the XIX century. new school methods are being created, and the first Russian settlements began to emerge here through Bukhara railway (1887).

Thus, it can be stated that by covering the history of the studies of the Bukhara Emirate by representatives of the scientific community, diplomatic correspondence conducted by the Russian Imperial Political Agency is a valuable source and requires further close attention on the part of scientists from various scientific fields.

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2. Vamberi A. Journey through Central Asia. M., 1865. C.213.
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4. CSA RU. Form I-126, op.2, d.7392, sh.1-6.
5. CSA RU. Form I-3, op.1, d.269, sh.20-21.
6. CSA RU. Form I-126, op.2, d.687, sh.14-15.
7. CSA RU. Form I-3, op.1, d.374, sh.67.
8. In the process of analyzing archival documents of the Political Agency, in addition to this type of appeals, letters of heads of organizations sent directly to the political agency were preserved.
9. This means letter No. 75 of June 7, 1912, sent to the name of political agent A. Somov, the head of the society. See: CSA RU. Form I-3, op.1, d. 74, sh.10.
10. CSA RU. Form I-126, op.2, d.850, sh.10.
11. CSA RU. Form I-3, op.1, d.9, sh.240.
12. CSA RU. Form I-3, op.1, d.52, sh.62-,94.
13. CSA RU. Form I-3, op.2, d.96, sh.421.
14. CSA RU. Form I-3, op.1, d.374, sh.132.
15. CSA RU. Form I-3, op.1, d.374, sh.134
16. CSA RU. Form I-3, op.2, d.96, sh.18.
17. CSA RU. Form I-3, op.1, d.374, sh.171.
18. Mirzabashi is a person holding a position in the emirate's management system. Performed the duties of the manager of the affairs of the office. He was considered an official equal to the rank of sergeant-major in the Russian Empire. The dwellers are both a palace and military official. He was considered an official equal to the rank of second lieutenant in the Russian Empire. Karavulbegi - the chief of the guards and guards. He was a responsible person for peace and tranquility in the state. He was considered an official equal to the rank of lieutenant in the Russian Empire. Mirakhur - a person in this position, at first was responsible for delivering food (straw, hay, grain) to Emir horses. He was

considered an official equal to the rank of captain in the Russian Empire. See: Khanykov N. Description of the Bukhara Khanate.Saint Petersburg, type. The Imperial Academy of Sciences, 1843-P.185.
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20. CSA RU. Form I-3, op.1, d.374, sh.171; Form I-3, op.1, d.9, sh.55; Form I-3, op.2, d.96, sh.19; Form I-3, op.1, d.854, sh.40; Form I-3, op.1, d.9, sh.26; Form I-3, op.1, d.374, sh.134; Form I-3, op.1, d.374, sh.140; Form I-3, op.1, d.9, sh.34; Form I-3, op.1, d.113, sh.39; Form I-3, op.1, d.9, sh.170; Form I-3, op.2, d.96, sh.247; Form I-3, op.1, d.9, sh.73; Form I-3, op.1, d.9, sh.73; Form I-3, op.2, d.96, sh.282; Form I-3, op.1, d.9, sh.101; Form I-3, op.2, d.113, sh. 31; Form I-3, op.2, d.96, sh.425; Form I-3, op.1, d.9, sh.163.
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23. CSA RU. Form I-3, op.1, d.39, sh.55.
24. CSA RU. Form I-3, op.1, d.8, sh.34.
25. CSA RU. Form I-3, op.1, d.374, sh.174.
26. CSA RU. Form I-69, op.1, d.1, sh.20-21.
27. Vrevskiy Alexander Borisovich - (1834-1910). In the years 1867-1875. rank 7 officer in the General Staff; in the years 1876-1884. chief of staff of the 7th military (army) corps; in the years 1884-1889. Chief of Staff of the Odessa Military District. In the years 1889-1898. commander of the Turkestan General-Governorship and the Turkestan Military District. In 1898 he was elected a member of the Military Council. In 1906 he finished his military activities
28. CSA RU. Form I-69, op.1, d.1, sh.22.
29. CSA RU. Form I-3, op.1, d.9, sh.29.
30. The Turkestan branch of the Imperial Geographical Society was established on the orders of the government on May 20, 1896. Its activity began on November 28, 1896 in the city of Tashkent. Honorary members of this society were different high-ranking people who made a great contribution to the study of the Turkestan region from a scientific point of view. The first political agent of the Russian Empire in the Bukhara emirate, N. V. Charykov, was also a member of the Imperial Geographical Society. Individuals who are members of the society had to pay a membership fee of 10,000 silver rubles each year. See: Lunin B.V. From the history of Russian Oriental studies and archeology in Turkestan (1895-1917). T.: Publishing House of the Academy of Sciences of the Uzbek SSR, 1958.-P.47., CSA RU. Form I-3, op-1, d.8 the reverse side of L.35.
31. CSA RU. Form I-3, op.1, d.9, sh.135-136.
32. CSA RU. Form I-3, op.1, d.870, sh.1.
33. CSA RU. Form I-3, op.1, d.870, sh.2.
34. CSA RU. Form I-126, op.2, d.875, sh.3.
35. CSA RU. Form I-3, op.1, d.870, sh.5.
36. Funds allocated by the scholars of the Bukhara Emirate for the study of the territory, through a special check, were delivered to the Political Agency. At the end of the letter it was noted that it is necessary to deliver the kushbegi information on the acceptance by the political agency of these funds. In fulfilling this requirement, the Russian political agency in Bukhara did not always apply to the kushbegi with a new letter, but at the top of the middle part of the reply letter sent to the kushbegi, informed that in accordance with the established procedure, these funds were accepted on the basis of the State Bank's check.
37. CSA RU. Form I-3, op.2, d.579, sh.4.
38. CSA RU. Form I-3, op.2, d.579, sh.2.
39. CSA RU. Form I-3, op.1, d.8, sh.190.
40. CSA RU. Form I-3, op.1, d.9, sh.90-91.
41. CSA RU. Form I-3, op.1, d.9, sh.93.
42. CSA RU. Form I-3, op.1, d.9, sh.80.
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Concept of Research Training of Students in Context of Competence-Oriented Technical Education

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Abstract

The relevance of the problem under study is conditioned by the incongruence between professional competences, acquired by graduates of technical institutes during the training process, increased demands of high-technology enterprises, scientific institutes, design organisations, employers. The purpose of the paper consists in solution of the problem of development and realisation of the concept of research training of students in the context of competence-oriented technical education. Based on the analysis, systematization and development of existing scientific and pedagogical approaches to solution of the problem of research training of students of technical institutes, the basic approaches and principles, being the methodological foundations when designing the concept of research training of students of technical institutes, were distinguished. The concept of research training of students in the context of the competence-oriented engineering education was created as a system of provisions in the field of professional training, including a programme-based system of education quality management; taking into account requirements of employers for research training of a graduate, specifics of research training as a basis of building a new didactics of an engineering higher school allowing realisation of requirements of educational standards on formation of a set of competences. The role of the process of research training of students as an obligatory part of realisation of educational standards in the context of formation of common cultural, professional, special competences and development of professional activity of an engineer was defined. The concept determines the necessity of monitoring the education quality, including the monitoring of the degree of students' research competence formation. Empirical methods (observation, questionnaire, conversations, testings, self-assessment, analysis of documentation, studying products of activity, pedagogical designing) allowed determining the level of research competence formation of students of technical institutes at all stages of experimental work on realisation of the concept of research training. To interpret the results of the experiment, the methods of mathematical statistics having allowed proving their authenticity and effectiveness of realising the concept of research training in the educational process of technical institutes were used, which contributes to the formation of students' research competence, development of their creativity, motivation, value attitude to research, formation of the orientation basis of activity. The materials of the paper are of practical relevance for teaching staff of technical institutes, for experts of the supplementary education system in the framework of organising refresher courses for managers and teachers of technical institutes; for experts in the field of methods, theory and practice of professional training.

Keywords: research activity; research competence, concept of research training, competence approach.

Introduction

Technological demands of global economy place challenges before Russia related to integration of the country into the world economic space, formation of favourable investment climate, competitive recovery of domestic industry. This determines the change of the nature of technical education, demanding from the graduate the mastery of a wider spectrum of key competences, ability to develop and introduce competitive technical equipment and technologies, orientation to research activity in the profession. Incongruence between professional competences, acquired by graduates of technical institutes during training, increased demands of hi-tech enterprises, scientific institutes, designing organisations, employers is one of the basic contradictions of the Russian higher technical education. There is a shortage of experts majoring in engineering, who are able to develop and introduce new, competitive technologies, technical equipment and are oriented towards research activity.

One of the key conditions of development of the higher technical education system, mentioned in "Concepts of long-term socio-economic development of the Russian Federation for the period up to 2020", is involvement of students into research and scientific work, which will allow preserving schools of thought, nurturing a new generation of researchers.

The change of the nature of engineering activity, conditioned by tendencies of modern production, transformation of industrial society into post-industrial, determines the image of the graduate of the technical institute, making demands for technical education, the strategic goal of which is establishment of an adaptive system providing training of the graduate in the context of professional mobility and competitiveness, as well as one's formation as a socially and humanism-oriented personality, being ready for research activity. Thus, the necessity and timeliness of creation and introduction of the holistic concept of research training of students in the context of competence-oriented technical education are obvious.

Research methods

There are theoretical (study, analysis and synthesis of pedagogical, social, engineering, economic literature on the problem under consideration; analysis of the research subject; modelling the education process; generalization of research results); empirical (study of normative documents, observation, conversations, testing, self-assessment, analysis of documentation, study of products of activity, pedagogical designing); experimental (a pedagogical experiment, methods of mathematical treatment of results) methods.

Results and discussion of research results

Methodological foundations of training students of technical institutes for research activity

Engineering activity, the specifics of which is determined by peculiarities of modern production, contributes to a fundamental change of an expert's image, and, accordingly, to the techniques of one's training as well; therefore, the necessity to create the concept of research training of students of technical institutes in the context of the competence approach, which will be adequate to modern realia, is evident.

When solving the problem of research training of students of technical institutes, the main reference point at the methodological level for the authors was the competence approach as a new understanding of the meaning of modern technical education in the framework of the Bologna Process. "Many ideas of the competence approach appeared as a result of studying the situation on the labour market, determining those demands for an employee that are formed on it" [16]. Such kind of education evolves owing to the need for such training of experts that would satisfy the society, production and higher school graduates themselves.

Having analysed works concerning the issues of competence-oriented education ([4], [7], [23], [24], [25], [29], [32], [33], etc.), the authors determined that the established theoretical and methodological base of the competence approach allows decomposing the structure of higher technical education, re-orienting its purposeful and effective attitudes. The competence approach is a "set of innovative theoretical and methodological ways and techniques of designing goals, content, technologies and results of education in the framework of philosophy of pragmatism and constructivism" [14].

The competence approach reflects a transition of education to a new attitude towards ability and readiness of the subject for effective activity in different scopes provided that there is a high degree of freedom, autonomy, development of personalized meanings, as compared to then existing subject-knowledge informative orientation.

The competence approach is oriented to transformation of goals of professional training, shift of emphasis to the student's personality. The main idea consists "not in the attempt to refuse "knowledge" orientation of education for the sake of competences, but in the fact that it is necessary to possess certain personal characteristics and be able to find and select necessary knowledge in information repositories, created by humankind, rather than to have knowledge" [3]. The competence approach reinforces the practical orientation of professional education, its subject-professional and pragmatic aspects. Besides, it provides for reevaluation of training results (formation of competences contributing to training of a competitive graduate) and, on this basis, implies a specific organisation of the educational process: reinforcement of problem-research, practice-oriented directedness; the emphasise is put on active, interactive technologies, use of information resources, a rating system, organisation of different forms of monitoring [30, 31].

The following aspects of the competence approach to the renovation of education are identified: making education pragmatic, which is aimed at development of students' ability to apply knowledge and skills in practical situations; increasing attention to generalised subject abilities; mastery of key competences providing interaction of a human being with other people in real social and professional situations [14].

Renovation of the content, forms of study is promoted by the fact that it is organised in the context of the future professional activity of the graduate. This implies inclusion of all kinds of learning activity associated with that of professional one in curricula and syllabi, organisation of practices including research tasks, projects completion, taking into account the needs of backbone enterprises; implementation of research and scientific work at the curricular and extracurricular time.

To realise the competence approach in technical education, it is necessary to implement the following principles:

- humanitarization of education, which will provide personality-developing nature of professional training, will contribute to effective self-development and self-realisation;
- integrity and interdisciplinarity, which is oriented to integration of disciplines at the level of content, technologies, and will provide their relevance to professional activity of an engineer as well;
- continuity of training from the viewpoint of content and technologies in the educational process will provide consistency of pedagogical requirements, oriented to development of readiness for research activity, formation of creative, productive thinking, as well as personal qualities that determine the competences under formation;
- diagnosticity provides for a stage-by-stage process of determining the level of formation of competences when using a criterion-evaluative set.

The competence approach was initially oriented to achieving specific results in the form of acquisition by the student of a complex of competences, characterising efficiency of professional education. They serve for presenting and designing educational results adequate to the rapidly changing world. Engineers-experts "form not only certain knowledge and skills, but also specific competences, focused on ability to apply them in practice when creating new competitive products" [9]. Consequently, designing the volume, the level, the content of theoretical and empirical knowledge, practical skills, work experience is in direct relationship with education results, expressed in the form of competences.

Approval and introduction of FSES of HE (Federal State Educational Standard of Higher Education) contributed to consolidation of legislative and regulatory frameworks of the competence approach at the government level (possibilities of FSES of HPE on formation of students' readiness for research activity were considered in the previous paragraph).

The competence approach in the methodological aspect bases on traditional approaches (axiological, value-motivational, synergetic, integrative, activity-based, context-dependent) to organisation of the educational process in the engineering higher school and can be optimally organised if the requirements of traditional approaches are met. The competence approach provides application of the mentioned approaches at a qualitatively new level, acting as an area of their interaction. Its meaning can be supplemented with the system of principles of traditional approaches. Therefore, the competence approach is considered by the authors in connection with traditional approaches as some "correlate" (A.G. Bermous). It acts as a link between practice and theory and is able to realise the connections among higher schools and employers, having practical and effective-purposeful orientation.

Let us consider traditional approaches from the viewpoint of research training of students of engineering institutes.

The systemic approach is realised during theoretical understanding, substantiation of holistic systems and methods of cognition allowing consideration of research training of a student as an integral system. It discloses the unity of its value, functional, activity-based aspects. The concept of the "pedagogical system", which (having analysed a multitude of definitions [6], [15], [20], etc.) is understood as an integrity in which interacting components contribute to the fact that the system performs the function of education, achieving the set results, namely training the student for research activity, is of great importance for solving the tasks of this research. Let us consider the following as components of the pedagogical system: a training goal, tasks, content, an educational process, students, teachers, training aids, pedagogical technologies, forms and methods of training. Interaction of the components of the pedagogical system generates a pedagogical process.

The study of provisions of the axiological approach allows regarding technical education as a socio-pedagogical phenomenon, which performs the following functions: cultural-creative, humanitarian and socialization functions. The axiological approach implies transmission, storage, reproduction and development of the culture of research using educational means. They contribute to acquisition and reproduction by a human being of certain social experience necessary for adaptation in society, realisation in professional activity.

The value-motivational approach [22] provides for activity aimed at organising interaction among students and teachers as subjects of the education process, contributing to formation of the value system when adopting an overall purpose, formation of motivation, contributing to "conscious acceptance and realisation of these values, establishing a correspondence between results of labour and a status attitude of participants of the educational process, facilitating a continuous growth of education quality" [22]. The value-motivational approach during research training contributes to harmonization of goals of students and teachers, formation of collective subjects of activity, motivated participation of subjects in research activity.

The synergetic approach as a theory of self-organisation orientates to formation of a new result of engineering education. The provisions of this approach allow considering formation of students' ability for self-organisation of inner resources and their orientating to research training during the educational process at higher schools as one of the main principles of engineering education. The synergetic approach contributes to consideration of objects and subjects of engineering education as complex self-organising systems, the main property of which is ability for self-development. Use of the synergetic approach when designing the concept of training students for research activity contributes to enrichment of the educational process with dialogue methods and techniques of pedagogical interaction, which intensifies the process of students' development.

The integrative approach provides for elimination of disconnectedness of higher school disciplines owing to cross-curriculum connections, deepening and consolidation of students' knowledge, formation of ability to compare, analyse and classify the obtained information; after all, phenomena of the objective world do not exist in isolation in separate sciences, they are closely connected, united with each other, and they must be studied in this unity. The authors share the opinion of A.N. Sergeev that all academic disciplines must be interrelated and interdependent despite the fact that each of them is a separate branch of science with its methodology, terminology system, methods [21].

The personality-oriented approach allows developing a student's personality as a subject of research activity. A technological potential of this approach consists of methods "corresponding to such requirements as: dialogic nature; activity-creative nature; orientation to support of student's individual development; providing a learner with a necessary space, freedom for making independent decisions, creativity, choosing the content and ways of learning and behaviour" [8]. Realisation of the personality-oriented approach during training for research activity contributes to formation of partnership interrelations between teachers and students.

According to the government strategy of education renovation, designing of all components of the training system is implemented based on the activity approach, in particular on the basis of formulation of competences in the activity format. In the studies on the activity approach ([2], [10], [17], [19]), the personality is accepted as a subject of activity, forming in it, as well as in communication, which determines the nature of the activity itself. The essence of the activity approach consists in training students based on productive activity, which forms them. According to the research of A. Diesterweg "knowledge and skills … cannot be given or communicated" [13]. It is possible to be drawn to knowledge and skills and to achieve certain results only through activity. From the position of training for research activity, the provision about organisation of activity, in which the student acquires models of professional activity, assesses their possibilities and prospects of application, is important.

The context approach, created in the development of the activity approach – "in the language of science and by means of the entire system of forms, methods and means of training, models sequentially the subject and social content of the future professional activity of students" [9]. During research training, the content of professional activity of an engineer will be modelled in the forms of students' activity. Students must assess the training process using comprehensible criteria; then there is personal activity of the student, ones' interested participation in forming oneself as an expert" [9].

The competence approach starts with cardinal reconsideration of the training results; it implies a new approach to designing expected results, and only then, on this basis, the content of training and the training process change in a varying degree. Thus, "a context approach can be considered as an effective means for achieving goals, set in connection with realisation of the competence approach" [7].

The competence approach to building the concept of research training of students of technical institutes is concretized in principles regulating this process: succession, integration, unity of educational space, training intensification, creativeness and activity-based orientation, reflexivity; let us consider them.

The succession principle allows building the concept having preserved consistency and continuity of research training of students in the course of general professional training. Succession provides an optimal connection between the stages of student's formation as a subject of research activity. Succession implies preservation at each stage of an accumulated system of knowledge, formed abilities, skills and determines possibilities of subsequent development.

The integration principle is aimed at holistic perception of knowledge in conditions of integrating materials in different scientific fields, presence of inter-disciplinary dependences and connections. "Integration implies combining parts into something whole" [18]. Pedagogical integration during research training implies unity of the following constituents: teaching-learning-research, which contributes to integration of theoretical and practical training; interdisciplinary integration of disciplines; integration of efforts of all participants of the educational process oriented to research training of students of a technical institute; integration of independent work of students and different forms of classroom work. The integration principle discloses the cross-curriculum integrative nature of research training, manifests itself in connections of disciplines realised by means of active, interactive, informational and communicative technologies.

The principle of unity of educational space determines formation of developing educational environment of a technical institute containing personnel, management and information resources, oriented to research training. Research space, formed in the developing educational environment, combining research and learning activity of subjects of the educational process, is practice-oriented.

The practice-orientedness principle implies consideration of requirements of employers and provisions of professional standards during research training, formation of the system of partnership with backbone enterprises.

The principle of training intensification is considered as an increase in development of student personality owing to one's maximum allowed involvement in implementation of different types of scientific, learning, research activity. The main factors of intensification during research training are: enhancement of training purposefulness; strengthening of motivation and positive personality orientation to formation of readiness; an increase of informative capacity of education content; application of active, interactive methods and forms of training; development of skills of research activity; use of information technologies, network educational resources.

The principle of creativity and activity-based directedness implies creation of conditions for creative development of both students and teachers in the atmosphere of collaboration and co-creation. The indicators of creativity are: "originality and irregularity; nature of reaction, emphasizing its rapidity; emotionality, imagination, flexibility; analysis and reflection; independence and activity" [26]. Activity-based directedness determines the fact that the basis of the process of research training is ways of student's work, approximated to real research activity of an engineer in the framework of each course, co-creation of students and teachers during activity.

The reflexivity principle implies involvement of reflexivity in learning and research activity for the purpose of development of students' self-control, their involvement in the process of co-management of education quality during their self-organisation in the course of research training, which is aimed at changing of relation to training results, development of aspiration for self-perfection and self-realisation.

The analysis conducted showed that the considered approaches supplement each other and realise different plans when considering the issue of research training. The competence approach, interacting with traditional approaches (axiological, value-motivational, synergetic, integrative, activity-based, context), is backbone and introduces principle changes in the process of education, expressed in the strengthening of practical orientation and instrumental directedness of engineering education, creates optimal opportunities for research training of students. Methodological principles concretize provisions of the competence approach and, along with it, are methodological bases when creating the concept. Realisation of the competence approach and methodological principles of technical institutes implies the possibility of changing the management system of the higher school, in particular education quality management, oriented to research training of students.

Content of the concept of research training of students of technical institutes

The concept of research training of students of engineering institutes (hereinafter concept) is a complex of attitudes and concepts in the field of professional training of students built on the basis of the theory of the competence approach and principles of designing the process of formation of research competence, generalizing progressive educational experience in this field, formed as of today, considering the fundamental needs of modern society and production. The concept of research preparation of students in the context of competence-oriented engineering education determines research training as a basis of building innovation didactics of an engineering higher school in the framework of the developing national system of qualifications, allows realising requirements of FSES of HE for formation of a set of professional, special, common cultural competences.

The concept describes a process of research training of students, means and methods of its realisation and includes (Figure 1): common provisions (purpose, tasks, prerequisites of development, methodological support, a normative base, a terminology system); methodological support (a competence approach, methodological principles); content – a functional model of training a student of an engineering higher school for research activity; verification.

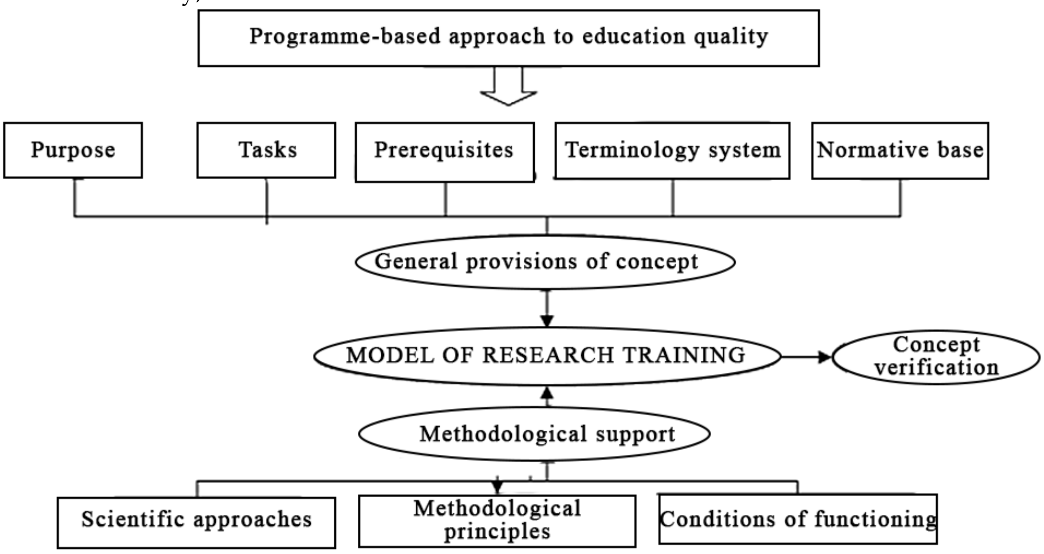

Figure 1 Concept structure of research training of students

The purpose of the concept is substantiation of the process of formation of a creative subject of engineering activity with a developed research attitude and reflection, ready for active participation in innovation engineering processes, capable to develop new ideas, solve research production tasks and make non-standard decisions.

The following tasks were solved in the concept:

- methodological foundations of preparing students of engineering higher schools for research activity were defined;

- principles constituting the basis of effective selection of content and technologies of preparation for research activity were formulated;
- components were structured and integrated into the holistic functional model, necessary changes were introduced into the process of professional preparation;
- criteria and indicators of readiness for research activity of a student of an engineering higher school were determined.

When building the concept, it was determined that *prerequisites* of its development are:

- peculiarities of modern engineering education (change of the educational paradigm, introduction of the competence approach in engineering education, introduction of FSES of HE, which consider research activity as an integral part of engineering activity; search for innovation pedagogical solutions, providing enhancement of effectiveness of engineering education);
- changing structure, content and nature of engineering activity, which is underlain by research aspects;
- changing requirements for a graduate of an engineering higher school according to professional standards, demanding preparation of specialists, capable of providing high production results and being ready to realise exploratory search;
- age-related and socio-pedagogical peculiarities of students of engineering higher schools, contributing to professional training for research activity;
- experience of pedagogical science on professional training of engineers capable of adapting to changing production conditions; historical prerequisites taking into account the experience of preparation for research activity; results and experience of pedagogical studies in the field of improving content, forms and methods of engineering education.

The mentioned prerequisites were the motives of formation of the concept; besides, it is necessary to note that the more the higher school is capable of progress, the higher the level of research activity of students and teachers. In engineer's activity, the research nature reveals itself as key; it allows realising creative self-development contributing to successful professional activity. Therefore, research preparation of students is a condition of competitiveness of Russian engineering education and is considered by the authors as a strategic guideline, in which direction the professional training of students of technical institutes will be realised.

The normative basis of the concept consists of: the Russian Federation Laws "On education in the Russian Federation", "The concept of long-term socio-economic development of the Russian Federation for the period up to 2020"; "The Law on higher and post-graduate professional education", "National doctrine of engineering education in the Russian Federation", "The concept of development of research and innovative activity in Russian higher schools", FSESs of HPE, professional standards.

The terminological system of the concept is represented by notions reflecting specifics of the process under study: "research activity", "research learning", "research competence", "developing educational environment of a higher school", "research training", competence-oriented engineering education".

The problem of preparation of a technical institute student for research activity is solved by the authors from the position of the competence approach, which, interacting with traditional approaches, introduces fundamental changes in the training process, manifested in the strengthening of practical orientation and instrumental directedness of engineering education, creates optimal opportunities for research preparation of a student.

Methodological principles, allowing one to select the content of preparation for research activity and to organise the competence-oriented training process, were taken into consideration in the concept: the succession principle, the practice-orientation principle, the integration principle, the principle of unity of educational space, the creativity and activity-based principle, the reflexivity principle.

Realisation of the competence approach and methodological principles implies reconsideration of purposes, content, techniques of professional training of students of an engineering higher school, which is possible when changing the system of education quality management aimed at a result, namely the preparation of students for research activity, inextricably connected with the level of formation of common cultural and professional competences.

Comprehension of scientific, pedagogical, methodological foundations of the system of education quality management in a higher school, which provides motivation of participants of the educational process to enhance the education activity quality, contributed to a transition to a programme-based system of education quality management in a higher school, which is characterised by the following features: “focus on the end result; system understanding of the object; a planned quality level; complex analysis of problems; a complex approach to the choice of purposes and means of their achievement; linking together purposes and resources (creation of a goal-oriented programme); aspiration for maximal effectiveness of achieving purposes when using resources rationally; integration of efforts of a higher school and enterprises” [12].

The program-based system of education quality management allowed:

1. establishing attainable goals, namely formation of students’ readiness for research activity;
2. establishing a developing educational environment in a higher school;
3. building a united team (representatives of a higher school, backbone enterprises);
4. developing a training programme for research activity (a functional model);
5. guaranteeing necessary support: personnel, material and technical, informational, methodological, etc.

The research training of students of a technical institute was determined as a programme of ideology of the higher school functioning; hence, a systematic monitoring of the quality of research competence formation is an integral part of the management system.

Having analysed a number of works on organisation of educational environment of a higher school ([5], [27], [7], etc.), the authors concluded that formation of developing educational environment in a higher school is an obligatory condition for solution of the task of establishing innovative didactics of an engineering higher school, aimed at research training of a student; at that, employers’ requirements for training students for research activity, characterized by an individual and productive style of engineering activity and professional standards provisions, are taken into account. The developing educational environment of an engineering higher school can be considered as a competence-oriented space, in which a set of conditions, aimed at provision of optimal parameters of educational activity of a higher school, is created, namely provision of purposeful, informative, operational, effective, resource aspects.

The technology of organisation of developing educational environment of a technical institute consists of several stages:

1. motivation for research training of students of an engineering higher school;
2. interactions and joint activity of all subjects united by the environment space;
3. students’ self-regulation and self-generation during research training.

The developing educational environment of a modern technical institute includes the following structural components, which are provided with personnel, management and informational resources.

A spatial-subject component: architectural and esthetic organisation of the educational process (architecture of buildings; classrooms, equipment, etc.); a symbolic space (symbolism and traditions of a higher school).

An informative component: a functional model of research training as an informative content of the concept.

An organisational component: a personnel resource, a management resource, a communication field (partnership interrelations between a teacher and students on the basis of accepting common goals; harmonization of interests of all participants of the educational process (higher school management, work group, teachers, students, representatives of enterprises); creation of an atmosphere of productive activity, organisational conditions. The personnel resource provides for creation of a team of like-minded people, united by a single goal owing to coordinating the work of structural subdivisions of a higher school (sub-faculties, an internship department, an academic office), as well as separate teachers; enhancement of professional competence of higher school employees (refresher courses, seminars, consultations, round-table discussions, etc.).

An information component provides for network interaction with representatives of backbone enterprises, use of network educational resources, introduction of the electronic system of support of the educational process aimed at solution of relevant tasks of education informatization, including development of infrastructure of a united educational informational space, development of electronic educational resources.

Educational environment (Figure 2) is characterised by a structure, in which elements are interconnected and are in the indissoluble unity.

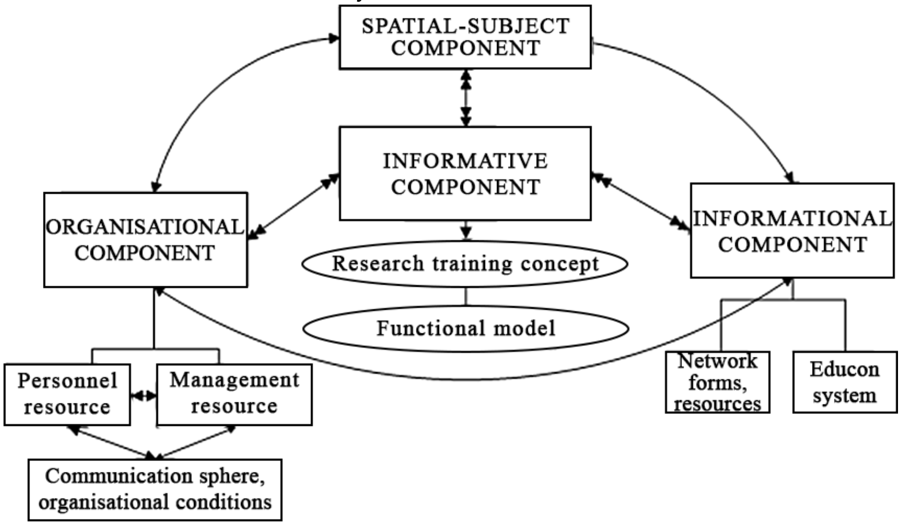

Figure 2 Structure of developing educational environment of technical institute

The authors of the paper proved that establishment of developing educational environment requires: 1. organisation of interaction and joint activity of all subjects united by the space of environment during training; 2. integration of training and research at all stages of the educational process; 3. transformation of the content of education, development of new and improvement of existing methodological support; change of organisational-technological foundations of the educational process;

- formation of the system of partnership with higher schools, scientific organisations, enterprises; realisation of the network form of interaction (agreements on complex collaboration were concluded with backbone enterprises). This allows conducting purposeful distribution of graduates, attracting representatives of enterprises to the process of research training (development and correction of main educational programmes; internship programmes, a fund of evaluating means, research tasks (connected with real problems of production), participation in control events (presentation of research papers, term projects (papers), graduation theses); conducting internships, field laboratory and practical works; organising probations for teachers; monitoring of current and prospect demands for graduates, consideration and analysis of successful activity of higher school graduates, etc.);
- extension of the set of competences of FSES of HE owing to special competences;
- providing personal and professional development of students, involvement in the process of co-management of education quality with their self-organisation during research training (increasing the share of independent work, rejection of reproductive methods). Students master their role in the educational process, as well as culture of self-organisation in learning activity, self-regulation of the process of research training, which contributes to change of the attitude to training results and more competent evaluation of one's own preparation quality.

Thus, the following principles are core for realisation of the concept: the programme-based approach to management – systematic monitoring of readiness of students for research activity; organisation of developing educational environment in a higher school providing for motivation, interaction and joint activity of all subjects, united by the environment space; integration of training and research at all stages of the educational process; transformation of the content of engineering education, development of practice-oriented methods, special forms and means of students' activity; taking into account requirements of employers and provisions of professional standards based on formation of the system of partnership with backbone enterprises; involvement of students in the process of co-management of education quality with their self-organisation in the course of research training; criterion nature and diagnosability of results.

The content of the concept is realised in the functional model of students' preparation for research activity being a basis of innovative didactics of an engineering higher school. The concept is of interdisciplinary nature, being a part of the holistic content of professional training, is represented as a basis of organising the process of students preparation for research activity. The represented structure of preparing students of engineering higher schools for research activity is invariant and can be used in the educational process of other higher schools.

The assessment of effectiveness of realising the research training concept, expressed in the assessment of formation of research competence of students of technical institutes, was made by means of criteria, indicators. Cognitive, personality, activity-based components, which are also used as criteria, were identified as components of research competence. The cognitive one determines the degree of mastery of the conceptual framework, ability to use the formed theoretical basis during research activity. The personality one is motives and value attitudes of the personality, student's reflection during research activity. The activity-based one determines the degree of mastery of ways of performing research acts, possibility of applying mastered ways of action and accumulated knowledge in practice [28].

Experimental work on realisation and verification of the concept has confirmed the effectiveness of its basic provisions. The total number of people, involved in the experimental work, was 1520; among them, there were 1390 students and 130 teachers.

The experiment on realisation of the concept underwent 3 stages. At the ascertaining stage, it was defined that at the beginning of the experiment, research competence of the first-year students had not been formed; among the graduates (before the beginning of the experiment), the students with a low level of research competence prevail, which reflects the results of the process of traditional professional training in the technical institute. At the forming stage, pedagogical expediency of introducing the concept of research training of students of technical institutes was proved experimentally. The generalizing stage was aimed at assessment of the concept effectiveness, by means of revealing the resulting dynamics of research competence formation of students of technical institutes. Results of control assessment are presented in Table 1 [11].

Table 1

Dynamics of readiness formation for research activity, %

Personality component	2012-2013 academic year		2013-2014 academic year		2014-2015 academic year		2015-2016 academic year	
Motivational	Exp.	Cont.	Exp.	Cont.	Exp.	Cont.	Exp.	Cont.
Highest	0	0	3	0	3	1	3	1
High	0	0	27	2	37	3	45	9
Average	5	2	25	10	28	15	40	26
Low	53	38	30	58	29	61	10	54
Zero	42	60	15	30	3	20	2	10
Reflexive								
Highest	0	0	3	0	3	1	3	1
High	0	0	27	2	37	3	45	9
Average	5	2	25	10	28	15	40	26
Low	53	38	30	58	29	61	10	54
Zero	42	60	15	30	3	20	2	10
Cognitive component								
Highest	0	0	3	0	3	1	3	1
High	1	0	25	4	38	7	50	19
Average	4	2	25	18	32	25	40	38

Low	52	36	30	48	24	50	7	40
Zero	43	62	17	30	3	17	0	2
Activity component								
Highest	0	0	3	0	3	1	3	1
High	0	0	26	1	42	1	49	9
Average	5	2	27	20	35	30	40	43
Low	55	28	29	39	15	48	7	44
Zero	40	70	15	40	5	20	1	3

Comparison of the data of initial and final assessments showed a stable growth of indicators by all components of research competence of students of experimental groups versus the compared results of control groups and results of graduates before the beginning of the experiment. The credibility of the results was confirmed by the verification on the basis of statistical analysis using criteria of mathematical statistics. The results of the experimental work show effectiveness of the developed concept realised through the functional model of research training of students of technical institutes.

Conclusion

The concept of the research training of students in the context of the competence-oriented technical education determines research training as a basis of building innovative didactics of an engineering higher school, which allows realising requirements of FSES of HE on formation of the complex of professional, special, common cultural competences. The following principles are basic for realisation of the concept: the programme-based approach to management – systematic monitoring of formation of research competence of students; organisation of developing educational environment in a higher school, providing for motivation, interaction and joint activity of all subjects, united by the environment space; integration of training and research at all stages of the educational process; transformation of education content, development of practice-oriented methods, special forms and means of students' activity; taking into account requirements of employers and professional standards based on formation of the system of partnership with backbone enterprises; involvement of students in the process of co-management of education quality along with their self-organisation during research training; criterion character and diagnosability of the results.

The results, obtained during the experimental work on approbation of the main provisions of the concept, showed that its introduction contributes to development of student's creativity, motivation, value attitude to research, readiness for active participation in innovative engineering processes, ability to develop new ideas, solution of research production tasks and making unusual decisions.

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Theory and Practice Development of Technical Universities Students' Research Training

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Abstract

The relevance of the problem under study is caused by the non-compliance of the level of technical universities students' research training with the modern requirements of the society and production development. The educational system in technical universities does not create the conditions sufficient for the formation of students' research competence, their creative potential fulfillment, personal and professional development, comprehensive solutions for research problems. The objective of this article is to solve the problems of the theory and practice of the students' research training development in the context of competence-oriented technical education. Based on the analysis, systematization and development of the existing research and pedagogical approaches to the problem of the technical universities students' research training, the main approaches and principles have been identified. These approaches and principles are the methodological basis when designing the concept of students' research training that determines the research training as a framework for innovative didactics of the technical universities building, allowing implementing the requirements of the educational and professional standards on the formation of competencies complex. The main stages of solving the problem of technical universities students' research training in the process of studying this problem historiography were highlighted. Theoretical methods made it possible to determine the research nature of engineering allowing the university graduate as a subject to interact through it with the world and acquire the ability to change it. Based on the analysis of educational, professional standards and employers ' requirements, the research tasks that the university graduate should be able to solve, and the research skills complex were determined. The empirical methods (observation, questionnaires, interviews, testing, self-evaluation, documentation analysis, products of activity study, pedagogical design) allowed us to determine the level of research competence of technical universities students' formedness at all stages of the experimental work on the implementation of the functional model being the main part of the research training concept. To interpret the results of the experiment, the methods of mathematical statistics were used that made it possible to prove their authenticity and the model implementation effectiveness in educational process of technical universities. The materials of the article are of practical importance for the academic teaching staff of the technical universities, for specialists of the additional education system in the framework of the upgrade training courses for technical universities managers and teachers, for specialists in the field of methodology, theory and practice of vocational education.

Keywords: research activity; research competence, concept of research training, functional model of research training.

Introduction

The international community seeks to create a global strategy for human education that promotes the development of international educational space. The study of innovative changes in modern society presented in the researches of the Canadian Centre for Innovation Studies Professor Fred Gault shows that 'the key components of innovation development are grouped around six main global components: markets, people, innovation activities, public interests, international cooperation and the global changes' [32]. High-tech product that is one of the determining factors of the countries development becomes the main result of engineers' creative activity.

The global requirements to the engineering university graduate, the characteristics of the modern production in Russia, the industry modernization and high technology development needs the training upgrade of the competitive specialists with modern knowledge and skills, the production and personal potential required for working at high-tech enterprises. This explains the fact that in modern conditions of the society and production development, the main strategy for moving forward is the development of creative and research capacities of employees within their professional activity and the increased requirements in this respect to the graduates of technical universities. A new class of information technologies – Computer Aided Invention that help to generate innovative ideas, gets a widespread use. 'E-learning is developing dynamically, transforming into the direction of 'smart' educational systems' [33, 34].

Methods of research

Theoretical (study, analysis and synthesis of pedagogical, social, engineering, economic literature on the problem under study; analysis of the research subject; modeling the educational process; generalization of the research results); empirical (study of the reference documents, observation, interviews, testing, self-evaluation, documentation analysis, study of products of activities, pedagogical design); experimental (pedagogical experiment, methods of the results mathematical processing).

Results and discussion of the research results

Features of modern engineering education in Russia

In modern conditions, Russia is facing the global challenges related to the country's integration into the world economic area, formation of congenial investment climate, increase of competitiveness of the domestic industry, 'formation of the Russian world brands' [1]. The importance for national security and economy competitiveness of the country is the equipment innovations and technologies that demands new priorities for engineering activities that are determined by the features of modern production, among which we can highlight:

- the accelerating dynamic change of social processes, generational change of equipment, technology upgrades in the shortest possible time, and, consequently, the change in the functional and value orientation of labour;

- integration strengthening in the modern science and production. 'The close interaction and interpenetration of fundamental and applied research, highly inter - and multidisciplinary nature of new technologies, and the impact of cyber infrastructure allowing you to solve complex problems in new areas requires new paradigms for engineering' [1].

- intellectualization of the production basic factors.

- processes of informatization penetration into all spheres of human activity.

The changing nature of engineering activity, its consideration as a form of approval of occupational and personal identity, its self-fulfillment promote the priority development of creative and research aspects demanding the formation of creative engineers capable to solve the production research problems effectively. 'The Russian higher educational institutions are at the intersection of innovation processes and the need for training to research, development and application of high technologies in all branches of knowledge' [10]. The characteristic trend of changing requirements to technical university graduate is a convergence of practical and scientific spheres of its activities: from the processes of devices operation to fundamentally new systems and technologies creation.

The qualitative improvement issues for research training of technical universities students acquire the particular relevance since one of the main tasks of higher education is to involve students in research activity that will make possible 'not only to save the Russian scientific schools that are well-known in the world but also to train a new generation of researchers focused on the needs of innovative economy of knowledge' [16 ,36]. Certain requirements are put forward for technical education, namely: to correspond with the constantly accelerating rates of intellectual changes; to apply and develop modern achievements of science, develop, complexate (aggregate) and apply the advanced science-intensive technologies and processing chains at different levels of the problem description: to apply the complex approach to meeting the social needs 'integrating the social, economic, environmental, and legal conditions into technologies, developments and innovations' [19, 35].

This implies a significant revision of educational traditions, changes in tasks and objectives, and technologies of the technical education. Research training allows you to implement the educational standards requirements in full scope, form the complex of competences and it promotes the development of students' creativity, their research capabilities, the formation of functional skills of research as universal ways of contact with the outside world.

Training practice analysis of technical universities graduates shows that the level of their research training does not correspond to current requirements. The educational system in technical universities does not create the conditions sufficient for the formation of students' research competence, their creative potential fulfillment, personal and professional development, comprehensive solutions for research problems.

The strategic aim of the technical education development in Russia is the adaptive system creation that provides graduate training in the framework of professional mobility and competitiveness, as well as his becoming as a socially and humanistically oriented person ready for research activity. With this, the unique experience, traditions and enduring values of the Russian technical school should form the basis.

Historiography of the problem of research training of the technical universities students

According to the analysis of historiography of research training problem, 4 stages were highlighted:

- Stage I (from 1918 until the late 40-ies of XX century) - formation of the engineering education system, the problem was not yet the subject of the scientific study but there were real preconditions for its conscious setting;
- Stage II (50-ies - the late 80-ies of XX century) - improvement of the scientific organization of students' work is considered as a condition for enhancing the quality of the university-level education;
- Stage III (90-ies of XX century to early of XXI century) – slowdown in the development of research training in technical universities;
- Stage IV (beginning of the XXI century to the present day) - comprehensive study of the problem, preparation for research activities is focused on the engineer's future professional activity [4].

The problem analysis of the historical formation of the students ' research training also confirmed that the remained in technical universities 'knowledge' approach focused on the development of technologies used to date and the achieved level of sciences development that is implemented in subject-centered traditional forms does not meet the requirements of postindustrial society. Technical education in Russia is at the stage when the research training issues require the substantiated modernization of the learning process at the university.

Age peculiarities analysis of students of technical universities showed that changes in various spheres of personality at the given age stage 'when the authorship in the development of capabilities, the conscious and purposeful self-development begins' [17] are the prerequisites for the development of their research competence.

Thus, the analysis of the characteristics of modern engineering education in Russia allows us to state:

- the basic contradiction of engineering education in Russia is the discrepancy between professional competencies of the technical universities graduates that they obtained in the process of training, the increased requirements of high-tech industries, enterprises, employers, scientific institutes and organizations. There is a shortage of technical specialists capable to develop and implement new, competitive technologies and equipment oriented on the engineer's research activity;
- trends of modern production caused by the industrial society transformation in post-industrial one determine the image of the technical university graduate capable to personal and professional self-fulfillment specifying certain requirements to technical education;
- the paradigm change of the Russian technical education system is conditioned by the processes of integration into the world educational space;
- the unique experience, traditions and enduring values of the Russian technical school should form the basis of engineering training.

Analysis of the existing approaches to solving the problem of technical universities students' research training

Status analysis of the scientific support for technical universities students' research training showed the presence of a number of previously developed concepts, models, and technologies submitted in the thesis researches. We highlighted, systematized and developed the existing approaches to the solution of this problem promoting the development of the methodological basis of this training. It was revealed that the authors focused on the separate sides of the phenomena under consideration, namely:

Issues of the research activities motivation were considered in the researches of S. A. Nenasheva [12] and A. L. Mazaletskaya [11] where the effectiveness of interdisciplinary integration of scientific knowledge in the project research activities was proven; provision of emotional and value component; formation of the student's stable orientation to scientific cognition. I. Yu. Danilova [6] determined that the research activities motivation promotes creating the atmosphere defining an independent search for tasks solving; comfortable psychological environment, encouragement of the aiming for research.

A number of researchers (A. A. Gubaidullin [5], A. A. Ermakova [7], M. A. Osintseva [14], et al.) studied the possibilities of preparing students for research activities through the use of research tasks and giving them a problematic character; encouragement of innovative approaches and methods of solution; the computer technologies applications. N.I. Naumkin [13] considered the preparation for research activities through immersion in engineering creativity (training in Olympiad environment), the application of knowledge in solving research tasks, experimental vocational-oriented tasks, course design.

I. A. Yanyuk [24] determined that the effective formation of research competence of technical universities students was possible provided that in the university there is a favorable environment for the student's perception of the professional activity model and the implementation of early professional self-determination. D. R. Salyamova [18], studying the issues of improving the efficiency of research activities came to the conclusion the development of partnerships between government, scientific structures and universities, the creation of conditions for highly qualified university personnel attraction and retention requires special attention.

In studies on the formation of research skills, the authors [9], [20] identified the conditions necessary for this: the educational process saturation with creative situations, its creative organization; the introduction of elements of research activities; the transition from reproductive to productive activities.

A number of researchers [13], [21], [23] studied the possibilities of the competence-based approach in the process of preparation to research activity and they found that the formation of students willingness for educational and research activities was possible with: the introduction of special courses, stimulating motives of the research activities, use of active methods, information technologies, modular training.

The works analysis showed that the researchers focused on the important aspects of research training, much attention was paid to the content of technical education, technological component of training. But in the works, the conceptual idea of students training for research activities, that requires specially organized measures and has a significant potential in improving the quality of technical education is reflected inadequately. The research activity was not considered as a basis for the formation of common cultural, professional and special competences with the purpose of the educational and professional standards requirements implementation, and consequently the process of the research training is not studied from the position of the creation basis of the engineering university innovation didactics. The issues regarding quality management system of education change left unattended. The issue of creation of the university developing educational environment also was not addressed. The connection between the university and employers, their participation in the process of students training for research activities is not observed. Therefore, the need and timeliness of creating and implementing the holistic concept of engineering university students' preparation for research activities in the context of competence-oriented engineering education is obvious.

Study of foreign experience [2], [3], [25], [26], [27], [30], [31], [37] made it possible to highlight a number of provisions that should be taken into account when preparing the students of engineering university to research activities, namely: the inclusion in the curriculum of special courses, special practicums focused on research training; gradual familiarization with the methods of solving the research problems, use of heuristic methods, methods of generating ideas; development of industrial design skills, aesthetic development of students; implementation of group and individual research projects in order to attract students to scientific-research activities; close cooperation with basic enterprises; replacement of competition with cooperation; ethic education (in research activities.

Close interaction with employers during the study allowed determining the basic requirements to research training of technical universities graduates:

- capacity to conduct research of technical devices, technologies, and processes with the purpose of modernization and improvement of the enterprise operational efficiency;
- capacity to work with information for the purpose of analyzing, evaluating operation conditions, diagnosing, monitoring of processes, taking corrective measures in cases of deviation from the parameters specified;
- capability to take optimal decisions in emergency situations and analyze them;
- capability to solve research problems in standard and nonstandard situations; to assess risks, make decisions by taking into account complex of production factors;
- capability to use the mathematical tools, application software products, technical resources, network resources;
- active work in team when developing projects aimed at performance gains;
- adequate analysis of the activities; self-control, activity in self-development, self-enhancement and self-affirmation in the profession.

The content and structure of modern engineer's research activities

Analysis of professional standards, structures of engineering activities, complex of all-cultural and professional competences showed that the research nature manifests itself as a leading component in all activities of the engineer. The highlighted job functions coupled with the necessary skills have a research component (orientation) and determine the need for the research training of students of technical universities.

Relying upon the provisions existing in science on the activities structure [8], [15], [22], we have identified the following components of engineer's research activities: object (production processes, technologies, technical elements, etc.), subject (the technical objects properties under study and the process of new knowledge acquiring), motives (need for self-fulfillment and self-enhancement, striving to acquire knowledge, responsibility for results, the need for recognition and self-affirmation, pursuance of material goods), objective (improvement of technical and economic indicators of production, ensuring its continued operation), actions (organizational, operational, controlling and evaluation), result (elimination of technical malfunctions, failures, improving technical and economic indicators of production, implementation of new technologies, innovation proposal, invention).

Determination of the engineer's research activities structure permits to pay particular attention to the didactics of the research tasks solution that were highlighted according to the results of educational and professional standards analysis taking into account the requirements of employers, namely: 1) analysis of the technical devices operation and organizational processes; 2) experimental studies of the objects by selecting optimal methods; 3) statistical processing of experiment results, preparation of reporting documentation; 4) collection of original data and their submission with the purpose of objects modeling; provision of project documentation for improvement of production processes, technologies, equipment; works on definition of methods to eliminate (prevent) negative impacts; 5) computation of the processes design and assessment of various factors effect on production processes; efficiency assessment of the solutions; 6) results provision in the form of design, technological, and process control documents.

The competencies specified in the educational standard are insufficient to provide the students' research training, so we offered to increase their set at the account of special competencies, namely: capability to realize the nature and significance of research activities in the general structure of engineering activity, its importance in self-fulfillment in profession taking into account aesthetic and ethical standards; to have a system of value orientation of research activities, its motivated implementation (SC-1); the willingness to apply the formed generalized recommended sequence of the research activities effectively when conducting multi-disciplinary research (SC-2); willingness to work in the engineering profession based on self-reflection (SC-3) [4].

In the process of study, we identified a number of provisions that were not included in the standards but necessary for the formation of a competitive graduate: FSES (Federal State Education Standards) mandatory compliance with professional standards, accounting of integrative processes, inclusion in elective course the special courses focused on the projects implementation, crosscutting research tasks, work with basic enterprises, conclusion of contracts on goal-oriented preparation of students, introduction in educational process of the virtual laboratory works providing access to the unique and closed processes, technologies, equipment.

The engineering specifics, implementation of competence-based approach in engineering education, Federal State Educational Standards of Higher Education, adoption of professional standards fundamentally change the outlook on the ways of students training determining the need in searching a model of the educational process in engineering university focused on graduates' preparation to research activities. It should serve as a basis for building an innovative didactics of engineering university that allows you to implement the educational standards requirements, form the complex of competences and it promotes the development of students' creativity, their research capabilities, formation of functional skills of research as universal ways of contact with the outside world.

Research training concept of the technical universities students

We have developed the concept of students' research training. This concept includes the program and goal-oriented system of education quality management that takes into account the employers requirements to research training of graduates, the specifics of the research-based learning as the basis of building an innovative didactics of the engineering university in the context of the developing national qualifications system.

The novelty of this concept is that it provides the setting of new objectives, tasks, organization of the new developing environment in higher education institution focused on research training technical universities students.

The concept objective: development of the creative subject of engineer's activities with the advanced research position and reflection with formed competencies, providing the ability to perform research functions in the process of professional activities in accordance with the requirements of the modern society and production.

The concept solved the following tasks: methodological backgrounds of the research training of technical universities students were defined; the basis principles of the content and research training technology effective selection were formulated; the components were structured and integrated into a holistic functional model, the necessary changes to engineering training were made; the criteria and indicators of research competence of students of technical universitiess were defined.

The problem of technical university students research training is solved from the point of view of competence approach, that promotes the strengthening of the practical orientation and the instrumental orientation of technical education, creates optimal opportunities for research training of students.

Part of this concept was the program and goal-oriented system of education quality management. We proved that the development of students' research abilities correlates clearly with the quality of higher education. There is a level of education quality when talking about the research skills of students is not possible.

Program and goal-oriented system of education quality management made it possible to determine really achievable objectives, namely the formation of students' research competence, to organize the developing educational environment in the university, to build a consolidated team (representatives of the university and basic enterprises); to develop a program of research training (functional model), to ensure the necessary provision: personnel, material and technical, informational, methodological, etc.

The structure of the research training of technical universities students presented in Figure 1 is invariant and can be used in the educational process of other universities.

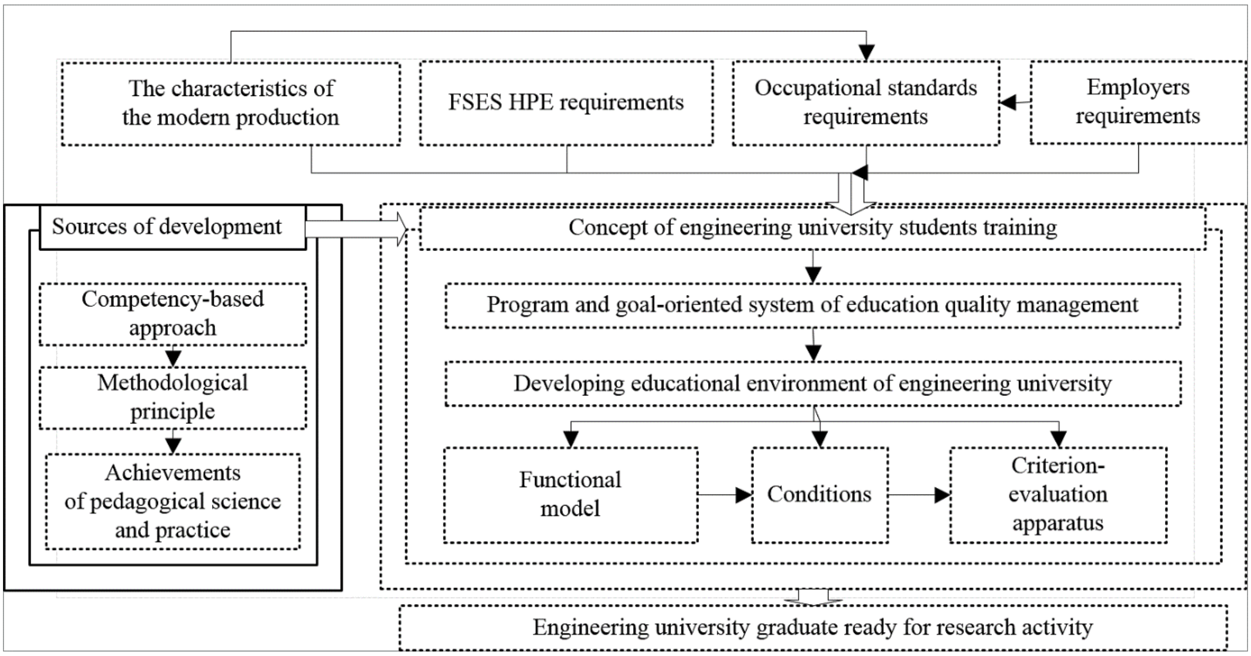

Figure 1. Structure of the students' research training

The concept content is implemented in the functional model of the students' research training being the basis for innovative didactics of engineering university and includes the following components: goal-oriented, motivational, informative, operational-activity, controlling-effective.

The implementation of functional models have contributed to the fact that:

- students motivation to research activities was formed, their subjectivity as active participants in the educational process on the basis of the general objectives acceptance and harmonization of interests of all subjects was developed, the atmosphere of productive activities was created;
- the education content was structured: integrative processes were implemented; special courses and practicums were included in professional training; special forms and means of extracurricular activities (field lab sessions and practical works, research tasks and projects performance, action groups work) were created;
- information technology, online learning resources were used, electronic system of the educational process Educon support was implemented;
- system of tasks (placed in Edukon) was developed and used, the students were focused on the ways of their solving during the teaching process and practice; integrated crosscutting research projects were used during course works and graduate qualifying works performance;
- conditions for development of reflection and self-control of students were created [29].

Efficiency assessment of the research training of technical universities students

Efficiency of the functional model is confirmed by the improving the technical education quality, namely: the formation of the graduates complex of competencies, research capabilities, functional skills of research as universal way of contact with the outside world, as evidenced by the results of experimental work (in the experiment 1520 people were involved, from them 1390 were students and 130 - teachers).

Effectiveness evaluation of the functional model required selecting criteria and indicators adequate to the task preset. As the components of research competence, we highlight as follows: cognitive, personality, and activity-related that we use as a criteria. In course of work, we determined that the level of the criteria of research competence formedness may be different and we made a scale of the combined assessment that took into account the mixed gradation combining two adjacent levels. Table 1 shows the scale of the combined assessment of research competence of technical universities students [28].

Table 1

The scale of the combined assessment of the willingness level for research activity (RA)

Level	Level characteristics	Correlation with the level of formedness
0	At least one component of willingness for RA is not formed	zero
1	All components of willingness for RA are at low	level
2	Three components of willingness for RA are at low level, one at higher level	
3	Two components of willingness for RA are at low level, two others at higher level	
4	One components of willingness for RA is at low level, three others at higher level	medium
5	All components of willingness for RA were formed at medium level	
6	At high level - one component of willingness for RA, at medium level - three other components	
7	At high level - two components of willingness for RA, at medium level - two other components	
8	At high level - three components of willingness for RA, at medium level - one component	high (advanced)
9	All components of willingness for RA were formed at high level	

At each stage of the experiment, the results analysis was carried out, analytical tables and histograms were filled allowing tracing the dynamics of changes. Table 2 shows the dynamics of the combined assessment of the students' research competence formedness in experimental and control groups at the beginning and end of the experiment.

Table 2

Combined assessment of research competence formedness, %

Combined level of willingness	Experimental groups		Control groups	
	input	output	input	output
Not formed (level 0)	95	1	94	6
Low (0 - 1 levels)	4	4	5	20
Below medium (2 - 3 levels)	1	4	1	26
Medium (4-5 levels)	0	40	0	32
Above medium (6-7 levels)	0	31	0	10
High (8-9 levels)	0	20	0	6
χ^2	172.8		79	

The results of experimental work show the effectiveness of the developed concept and implemented by means of functional model of the students research training. Data comparison of original and final assessments showed a stable growth of all components indicators among the students of experimental groups in comparison with the results the control groups. The results validity was confirmed using the methods of mathematical statistics.

Conclusion

The current stage of technical education development is characterized by highlighting the problem of students' research training that requires the technical education objectives and tasks rethinking, the formation of the conceptual foundations of the technical university educational activities. The research competence of the technical university graduate is defined as the research training objective.

The study of historiography of the technical universities students' research training problem made it possible to identify 4 stages; modern approaches are systematized, foreign and domestic experience is analyzed, the basic approaches to solving the problem of research training technical HEIs students are identified and developed. It was found that the existing approaches do not allow solving the problem of the research competence of technical HEI graduate formation in full scope.

It is revealed that engineering activity has an expressed research nature. Engineer interacts with the world through it as a subject and acquires the capability to change the world. The research nature of engineer's activities is manifested as leading one promoting its effective occurrence, being the basis of self-development and identifying the need for goal-oriented research training of students.

The concept of the students' research training in the context of competence-oriented technical education was created. This concept defines the research training as a basis for building innovative didactics of engineering university allowing implementing the requirements of the Federal State Educational Standards of Higher Education for the complex of professional, special, general cultural competencies formation.

The functional model of the technical university students' research training being the part of the concept and the basis for innovative technical didactics of the technical university was developed and implemented. The model is represented by a set of components: goal-oriented, motivational, informative, operational-activity, controlling-regulating.

The results obtained during experiment on evaluating the concept principles implementing by means of a functional model have confirmed its effectiveness on the development of students' creativity, motivation and value-based attitude to research, willingness to participate actively in innovative engineering processes, capability to develop new ideas, solving research production problems, and making innovative solutions.

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Multicriteria Business Performance Evaluation

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Abstract

The effectiveness of entrepreneurial activity determines the relevance of the topic under investigation, since its methodological development neither meets the requirements of systemically reflective objective processes nor fully reveals their essence. An analysis of conceptual views on this issue highlights a divergence of topic-related theoretical positions. The purpose of the article is to develop the effectiveness of business development in the modern economy.
In recent years, this process has significantly accelerated, which is associated with the growing importance of entrepreneurship as the most important factor in increasing efficiency in the new business environment. Increased attention to the problem being investigated is due to the comprehension of the dominant role of entrepreneurship and the manifestation of specific features in market conditions. The main approach to the study of this problem was to assess the development of innovative entrepreneurship resulting from its unique properties. The research novelty of the study consists in the further development of the outlined directions and in a major contribution to research in the related field. The main results of the article will facilitate the development of a toolkit for approbation of the most progressive innovations aimed at increasing the efficiency of entrepreneurial activity and expanding their market positions in the domestic and international markets. Public authorities and management may make use of the main trends, patterns and mechanisms for the development of innovative entrepreneurship that were identified during the research project in order to enhance the sustainable development of the economic system in the context of increasing global competition and that of regional socio-economic development programs. The results of the research will foster the innovation activity of entrepreneurial structures, the development of practical mechanisms for the implementation of entrepreneurial functions and of ways and directions for their innovative use as well as the definition of a strategy for the innovative entrepreneurship development.
Keywords: Innovation, Innovative Activity,Innovative Enterprise, Integration of Enterprise Structures,Innovative Potential of Entrepreneurship, Common Innovative Space,Innovative Technologies, Competitive Advantages, Innovative Development

Introduction

Currently, the pace of economic growth depends on the extent to which the capital, an important element of which are the capital assets, is reproduced.

It should be noted that the accelerated renewal of fixed capital imposes stricted requirements on the technical level and qualitative transformation of all elements of the productive forces, whose implementation ensures an increase in economic efficiency and, basically, is accompanied by an expanding and updated range of products.

The study of the quantitative and qualitative characteristics of the increased production makes it possible to encourage the development of activities, proposals and recommendations.

To this end, a system of indicators needs to be implemented, which would determine the level, state and development of production intensification and detect the essence of its category [1].

Using this system allows a quantitative and qualitative disclosure of essential interrelationships of the various aspects of this process. Furthermore, it is necessary to assess the level, identify the reserves of growth in production intensification, determine factors affecting the production results and improve the incentive system.

In practice, however, the system of indicators has not yet been fully developed, which makes it difficult to tackle issues related to measuring the extent and the influence of factors on the economic efficiency of production.

The main reason for that is that the theory on production intesification is yet to be formulated and that the methodological issues concerning the formation of a system of indicators have not yet been solved.

An analysis of approaches adopted to deal with the above problems showed that different indicators are used to characterize production intesification. They mainly reflect the production process, the achievement of the economic efficiency of production, the comparison of results with the costs of production, the amount of expenditures of living and materialized labor per unit of time.

The study also stressed the lack of consensus among economists on production intensification and its outcomes. In addition, many of these studies are of theoretical nature and do not take into account information flows existing in economic entities.

Thus, the diversity of indicators and the inaccurate disclosure of the content point to an insufficiently developed theory, on the basis of which a system of indicators can be set up.

2. Review of Research Literature

The formation of a new quality in economy is a complex and multifaceted socio-economic process, which is reflected in the increased economic efficiency of entrepreneurship and determines economic development. Many Russian and international research studies deal with the economic efficiency of entrepreneurship. Increased economic efficiency was considered in the works by researchers such as V.I. Vybornov, N.V. Igoshin, T.V. Ryabushkin, V.G. Lebedev, V.A. Afanasiev, V.I. Maevsky and others [2].

Researchers such as A. Busygin, V. Kovalev, O. Efimova, J. Richard, and A. Gryaznova conducted research into the progressive economic development.

The stages, steps and cycles of economic development were examined by the following scholars: A. Shpitgof, G. Kassel, T.Veblen, U. Mitchell, J. M. Klark, J. M. Keyns, J. Hicks, K. Vicksell, E. Khansen, J. Schumpeter, N. D. Kondratiev, P. Samuelson, Zh. Shaekina, among others [3].

Despite the existing extensive research literature on economic efficiency, no study has focused on the economic performance indicators assessing the entrepreneurship complexity, the dialectical unity of the rates of change in levels (quality) and volumes (quantities) of economic efficiency indicators, types and systems of regulation with a view to ensure its rational development, the rate of their change (trends) in the stages and stages of the business cycle.

Developing the theory of economic efficiency is of great importance for the substantiation of managerial decisions to ensure the rational development of entrepreneurship.

2. Methods

The indicators pointing to the quality of joint commercial enterprise can be divided into basic, defining and binding ones.

As an example, the leverage of capital, capital productivity and labor inputs per 1 ruble of total capital are representative of the binding indicator.

The defining and basic indicators include the profitability of equity, the profitability of total capital as well as the profitability of sales.

Defining indicators characterize the adaptation of the development of joint commercial entrepreneurship to a changing external environment and the linking indicators are means for achieving goals.

Indicators of economic efficiency reflect the diversification of entrepreneurship in an economic entity [4].

Eeconomists developed various models to establish the qualitative aspect of the regulation system, which basically reflects reflects the system's qualitative aspect or its connection with the qualitative aspect of other systems [5].

Thus, K.A. Raitsky proposed the formulas □1□, which reflect the economic efficiency of both the intensity and rationalization of the movement in the reproduction of capital, and the use and consumption of production resources at the enterprise.

These include:

1. $Э^{1}_{п} = \frac{П}{К} = \frac{П}{Рп} * \frac{Рп}{Рп} =$ profitability ratio realized

products * return on assets.

2. $$Э_{n}^{1} = \frac{П}{Ип} * \frac{Ип}{Рп} * \frac{Рп}{Ч} : \frac{К}{Ч},$$

where $Э_{n}^{1}$ – generalizing measure of economic efficiency;

П – profit;

$И_п$ – amount of costs of production and circulation;

$Р_п$ – volume of products sold;

Ч – average number of employees;

К – capital (average annual value of fixed and current assets).

Here "the cost-effectiveness (profitability) is equal to the cost per 1 ruble of sold products multiplied by the productivity of labor of workers and divided by the labor-fund rate of labor of workers" [1].

Note that the formula (I) reflects the economic efficiency of production from the standpoint of the intensity and rationality of movement in the reproduction of capital.

The formula (2) indicates the economic efficiency of production in terms of of the use and consumption of production resources at the enterprise.

These formulas, however, do not reflect the interests of owners and entrepreneurs, which are important and fundamental.

These interests foster the production's establishment, functioning and development. Therefore, it seems necessary to investigate the economic efficiency of production from the perspective of changes in the return on equity.

Formulas (1, 2) take into account the volume of products sold resulting from the sale of products (services rendered, works performed).

It does not, however, reflect the totality of the workers' performance, which implies that the volume of sold products does not include the result of the realization of fixed assets used at the enterprise.

In other words, this volume is part of the total income [6].

The total income takes into account all forms and types of realization of the results of labor of workers and fully characterizes the final result of the movement in the reproduction of capital.

Other models belonging to this system also characterize its independent qualitative aspect. All of these studies show how to increase the volume of the system of indicators and to arrange the connections of some indicators with others as to determine the role and place of each of them in the system change. They were also used in the formation of the system being investigated.

To evaluate the economic effectiveness of joint (collective, group, etc.) commercial entrepreneurship, this study proposes the following formula:

$$J^{C} = J_{K}^{л} * J_{O}^{л} * J_{K}^{п} * J_{O}^{п} * J_{K}^{ч} * J_{O}^{ч} * J_{K}^{р} * J_{O}^{р} = J_{K}^{с} * J_{O}^{л} * J_{O}^{п} * J_{O}^{ч} * J_{O}^{р}, \quad (1)$$

where J^c - integral index of the change in the economic efficiency of joint (collective, group, etc.) commercial entrepreneurship;

$J_{K}^{л}$, $J_{O}^{л}$ - respectively, indicators of change in the level and volume of capital leverage;

$J_{K}^{п}$, $J_{O}^{п}$ - respectively, indicators of change in the level and volume of labor productivity;

$J_{K}^{ч}$, $J_{O}^{ч}$ - respectively, indicators of change in the level and volume of labor costs per 1 ruble of the total capital;

$J_{K}^{р}$, $J_{O}^{р}$ - indicators of change in the level and volume of profitability of sales;

J^{c}_{K} - index of changes in the level of return on equity.

The economic efficiency of joint (collective, group, etc.) commercial entrepreneurship in economic entities was estimated according to the formula (1).

For single-value estimates of the economic efficiency of joint business this study proposes to use the following formula:

$$I_C = \sqrt[5]{I_K^{\lambda} \cdot I_O^{\lambda} \cdot I_K^{П} \cdot I_O^{П} \cdot I_K^{Ч} \cdot I_O^{Ч} \cdot I_K^{P} \cdot I_O^{P}} = \sqrt[5]{I_K^{C} \cdot I_O^{\lambda} \cdot I_O^{П} \cdot I_O^{Ч} \cdot I_O^{P}} \qquad (2)$$

where I_C - the rate of change (index) of the integral index of economic efficiency of joint commercial enterprise;

$I_K^{\lambda}, I_O^{\lambda}$ - rate of change (index) of level and volume of capital leverage;

$I_K^{П}, I_O^{П}$ - respectively, the rate of change (indices) of the level and volume of labor productivity;

$I_K^{Ч}, I_O^{Ч}$ - respectively, the rate of change (indices) of level and volume of labor costs per 1 ruble of total capital (the ratio of consumption and accumulation);

I_K^{P}, I_O^{P} - accordingly rates of change (indices) of level and volume of margin on sales;

I_K^{C} - rate of change (index) of profitability level of owned capital.

In order to ensure the rational development of joint business, it is necessary to determine the following:

- which indicators that are included in the system grow;
- which ones decrease;
- the extent to which each increment increases;
- the extent to which each decreasing indicator decreases.

The solution of these problems requires an optimization of the parameters of the multiplicative effect of investment in the development of joint commercial entrepreneurship.

The model of this multiplier effect results from the following model of the development of joint commercial entrepreneurship:

y = b/c*(c+b)*d/b*(b+d)*E/d*(d+E)*a/E*(E+a)=a/c*(c+b)*
(b+d)(d+E)*(E+a), (3)

Where:

- a is the value of growth (decrease) in profit (net income) through investment, in thousands of rubles;
- b is the value of increase (decrease) in total capital through investment, in thousands of rubles;
- c is the value of increase (decrease) in owned capital, in thousands of rubles;
- d is the value of increase (decrease) in the cost of labor costs (number of employees, people), in thousands of rubles;
- E is the value of increase (decrease) in the total income, in thousands of rubles.

The stationary points of this multi-extremal objective function are of wavy-damped nature.

In practice, there are three types of stable changes in joint commercial enterprise:

- sustainable development,
- economic growth,
- decline.

Thus, a stable development is characterized by wavy-damped changes in the indicators that are part of the system, while the economic growth and recession are of wave-like increasing and decreasing nature respectively [7].

Each of them has an initial and final stage of stable development of joint commercial entrepreneurship. To ensure a stable change (increase, decrease) in the indicators included in the system, their parameters are to be used (Table 1).

These parameters were drawn from the stationary points of the multi-extremal objective function, which had been substantiated by the optimal nature of the change (increase, decrease) in the indicators included in the system. They can also be used in forecasting and planning the development of joint commercial entrepreneurship, as well as in substantiating activities undertaken for the development of the business entity.

In our view, the parameters of the multiplier effect on investing in the development of joint commercial entrepreneurship can be used to determine the profitability of an investment (external, internal).

Based on justified parameters of the multiplier effect, it is now possible to calculate the return on investment.

With the stable development of joint commercial entrepreneurship, the return on investment is 20% ($\frac{1}{5}c$:c*100=20%), but with the economic growth it growth to 60% (1 $\frac{1}{5}c$:2c*100=60%). The levels of this profitability correspond to the degree of complexity of the new quality and characterize the level of development of the country's economy. It is possible to use them to establish the directions and stages of the development of joint commercial entrepreneurship.

Table 1

Parameters of the multiplicative effect of investment in the development of joint commercial entrepreneurship.

Name of the model of a stable change in joint commercial entrepreneurship	Name of stage	The amount of change (increase +, decrease -)				
		Owned capital	Total capital	Total income	Number of employees (labor costs)	Profits (net profit)
Sustainable development	Final stage	c	$-\frac{4}{5}c$	$\frac{3}{5}c$	$-\frac{2}{5}c$	$\frac{1}{5}c$
Sustainable development	Initial stage	-c	$\frac{4}{5}c$	$-\frac{3}{5}c$	$\frac{2}{5}c$	$-\frac{1}{5}c$
Economical growth	Final stage	2c	$\frac{1}{5}c$	$1\frac{3}{5}c$	$\frac{3}{5}c$	$1\frac{1}{5}c$
Economical growth	Initial stage	0	$1\frac{4}{5}c$	$\frac{2}{5}c$	$1\frac{2}{5}c$	$\frac{4}{5}c$
Recession	Final stage	0	$-1\frac{4}{5}c$	$-\frac{2}{5}c$	$-1\frac{2}{5}c$	$-\frac{4}{5}c$
Recession	Initial stage	-2c	$-\frac{1}{5}c$	$-1\frac{3}{5}c$	$-\frac{3}{5}c$	$-1\frac{1}{5}c$
Note - The table has been compiled by the author						

The structure (interrelation) of the effects that are included in the system plays an important role in a regulatory system.

An increment (decrease) in equity leads to an increment (decrease) in the total capital, the total income, labor costs (number of employees) and profits [8].

These increments act as a multiplier effect resulting from the use of additional capital (investment) in the development of joint commercial entrepreneurship in enterprises.

The following formulas illustrate these relationships:

$K_1 = a/c$; (4.)

$K_2 = b/c$; (5)

$K_3 = d/c$; (6)
$K_4 = E/c$; (7)
$a = k_1 * c$; (8)
$b = k_2 * c$ (9)
$d = k_3 * c$;(4.65) $E = k_4 * c$, (10)

where^

- a is the increment value (decrease) in profit through investment, in thousands of rubles;
- в is the increment value (decrease) in the total capital through investment, in thousands of rubles;
- d is the increment value (decrease) in the total income through investment, in thousands of rubles;
- E is the increment value (decrease) in the cost of labor costs (number of employees, people) through investment, in thousands of rubles;
- c is the increment value (decrease) in owned capital through investment, in thousands of rubles.

These increments (declines) are closely related to the specific development of an economic entity that directly affects the change (increment, decrease) of the total capital, the total income, along with profit and cost of labor costs in economic entities [9].

These features can be taken into account using the coefficients, which are calculated according to the following formulas:

$K_п = П/C_{соб}$; (11)
$K_{сов} = C_{сов}/C_{соб}$; (12)
$K_д = =СД/C_{соб}$; (13)
$K_ч = C_р/C_{соб}$, (14)

where $K_п$ - coefficient of return on owned capital;
$K_{сов}$ - coefficient of capital leverage;
$K_д$ - return on equity ratio;
$K_ч$ - coefficient of labor force formation;
П – profit (net profit), in thousands of rubles;
$C_{сов}$ – total capital, in thousands of rubles;
$K_{соб}$ – owned capital, in thousands of rubles;
$C_д$ – total income, in thousands of rubles;
$C_р$ – labor costs, in thousands of rubles.

The following formulas determine the increment value (decrease) in the total capital, total income, labor costs, profits:

$Δп = a * K_п = K_1 * K_п * C$; (15)
$Δк = в * K_{сов} = K_2 * K_{сов} * C$; (16)
$Δд = d * K_д = K_3 * K_д * C$; (17)
$Δч = E * K_ч = K_4 * Kч * C$, (18)

where Δп is the increment value (decrease) in profit, in thousands of rubles;
Δк is the increment value (decrease) in total capital, in thousands of rubles;
Δд is the increment value (decrease) in total income, in thousands of rubles;
Δч is the increment value (decrease) in the cost of labor costs, in thousands of rubles.

These increments illustrate the multiplicative effect of making an investment into the development of an economic entity. It also corresponds to the degree of complexity of the quality of joint commercial entrepreneurship and takes into account the development of the business entity.

Based on our methodology aimed at optimizing the parameters of the investment's multiplier effect, we calculated the indicators characterizing the quality of joint commercial entrepreneurship

According to the optimal indicators, it is possible to regulate the development of joint commercial entrepreneurship, control, form and use a new quality in the economic entity [10, 11].

The actual values of the multiplier effect, however, do not correspond to the optimal ones, as shown by the reserves regulating the development of joint commercial entrepreneurship.

Importantly, the rate of change (trend) in levels and volumes of economic efficiency indicators should correspond to each other in steps and stages of the economic cycle and occur in a coordinated and synchronous manner.

An analysis of the optimization of indicators of economic efficiency of joint commercial entrepreneurship shows that it has significant reserves.

Consequently, the system of indicators, substantiated in this study and illustrating the complexity of quality, can be used in regulating and planning the development of joint commercial entrepreneurship in an organization.

Discussion

The essence and role of entrepreneurship in the economic development have have been the subject of research for over a century.

In different periods of the human civilization, social attitudes to entrepreneurship have changed.

An analysis of the essence and role of the entrepreneur showed that, throughout its history, entrepreneurship existed in various forms. In this connection, different definitions have been proposed of types of entrepreneurial structures.

An analysis of these approaches makes it possible to formulate their typology on the basis of signs: the historical form of occurrence; strategic and functional orientation; attitude to innovation; motivational consistency and the scope of activities [12].

Innovation is an inherent component of the entrepreneurial activity, which reflects its essence. At the same time, organizational innovations are no less important than industrial innovations. Obviously, five basic blocks of requirements are to be set down for the successful development of entrepreneurship: private property, economic freedom, economic incentives, competitive markets and limited government intervention.

As a rule, two models of entrepreneurship, the classical and the innovative ones, are distinguished.

In the first model, the entrepreneur seeks to organize work expecting to obtain a maximum return on resources.The second model is innovative entrepreneurship, which involves the search for new ways of enterprise development.

Nevertheless, any form of entrepreneurial activity should be of innovative nature.

Innovative enterprises, in addition to bringing the outcomes of research and technological activities to the state, make their use in the industrial sector possible and look for commercial partners [13].

In addition to small forms of innovative business structures, there exist medium and large organizational forms of innovative entrepreneurship. Small innovative enterprises have, in comparison with similar large entities, high chances of obtaining entrepreneurial profit.

Our analysis of the innovation activities of large organizations led to a number of general provisions representative of modern features of innovative entrepreneurship organization.

In terms of the organization of the innovation process in the firm, models of innovative entrepreneurship are singled out on the basis of the following:

- internal organization;
- external organization through contracts;
- external organization with the help of crowns [14,15].

One of the required conditions for the development of innovative entrepreneurship is the integration of small businesses into production complexes of large firms.

Partnerships in business can be grouped into four main areas of activity: cooperation in the sphere of production; cooperation in the sphere of commodity exchange; trade; and cooperation in the sphere of financial relations.

Another form of cooperation between small and large business is production cooperation.

The use of leasing (classical, financial, refundable, operational, leasing with full payment, leasing with partial payment, leverage leasing, leasing with additional obligations and net leasing) has considerable advantages. In addition, franchising can also be used as a form of partnership.

Entrepreneurial partnerships in financial relations can be reduced to factoring and commercial transfer. Thus, the development of small business directly depends on the opportunities for developing real production and the formation of close cooperation ties between small and large enterprises.

Conclusion

Entrepreneurship plays an important role in the economic development. It is economic efficiency that determines the direction of formation and development of an economic entity.

Despite this, research lacks on the economic efficiency of entrepreneurship, as confirmed by a significant divergence of opinions both on the essence of economic efficiency and on the formation of its criteria and indicators.

Progressive development of entrepreneurship in the economy can not be ensured without developing a theory of development, evaluation and optimization of its economic efficiency, without using specific criteria and indicators [16, 17].

At present, further research is needed to investigate burning issues in the economic efficiency of modern entrepreneurship.

The system approach plays a constructive role in the formation of systems of indicators in accordance with the degree of complexity of the quality of entrepreneurship. It makes it possible to reveal and examine in a more in-depth and comprehensive manner the interrelated changes in the complexity of the used quality of entrepreneurship as well as to determine the transitions from simple to more advanced quality.

Adopting this approach allows researchers to substantiate the types and forms of entrepreneurship, to adequately formulate the systems of indicators and development tasks, and to stimulate its development [18-21].

Continuous improvements are being made to indicator systems. On the one hand, they must be in line with the dynamic tasks of development, and on the other hand, to the methods for their solution. In an attempt to make indicators characterizing the development of entrepreneurship correspond to rapidly changing and more complicated solutions, methodologies and methods for their calculation need to be constantly updated.

To achieve the objectives of entrepreneurship and to adapt its development to the changing external environment, its economic efficiency indicators are defined as basic, linking and defining.

The basic indicators of economic efficiency facilitate assessment of means used to achieve the goal by determining indicators - the level of adaptation of their development to a changing external environment, and by linking indicators - the level of improvement of their organization [22-24, 29].

On the basis of ensuring that the rates of change (trends) of levels and volumes of economic efficiency indicators correspond to each other, types and systems for regulating the development of entrepreneurship.

Regulation methods include attracting investment, the intensity of capital flows, the use of resources, incentives for employees to work, consumption of productive resources and the implementation of labor outcomes. Being interrelated and based on an consistent expansion of these species, regulatory systems are formed in accordance with the types and forms of business development [25-28].

The long-term development of industrial entrepreneurship will contribute to the following. The development of industries can establish the production of competitive science-intensive products and the creation of new innovative productions. Specialized structures can be set up in order to ensure the development, implementation and dissemination of innovations. Sources and channels of long-term investments can be formed. Competitive and high-quality processing products can be manufactured using innovative technologies. Domestic products can be sold in the international market. Perspective systems of management of enterprise structures in the sphere of material production can be developed and implemented, as well as the information support systems for innovative developments and production. Finally, new branches of economy can be devised.

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The Structure and Semantics of Root Morphemes and Their Functioning in the Adyghe (Circassian) Languages

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Abstract

The article aims at resolving controversial issues relating to the Adyghe and Circassian semasiology and word formation, namely, the structural and semantic content of the main root morphemes.

A comparative method and a method of internal historical-semantic and word-building reconstruction on the basis of language correlations were used.

The main result of the study, illustrated with the data obtained from the analysis of the Kabardino-Circassian and Adyghe languages, was to clarify the structure and semantics of root morphemes belonging to the period of the Circassian language community, which influenced the further development of the semantics and structure of the languages. The considered root morphemes are the basic structural-semantic units on the basis of which wide lexical nests of words are formed. Derived words are formed according to the law of regularity of semantic transitions of words connected by the unity of the root.

The main conclusion of the study is that the given root morpheme participates in the processes of compositional, not word-formation derivation, i.e. its formal and content aspects do not constitute an affixing formant.

Keywords: etymology, word history, internal reconstruction, derived stem, stem composition.

Introduction

It is a generally accepted fact that a significant part of Adyghe root morphemes are of the monosyllabic type “consonant + vowel”. The article presents different points of view of such scientists as M.A. Kumakhov, Kh.Sh. Urusov, A.K. Shagirov, N.R. Ivanokov, N.F. Yakovlev and others. The root morphemes considered in this article, according to some scientists, turn into affixes in the course of historical development, and serve as word-formation affixes. The article introduces new approaches to this problem and a new original solution. The purpose of the article is to: 1) conduct an analysis of the historical-semasiological development of lexemes, which go back to a single root morpheme, 2) study its semantic volume and its main vectors of semantic development on the basis of numerous linguistic data, presented in the form of tables in the article.

The etymology and semantics of root morphemes is an important issue; those relating to the derivation of the Adyghe languages are still open for investigation. A rather controversial issue concerns the original composition of the Adyghe linguistic units. Word-stemming process lies within the field of word formation and is related to another question, namely, whether the so-called complex affixes belong to the group word-formation units in the Adyghe languages. The solution of the questions is of great importance both in terms of theoretical comprehension of the problem and in practical application, since the results of this study can be applied in further studies on the etymology of the Circassian (Adyghe) words, Adyghe word-formation, practical grammar and morphology. The data obtained during the linguistic analysis will also contribute to

the development of historical-semasiological and comparative studies and Adyghe semantics in general. We believe that the topicality of the issue raised point to the timeliness and relevance of this scientific phenomenon for both general linguistics and the Adyghe language studies (Parvizian et al, 2015; Al-Qayoudhi et al, 2017; Nuriyev et al, 2018; Sears, 2018).
Such well-approved methods as comparative-historical and internal reconstruction were used for solving the issues. P.J. Hopper writes: "Methods of internal reconstruction and comparative-historical are used to restore the hypothetical stage of the relatively diffuse group of related languages (Hopper, 1988).
"The reconstruction of the semantic changes allows us to reveal the deep cognitive processes reflecting human thinking, as a human perceives and regulates the surrounding reality through his consciousness", L. Kh. Kharaeva writes in her study (Kharaeva, 2007).

Literature review

This issue raised is not new and has its own history, since many prominent scientists have covered it in their works. Nevertheless, it has not yet been unified. There exist absolutely opposite opinions concerning the issue. Some scientists believe that the structure of the ancient root "consonant + vowel" is characteristic of the so-called amorphous stage of language development (Yakovlev & Ashkhamaf, 1941).
N.F. Yakovlev's point of view is shared by the Dutch scientist A. Kuipers, who claims the following: "There are at least 600 two-segment units that do not split into single-segment morphemes, although there is good reason to believe that these cases date back to the compounds of such morphemes" (Kuipers, 1963).
A more complex structure of the ancient Adyghe root appears in the works by G.V. Rogava, who describes the Adyghe root as a complicated form due to the presence of prefixes and suffixes. For example, such words as –ne "eye", –pe "nose", –ie "hand" are secondary derived forms with affixes (Rogava, 1956).
M.A. Kumakhov presents a more reasoned point of view according to which the monosyllabic roots "consonant + vowel" refer to different periods of development of the West Caucasian languages, that is, the appearance of words such as –ne "eye", –k'ue "son", is chronologically heterogeneous (Kumakhov, 1981).
M.A. Kumakhov also differentiates some consonant groups –pse, pl'e, bgy, pliy (*псэ, плъэ, бгы, плIы*). This means that the monosyllabic roots of the morpheme can be represented by two-, three-letter morphemes, while 33 consonants –r, gu, gy, gyu, d, dzh, dz, g, zh, zhy, z, ku , kiy, ky, kyi, l, li, kh, khu, khy, ts, tsu, shyu, shi, schi, schiy, tsi (*г, гу, гъ, гъу, д, дж,дз,ж, жъ, жъу, з,к, ку, кIу, къ, къу, къI, къIу, л, лI, х, ху, хъ, ц, цу, шъу, шI, шIу, чI, чIъ, цI*) are not marked at the beginning of the root morpheme of the type "consonant + vowel" (Kumakhov, 1981).
Kh.Sh. Urusov believes that in the period of the Adyghe language community, only two vowels functioned in the language –y, e (ы, э), and roots consisted of a consonant and a vowel. Of the 1,300 such simple roots, according to the scientist's estimates, 270 end in e (э) (Urusov, 31).

Results

In our opinion, the abovementioned examples, where paired consonants are observed, can be decomposed into separate elements, which confirm the generally accepted fact that word-formation in the common Adyghe vocabulary was based on the "consonant + vowel" model. According to this, for example, the word "bgy (mountain)" (DKCL, 37) is divided into two components –by and gy. The element –gy means an object above the flat area/line. Monosyllabic consonant groups are characterized by the loss of vowels y or e. A special feature of the Adyghe word-formation is the presence of a semantic meaning for each syllable "consonant + vowel".
The "Grammar of the Kabardino-Circassian Literary Language" admits the fact that "The overwhelming majority of affixes in the phonetic aspect are not different from words ... they go back to independent words in the past". We consider it controversial that the majority of root morphemes belonging to the "consonant + vowel" type have turned into affixes in the course of development. It is worth mentioning, that in the Grammar the root mentioned is once considered to be a root "consisting of three or more sounds, which is a combination of the primary root and the dead affixes", for example, badze "fly" and the lexical unit bzhen "goat" are assigned to monosyllabic words with a suffix that has lost its meaning (Grammar, 1970). The first word, from the point of view of modern word-formation in the Kabardino-Circassian language, cannot

really be decomposed into parts, which does not negate the fact of the etymological fusion of the two roots be/y + dze, where the first component means "something above the flat area/line, i.e. to fly", and the second one means "army", which eventually gives the "flying army" semantic meaning, where both roots are from the general Adyghe. In the second example, G.V. Rogava identifies a class indicator –b, the root part –zhe and the determinative suffix – n. (the quote from Urusov, 32-33) We consider it logically justified to see two roots in the meaning "something higher than the flat area" and zhe/y "to run", which in total gives the meaning "running in the mountains". The element zhe can be compared with the root of the azhe "he-goat" (DKCL, 1999).
The authors of the article agree with the opinion of some Caucasian scholars, including N.T. Gishev, who writes: "In the modern Adyghe language there are lexemes, which include related roots, once existing as independent words. Some of them still retain their semantics transparently, while others completely lost their original meanings" [Gishev, 2008). In contrast to the opinion of the above-quoted author, we do not consider his statement about the loss of meaning to be correct. In our opinion, it is the chronological periodization which points to the appearance of certain root-sounds. As M.A. Kumakhov writes, "the most significant achievement of comparative-historical linguistics, in our view, is the introduction of the principles of chronological hierarchy of the studied reconstructed phenomena". A comparative analysis of Adyghe and Kabardino-Circassian lexemes is not sufficient to restore the meanings of the common-Ubykh, and especially the common-Abkhaz roots. In the same work, the author decomposes the lexeme Iebzhane (*Iэбжъанэ*) "fingernail" into Ie (*Iэ)* "hand", bzh'e "horns" and ne "place" (Kumakhov, 1984). Without describing the other components of the word, one cannot be sure that bzhe is an indivisible unit that consists of a –by "higher than the flat area", since the shape of the nail is not flat, but anyway it fits into in the meaning "something above the flat place" as well as zhye "mouth" as the shape that is created between the pads of the finger and the tips of the fingernails is associated with the mouth. The fact that the element –by has a meaning of height was noted by N.T. Gishev himself in the same work (Gishev, 2008).
The solution of the problem should be found in the analysis of the sound composition of the Adyghe languages. The Kabardino-Circassian alphabet is represented by 59 signs. Almost all sounds in conjunction with the vowels y and e have their own lexical meaning, with the exception of the vowels (a, e, y), two signs that do not have a sound (*ъ, ь*), diphthongs yo, iy, eu (*ё-йо, й-йы, о-эу*), back-lingual k (к), occurring only in the borrowed words, the sonorous r (р). Even the vowels e/ye0 (*йэ*), and iy (*иы*) have lexical meanings, respectively, "bad", "to coat with clay". Thus, in the Kabardino-Circassian language there are 49 letters, with the help of which the words represented by structurally root morphemes "consonant + vowel" are constructed. We are not talking about the archaic nature of a given number of letters in their modern sounding, this is just a fact confirming the existing opinion that the Kabardino-Circassian word formation has not lost the form of word production inherent in the Abkhaz-Adyghe languages. It is believed that such syllable sounds, i.e. 98 units in the Kabardian-Circassian language, became the basis of the lexical composition of the language, which can be divided into aboriginal Abkhaz-Adyghe, Adyghe, and Kabardino-Circassian. These sound-syllables have received a further semantic development in derivative words as a result of word-formation processes. For example, k'uy (*къуы)* 1. Something dry, solid; kudame (*къудамэ)* "tree branch" (DKCL, 474); 2. The angle of something is kuape (*къуапэ)* (DKCL, 471); 3. Beat somebody - kyu (n) (*къуы(н))* (DKCL, 476). The root k'ue (*къуэ)* was developed in the following meanings: a channel, a ravine, a son (DKCL, 471; 1999).
Several dozens of simple roots form the basis for the formation of complex words consisting of two or more elements and followed by units that have categorical meanings of direction, location, capacity, etc., which have received the status of prefixes and suffixes in modern grammar. The transformation of a compound word component into an affix occurs only if the given element, an independent word, ceases to function outside the composite. The transformation of an independent word into a prefix occurs when a word, joining a number of notional words, begins to express signs or relations of a categorical, that is, a very abstract character (Shteinberg, 1976).
The analysis shows that the Adyghe root words are divided into two types initially - monosyllabic words with a vowel -y and monosyllabic words with a vowel -e. All derived words form large etymological nests,

in turn, consisting of numerous word-forming nests. Root morphemes have different primary meanings that are manifested in derived words.

Our study is devoted to the analysis of the root morpheme, which belongs to the category of monosyllabic roots under consideration. It should be noted that the root morpheme is used as an independent unit in the Kabardino-Circassian language, whereas in the Adyghe variant it has its own lexical meaning –by "hole, lair". However, the root –by is present in the derived Kabardian-Circassian words, from which it is freely isolated as a structural and semantic element. For example: kumb (*кумб) meaning* "pit" (DKCL, 329) is decomposed into ku and by (ku - center, middle + m (phonetic accretion) + b (y) pit = in the center of the pit); l'emb (*лъэмб)* (DKCL, 495) meaning "footprint" (lie - leg + m (phonetic accretion) + b (y) pit) = feet of the pit); l'embyatI (*лъэмбытI)* meaning "two footprints" (DKCL, 496) (l'e leg + m (phonetic accretion) + b (y) pit + mI (y) two = two legs of the pit); g'uemb (*гъуэмб)* meaning "hole" (DKCL, 102) (g'ue – hole, nest + m (phonetic accretion) + b (y) pit); byrk'ueshyrk'ue (*быркъуэшыркъуэ)* meaning "uneven, bumpy" (DKCL, 54) (by - pit + p (phonetic accretion) + k'ue "the lowland between the two heights" + shy "carry" + r (phonetic accretion) + k'ue "the lowland between the two heights"), l'ebyshe (*лъэбышэ)* meaning "clumsy"(DKCL, 493) (l'e - leg, foot + by "pit"+ "take away", compare Iush (yn) (*Iуш(ын)*) "take sb away" (DKCL, 851), and the etymologized word literally sounds as a "footprint, diverted to the side", i.e. not the way it should be); byrtiym (*быртIым*) meaning the "full, fat, overweight" (DKCL, 54) (by "swollen"+ r (phonetic accretion) + tiy "something soft", compare bykh'utie (*быхъутIэ) "*short fat man" (DKCL, 55), where by "swollen" + kh'u "round" + tie "something soft" + m here is associated with the same element as in the Iesthtym (*IэштIым)* "fist"" (DKCL, 834), tiamy *(тIамы) "*orange"" (DKCL, 642)), byrybyn *(бырыбын)* meaning "become fluffy" (by "become swollen" + r (phonetic accretion) + reduplication of the root by + n (the index of infinitive in the modern Kabardian-Circassian language)); bykh'u (*быхъу) "*wide" (DKCL, 55) (bykh'u "short fat man", where by means "swollen" + kh'u "round"); byiuebyshe (*быIуэбышэ) meaning "*ugly" (DKCL, 55) (by "going away from the straight line, regardless of the decrease or increase" + Iye / Iuy "the beginning, the original line or point" + by "going away from the straight line, regardless of the decrease or increase"+ she "to carry", literal meaning: away from the original line); schiembrye (n) (*щIэмбрыуэ(н)) "*dive" (DKCL, 803) (schie "bottom, under" + m (phonetic accretion) + b (y) "deepening formed on the water in the performance of this action" + r (phonetic accretion) + ye "striking", literal meaning: lead down / under, forming a deepening by striking).

In separate words such as byrgu-syrgu (*быргу-сыргу)* "bang bang" (DKCL, 54), birkshyrk (*быркъшыркъ)* "noise" (DKCL, 54), the element under investigation can act as a part of the onomatopoeic unit. It should be noted that all the above mentioned complex words are motivated with a transparent internal form. Even onomatopoeic words are partially motivated.

The etymological meaning of the word, which determines the initial semantics of the root in the Adyghe language, allows us to represent the complete or partial image of an object, its specificity, if it is a noun or an adjective, and also an action, if it is a verb.

The abovementioned approach helps to clarify the semantics of the root, the representation of the images of objects, which can be demonstrated in the following example: kumb "pit": ku "middle" + by "hole", container - a deepening on a flat surface. We also find the same root in the derived word bybyn (*быбын)* meaning "to fly" (Tharkakho, 663), preserved in the Adyghe variant, whereas in the Kabardian-Circassian there is a verb l'eaten (*лъэтэн)* (DKCL, 499) in the same meaning. The last verb is decomposed into l'e "leg" and you ty "to lift", in other words, the literal meaning of the verb is "to raise one's legs". At the same time, the common Adyghe root would be a part of the Kabardino-Circassian lexical units such as: byrybyn "become fluffy", sheryb (*шэрыб)* "bubble" (DKCL, 759), beten (*бэтэн) "*grow stout, fatten" (DKCL, 36). The image of a swollen object can be represented as an "inverted pit". Thus, single-root words denote opposites. In our opinion, there is no doubt that the formant b(y) in the composite nybe (*ныбэ)* "belly" (DKCL, 542) is inseparably connected with the meaning of the root morpheme -by "bubble". This conclusion is confirmed by the fact that the intestines of the slaughtered cattle are called *nybe*, which correlates with the sheryb "bubble", as well as b(y) in the bagyn (*бэгын)* "become swollen" (DKCL, 34). Let us also compare the Kabardino-Circassian verb tebyben (*тебыбэн)* (DKCL, 615) meaning "to fly over something". Our reasoning can be supported by the etymological analysis of the Adyghe words, conducted by N.R. Ivanov, who

believes that such ethnonyms as abaza, Abkhaz, Abadzekh have an element -by meaning "higher place, mountain" (Ivanokov, 2015), which is confirmed by the data of the conducted research.
The word abg'ue (*абгъуэ)* "nest" A.K. Shagirov divides into two parts: the composite ne "eye, hole" and b'gue "wide", comparing it with the Adyghe nabg'ue (*набгъуэ)* (Shagirov, 55). As in other examples with the element -by, one of two basic meanings is present: "something above the flat area" or "something below the flat area". If one draws a line and presents the gyoumb (*гъуэмб*) "the hole; something that is below the flat area", once can also get its opposite meaning - abg'ue "nest; something that is above the flat area". With the decomposition of the word schabe (*щабэ)* "soft", A.K. Shagirov associates –be/y with the same element as in the ubyn (*убын*) "to pound", and with –scha as a part of the word scheschen (*щэщэн)* "become small pieces" (Shagirov, 1977), which seems unlikely to the authors of the article. This word (schabe) is decomposed into a sche, which goes back to schy and is found in the word schyn "to rot" (DKCL, 789), logically based on the fact that all that is rotting becomes soft, and its full semantic meaning is translated as "to rot a lot".
Such a semantic development of the root can also be observed in other languages. If one looks at the comparative dictionary by M.M. Makovsky, one will see that the meaning of a pit, a den, corresponds to numerous images. Any hole (abyss, pit, hole, door, window, vessel, skull) has a double symbolism: this is the point from where everything happens, and the place where everything comes back. In particular, words with the meaning of the "hole" correspond to the meanings: breathe and dig, soul and intestines, outer and inner, abyss and stars, top and bottom, beginning and end, good and evil, birth and death, emptiness and way, etc. All these meanings and connotations are based on the oldest anthropomorphic model of the universe (Makovsky, 1996).
Other language examples show that the root –by can develop opposite values, which can also be reduced to the meaning "something not flat". For example: 1. l'emb (*лъэмб)* A footprint imprinted on the surface of something. 2. Deepening (drawing of a foot); l'embyti (*лъэмбытI*) step, literally "two footprints" from the l'emb *лъэмб* and the tiu (*тIу*) two. In the word k'uebaebzhabe (*къуэбэбжьабэ)* "with an uneven surface" (DKCL, 471) there is a reduplicated root of -be with an entirely different semantics. The root -be historically goes back to the sound complex -by. Having decomposed the actualized word into elements, we get the following: k'ue (*къуэ)* ravine + be "many" + bzhe "sheer drop" + be "many". The etymological and structural analysis of this word makes the following assumption possible. One part of the composite, namely bzhe sounds like bzhap "hill" in the Adyghe language (TSAYA 59), which splits into two minimal components - by+ zhe where -by means "rising part of something", and zhe "narrow part". For comparison, let us introduce the Kabardino-Circassian variant bgyzhye *(бгыжьэ)*, which means the narrow mountain area (DKCL, 37). Such lexemes as byrkueshyrkue (*быркъуэшыркъуэ)* "uneven, bumpy" in Kabardino-Circassian and byrg-tiyrg (*бырг-тIырг)* "uneven, bumpy" (Tkharkakho, 2004) in the Adyghe variant contain the root morpheme meaning "going down" like in the words kumb "pit" and, g'uemb "hole". Here are some more examples with the given root: be "many", bakiy (*бэкIы)* "of many years" (TSAYA, 84) (be "many" + kiy "grow"); batse (*бацэ)* "shaggy, furry" (DKCL, 34) (be "many"+ tse "fur, hair"), bedzh (*бэдж)* "spider" (DKCL, 34) (be "many" + dzh (y) "weave"), beg'uen (*бэгъуэн)* "multiply" (DKCL, 34) (be "many" + g'ue "dry", i.e. "revival of what was not alive, what was dry"), bev (*бэв)* "rich" (mainly about the crop) "(DKCL, 34) (be "many"+ vy "to plow"), the bashie (*бащIэ*) "workaholic" (TSAYA, 43) (be "many"+shie "do"), the baio (*баIо*) "talkative" (TSAYA, 49) (be "many" + iue to speak"), beby (*бэбы*) (TSAYA, 82) "a thick pole serving as a lever for lifting weights" (be "many" + by "above the flat area", literally meaning "many times over the flat area", which fully corresponds to the subject), g'able *(гъаблэ)* "infertile, hunger" (DKCL, 83) (g'e "year"+ be "below of what should have been"+ le "layer, volume", comp., zale (*залэ)* "the width of an index finger", (DKCL, 185), tiuale *(тIуалэ)* "the top, width of two fingers" (DKCL, 644), etc.), in the following three examples, we isolate the root -be in the opposite meaning, namely, "decrease, lessening" – ibe (*ибэ)* "orphan" (DKCL, 308), fyzabe (*фызабэ*) "widow" (DKCL, 668), liyg'uabe (*лIыгъуабэ*) "widower" (DKCL, 505). All three meanings have the connotation of the absence of integrity - an orphan without parents, a widow without a husband, a widower without a wife.
As for the stem chiybe "to drown in the water". Bersirov writes that "-be is an intransitive verb with a bound stem. It is manifested with the help of the preverb of the place Chie (Bersirov, 26). The author also notes that this lexeme is not marked in Kabardian (Bersirov, 26). Indeed, Chiybe (*чIэбы)* or (Schiybe) *щIэбы* do not

function in Kabardinian, but this stem –be can be found in the word Schiembryuen (*щIэмбрыуэн)* "to dive" [DKCL, 803], which is decomposed to Schiye (*щIэ)* "bottom, under" + m (phonetic accretion) to + -by "something below the flat area (i.e. , which is formed on the surface of the water after a person dives there) + ue "to hit", which literally translates "to go under the water hitting, creating something below the flat area". The author singles out the second stem root -be in the examples jebedshy (*йэбэджы)* "falling", the tyreuyiube (*тыреуыIубэ) "covering"*, but does not offer a variant of its meaning (Bersirov, 2001). In both examples, the suggested values of this root are preserved in this study: je-be-dzhy *(йэ-бэ-джы)*, whose meaning can be referred to as "something deviated from the line", i.e. if something or someone falls down, then it / it bounces off the trajectory that was considered given.

Thus, analyzing the root morpheme as part of numerous derivatives on Adyghe linguistic material, we come across a linguistic phenomenon, such as enantiosemy. Enantiosemy is characteristic, according to scientists, for all levels of language. The formation of a particular dictionary unit of different and even opposite meanings is widely known and observed in all languages.

In this study, we will talk about the manifestation of enantiosemy at the lexical level. The reasons for the emergence of lexical units that contain opposite meanings in their semantic structure are the following: the dualism of human thinking and the asymmetry of the linguistic sign. In the language, these laws are manifested at the level of etymology, the semantics of the primary meaning of the root, which is characterized by diffusivity or polysemy. The causes of enantiosemy lie in the weakening of the original meaning of the word in favor of its polarization in the form of opposite meanings, confined in the same linguistic form. This process consists of two phases - desemantization and enantiosemy. In the process of formation of opposing meanings, various factors are involved in one language form - objective ones, reflecting the surrounding reality and subjective, conditioned by individual cognition, which can enter contradictive relations (Kharaeva, 2007). In the process of enantiosemy, the language tries to find a solution to these discrepancies. Proceeding from the general principles of the formation and functioning of linguistic signs, we can derive certain regularities in the evolution of the linguistic unit, but at the same time, we should give an account of the fact that language as a sign system is inherently poorer than the surrounding world, which cannot be subjected to overall analysis. As a result, any linguistic sign existing in a discrete form is more "narrow" than "the signified". Thus, enantiosemy is a manifestation of the asymmetry of a linguistic sign or in other words a discrepancy between form and content, therefore it can be said that it is an element of a "single compensatory mechanism regulating the growth of the semantic and formal diversity of a language" (Patinioti, 2004).

Enantiosemy is the linguistic expression of the duality of human cognition, a general law, according to which a single can be divided into mutually exclusive opposites, between which relations are established. The category of opposition exists in the opposition of statement-negation. The primary meaning of a language unit can be either positive or negative. The paired existence of two opposites in the linguistic system is logical and is due to the significance of the linguistic unit, which is determined, firstly, by what it represents itself, and secondly, by what it is opposed to. Therefore two sides of the opposite become independent. Enantiosemy associated with the categories of negation, modality, expressiveness and emotionality, becoming a means of expressing the speaker's attitude to the environment, appears at the pragmatic and communicative level (Kravtsova, 2006).

The main reason for the development of opposing meanings in one linguistic form (semantic antonymy) is laid in the undifferentiated character of the root basis of the word, its etymon, which leads to the appearance of opposing meanings. The generalized syncretic nature of etymological meaning, which is the result of reflecting generalized ideas about the world, provides an opportunity for the opposite semantic development (Markova, 2010).

As we see from the illustrative material, the various meanings of the root morpheme of an independent word that has become part of the derived composite word often leads to an antonymy of the actual element that has become a formant of various words during derivation or development of other meanings.

Thus, the development of the root morpheme could be schematically shown as follows:

Table 1

By			
Something above the flat area	Something below the flat area	Something compact	Onomatopoeia
БыIуэбышэ «ugly»	*Ебышэ* «to slope»	*Быдэ* «strong»	*Быргуэ* «the sound of a falling object»
Быркъуэшыркъуэ «uneven, stumpy»	*Гъуэмб* «hole»	*Убэн* I «to make something compact»	*Быргъын* «to make a sudden sound»
Быбын «to fly away»	*Кумб* «pit»	*Убын* II «to gossip»	*Быркъ* «the sound of a metal or solid object on something solid»
Бырыбын «to become fluffy»	*Лъэмб* «footprint»	*Убэрэжьын* «to beat»	*Бым-сым* «boom»
Быдз «woman's breast»	*Абгъуэ* «nest»		*Быргу-сыргу* «bang bang»
БыхъутIэ «short fat man»	*ЩIэмбрыуэ* «to dive»		
Ныбэ «belly»			
Шэрыб «bubble»			

All these words differ in one feature, namely the location of the root stem -be. Its meanings "below/above the flat area" are present in the initial, middle and final positions of the derived words. Structurally, the root morpheme can stand in the middle of the derived word and in the final position.
As for the semantics of derived words, all their meanings go back to the original initial meanings of the root, which are the starting point of the semantic evolution, in other words, there is a certain dependence of the derived meanings on the meanings of the etymons (Kharaeva, 2007). The semantic development of the root consonant groups is systemic. Systemic relations arising between words derived from a certain root morpheme affect the qualitative certainty of the derived units and, accordingly, their derived meanings.
In our opinion, the root morpheme -be is a derivative of –by, since it correlates to it in its meaning. One of the initial meaning of –by is "to expand, increase or decrease in quantity" and this meaning served as the basis for the main meaning of -be. Further development of the root morpheme –be is schematically represented as follows:

Table 2

Be	
To multiply, which goes back to the meaning of –by (over the flat area)	To decrease, which goes back to the meaning of –by (below the flat area)
Бэ/бэ «many»	*Ибэ* «orphan»
БэкIын «of many years»	*Фызабэ* «widow»
Бацэ «furry»	*ЛIыгъуабэ* «widower»
Бэдж «spider»	*Бгъэ* «infertile»
Бэгъуэн «to multiply»	*Гъаблэ* «hunger»
Бэв «rich (meaning abundant)»	
БащIэ «workaholic»	
БаIуэ «talkative»	
Бэбы «bar, lever»	

All scientists who dealt with Kabardino-Circassian and general Adyghe languages agree that -be means "abundance, many things", but in the Grammar the element -be is referred to as a suffix -be forming words from the noun stems (Grammar, 84), which cannot be accepted because of both high usage of this unit and opposite meanings, as well as its separate use in speech in the same sense, i.e. "many"". In the same

Grammar, the -tse element is considered to be an unproductive word-building suffix with the meaning "having a lot of something" (Grammar, 97). The meanings of the batse (*бацэ)* "shaggy, furry" and tsybe (*цыбэ)* "hairy" (DKCL, 34, 747), where –be means "many" + tsy means " hair and fur", and variety of permutation of components show that the element -tse can be regarded as a suffix.
Our study correlates with the theory of morphological categories in synchronism and diachrony of J. Bainby, who denies the "arbitrary" nature of linguistic elements (even in morphology, which was traditionally considered to be the bunch of arbitrary and idiosyncratic). The scientist destroys the structuralist morphological theory, according to which the morphological facts, along with the phonological facts, represent an autonomous system of significant oppositions, where the regular (grammatical) goes along with the irregular (lexical). J. Bainby considers the main task of the study to be the search for cognitive-psychological explanations for the general properties of morphological systems observed in different languages. The most revolutionary thesis of the researcher proclaims the fundamental interconnection between the expression plan and the content plan. In the morphological structure of the word forms, the semantic properties of the morphemes entering it, which are related to the relevance scale, are directly iconic. By relevance, the scientist understands the degree of change in the meaning of one morpheme (primarily, the root) under the influence of the meaning of another morpheme (first of all, the affix) (Kharaeva, 2007), but according to our theory affixes or "dead" affixes are ancient roots that have lost their productivity.

Discussion

In conclusion it can be suggested that the word-formation processes, procedural moments of semantic evolution and nomination in the Adyghe linguistic space have their own peculiarities, determined by the worldview of the ethnos, its linguophilosophy. This feature is that some elements of the root morphemes erroneously refer to affixes, since they represent independent parts of the compound word with their own semantic meaning. Although there is a firm belief that many prefixes in different languages are independent words, prefix formation is sometimes referred to as word-building. In the course of our research, based on the analysis of all the lexemes mentioned, we found that the root morpheme be / by is in two main positions - preposition and postposition. It can be concluded that the same element cannot be both an affix and a suffix. Consequently, it should be recognized that derived words of a given type with an element of be/by are the result of compositional, not prefixal word-formation.
The semantic development of the stem root or the ancient root is closely related to word formation. When it comes to word-formation enantiosemy, they mean the multi-task and even the polarity of the values of root morphemes and affix formants.
The questions of semantic and word-formation enantiosemy on the material of the Kabardino-Circassian language have not yet been systematically analyzed, since they represent a certain complexity and ambiguity of the solutions. The analysis of the linguistic material allows us to make some generalizations and conclusions, namely, that the nature of the primary basis of the word includes the possibility of an opposite development of meaning, and on the basis of opposite meanings, different vectors of semantic evolution are born. Some features of objects, different actions and their results can be polarized in meanings.
All this variety of semantic evolution, its multi-tasking is the result of the cognitive activity of a person who, in the process of cognition of reality, names its segments, giving them different characteristics and evaluation.

The conclusion

Our conclusions are based on general theoretical and particular laws of Circassian linguistics, namely the systematic character of the semantic development of the Adyghe lexemes, which go back to a single root basis, and the regularities of the Adyghe word formation and word-compounding. Several stems gave rise to the formation of numerous lexeme derivatives with various meanings, the semantic reconstruction of which leads them to the root consonant monosyllabic types like "consonant + vowel".
Our study was confined to only one monosyllabic root group -by/be. As we have already noted, such consonant root groups, consisting of a consonant and a vowel, are widely represented in the Adyghe

linguistic space. The suggested assumption that these root groups are involved in the processes of compositional, rather than derivational derivation, namely, that they are not formal elements in word-formation, require further verification on a broader illustrative material, which shows the prospect of further scientific research, seen in the analysis of other root morphemes of the type “consonant + vowel”.
The data of the conducted study may be of interest and useful for further research in the field of semasiology and word formation in the Caucasian languages, and especially in the studies of the Adyghe language, as well as in the theory and practice of lexicology, morphology, etymology and grammar of the Adyghe languages.

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Economic localization in the system of economic security of the country

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Abstract
The paper deals with modern theories of globalization. Based on the studies representing the transformists, this work reveals the interrelation of the globalization and localization processes. The authors give definition to the economic component of localization, highlighting its criteria and factors. The interdisciplinary nature of globalization and localization is also shown. The conclusion is that the contradictory development of the modern economy is manifested, on the one hand, in the involvement in globalization, and on the other, in the desire to preserve national identity through economic localization. There are three stable trends that confirm this conclusion. They are the desire of to diversify import flows, preventing the prevalence of products of one country; reducing the influence of developed countries on individual regions, if their impact on the economic life of the territory ceases to be decisive; and increasing the role of regional leaders, influencing the economic situation in the region. Thus, the task of coordinating the economic security policy and development of trade and economic cooperation with a number of countries on mutually beneficial terms is becoming relevant in Russia.
Keywords:post-classical paradigm, globalization, localization,glocalization, interdisciplinary approach, economic security, macro- and mega-levels, integration associations.

Introduction

An important regularity of economic relations developing in modern world is globalization. There are deep contradictions in this process, since the ever-closer involvement of individual countries and territories in the single world economy not only contributes to their socio-economic development, but also has very negative consequences, including threats to their economic security. To minimize these threats, each state, based on its own characteristics and capabilities, determines its ways to preserve and strengthen their economic security, mobilizes the entire range of available resources to ensure economic growth and improve the welfare and living conditions of its citizens.

Meanwhile, no approach to understanding the nature of economic globalization and localization, their nature and impact on the economic security has not yet been found. It greatly hinders the formation of an adequate economic policy. In modern settings, the steps taken in practice are not always consistent and indisputable and not always bring the desired results, as well as the strategies adopted at the state level do not always find a real implementation.

Materials and methods: The post-classical paradigm is a new scientific thinking, in which the boundaries between the sciences disappear. It implies an interpenetration of theories, approaches, terms, and concepts, where a special role is played by the coexistence of social and natural systems. This interpenetration of natural science and humanities provides a more comprehensive understanding of the modern interconnected world. Globalization is one of these modern integrated interdisciplinary concepts.

Currently, the phenomenon of globalization is the focus of research of various fields of science. The increasing number of Research of the globalization development processes in economic management, international relations, financial market, culture, ecology, etc., was observed since the mid-1990s. A range of authors like I. Wallerstein, R. Robertson, M. Featherstone, M. Waters, A. Appadurai, A. Utkin, A. Chumakov, E. Kochetkov, A. Zinov'ev, and others are the well-known leading theorists in the field of globalization.

Modern globalization theories have emerged on the basis of many scientific studies, which are divided into five quite different areas, developing from the middle of the 20th century[1] (Table 1):

Table 1. Directions as a bases for the globalization theories

Direction of research	Major representatives	Basic ideas

Research of management	J. Rosenau, R. Keohan, J. Nayt, et al.	Phenomenon of multinational corporations. Optimization of production by placing it in different countries
Research of social and cultural theories	N. Adorno, M. McLuhan, E. Giddens, D. Harvey, etc.	Theories of space-time compression. The impact of mass communication on the transformation of society and social relations
Research of the biosphere	A. Pechchei, J. Forrester, D. Medouz, early works of K. Jaspers, E. Leroy, and others.	Global modeling. Exhaustibility of resources, the idea that humanity exists together in an insurmountable proximity to each other
Research of international relations	A. Frank, S. Amin, I. Vallerstayn, J. Arrigi, etc.	World-system theory. Dividing countries into developed and developing, introducing modernization (Westernization) institutions in the third world countries
Economic research	E. Toffler, F. Fukuyama, A. Touraine, D. Bell, J. Baudrillard, et al.	Concepts of post-industrial society, postmodern, third wave. Influence of new technologies on industry, structure of social relations and values

Modern theories of globalization, which are now particularly relevant, were formed on the basis of the selected areas. There is no doubt that globalization is a multidimensional process. Modern researchers deal with many manifestations of globalization from the globalization of the financial market to the relationship between globalization and the digital economy. The authors believe that insufficient attention is drawn to the nature of relations between globalization and localization, which in modern conditions has acquired particular relevance.

Results: To order the approaches in this analysis, the authors used the classification proposed by British political scientist D. Held [2]. It says there are three directions in which the relationship between globalization and localization can be traced: hyperglobalists, skeptics and transformists.

Hyperglobalists believe that the traditional nation state is unnatural, and globalization is a new era in the history of mankind. It should be noted that both hyperglobalists and skeptics take the state economy as the basis for the analysis. On the basis of works of J. Rozenau, P. Diken, V. Grayder, A. Jons, K. Omae and others, it can be concluded that the single global market exists. Hyperglobalists speak of an era without national borders, where nation states appear as transfer stations in a chain of global logistics flows of capital and goods. At the same time, there are two different groups of hyperglobalists: the first one follows the logic of neoliberalism (theory of T. Couen), the second follows the traditions of Marxism (theory of S. Latosh). That is, there are ideological contradictions among hyperglobalists, but they also have a common basis – economic interests are at the heart of globalization, where economic globalization creates a new system of winners. It includes a transnational class of managers, specialists in finance and information technology.

Hyperglobalists note changes in national culture: the consumerism ideology is spreading and forming a new identity, universal values and lifestyle. Proponents of this theory introduce such concepts as global civilization and global community.

Summarizing the views of hyperglobalists, one can distinguish a common feature: all authors consider the modern world as a single global market, global civilization and global civil society, where there are no local borders, and the national culture is gradually disappearing [3].

Another position, opposite to hyperglobalists, is the position of skeptics. The theory of the world-system analysis by I. Wallerstein, which is still popular in analysing the system of modern international relations. According to this theory, the basis of the modern world system is the world capitalist economy that has the center, periphery and semi-periphery.

The grouping is not geographical, but takes into account the nature of relations. For example, within the center of the capitalist world-economy there are stablished relations of cooperation and competition, and between the center and the periphery - exploitation and dependence. Mixed relations are typical to semi-periphery.

The theory of I. Wallerstein was developed by L. Sclair, who replaced the concept of world-system with global system, and the term "internationalization" - with globalization. In his works, L. Sclair structured the modern global system, highlighting three levels: economic, political, and ideological-cultural. Each had its key institutions such as transnational corporations at the economic level, transnational classes of capitalists at the political level, and consumerism at the level of ideology and culture.

However, this viewpoint is not justified even at the level of description: the key institutions of transnational corporations at the economic level and the transnational class of capitalists at the political level are often the same institution, and ideology has penetrated the economic and political levels long ago.

S. Huntington in his work "Clash of civilizations" assumed that the modern world is divided into distinct civilizational blocks, cultural and ethnic enclaves, where any integration is minimized, nationalism and fundamentalism at the cultural and ideological levels are strengthened [4].

According to researchers such as P. Hirst, G. Thompson, L. Weiss, et al., it can be said that global government and a global economy are delusional and imposed by the USA, while the consumerism in the modern world stimulates the development of fundamentalism and nationalism as defensive responses. In the analysis of globalization, it is skeptics that tend to equate globalization with modernization. Globalization is seen as the spread of Western institutions of modernization, which are based on capitalism and democracy. Summarizing the opinions of skeptics, it can be noted that they deny the existence of globalization and consider inter-state relations through the prism of national and international division instead of local and global one. Sceptics emphasize the importance of the national borders of Ssates, where the trends of nationalism and regionalism are increasing.

The third position is represented by the so-called transformists. They focus on some significant trends in globalization, which they recognize as a phenomena of the modern world. The position of the transformers is specific because they put culture in the basis of their concept. It is especially manifested in the works of M. Waters, P. Berger, R. Robertson, D. Tomlinson, etc. The transformists typical of the following features: there is no single logic of development, as globalization is a contradictory process; globalization is a long-term process; the historical aspect is the key one in the development of globalization, since it is the history of culture that prevents the general globalization. Another specific feature is the statement of the growing role of the nation state.

Despite the complex nature of the current globalization processes, transformists note that these processes cover the entire world. However, there is a rigid division within the global system, where the traditional division into the center and the periphery is irrelevant. The proponents of this theory note the changes in traditions that occur under the influence of globalization, the formation of a new hierarchy unrelated to geographical boundaries. The position of hyperglobalists is based on two fundamental theories – the deterritorization and glocalization.

While describing these conceptual theoretical models, it should be noted that the concept of deterritorization is expressed in the idea of fundamental transformation of relations between the place of residence, cultural and social practices, experience, and identity. Deterritorization is a key aspect of transformation of culture, state and all aspects of the local in the setting of globalization. It is especially clearly traced in the works of McLuhan, E. Giddens, D. Harvey, and their followers.

The term "glocalization" appeared in marketing and meant the adaptation of a global product to any local market. In social sciences, this concept has become widespread thanks to the researcher R. Robertson and other theorists of globalization like H. Knodker, D. Tomlinson, A. Appadurai, W. Hannerz, and others. The concept of "glocalization" demonstrates the two sides, the synthesis of globalization and localization. It is based on the theory of hybridization, which describes the features of the phenomenon of the merging cultures of the colonial and post-colonial worlds.

Unlike the hyperglobalists, transformists recognize the growing role of the state as a protective mechanism aimed at preserving its own sovereignty, as a response to global challenges. This trend can be traced in the studies of P. Berger, U. Shwerkens, K. Mitchell, where the state's response is to change the nature of the relationship between state power, territorial integrity and sovereignty. All this fully corresponds to the meaning of the theories of glocalization and deterritorization. Summarizing the position of the transformists, the authors emphasize that globalization still remains a key phenomenon that combines the trends of globalization and localization, although it is a controversial and ambiguous process that causes transformation of all spheres of society.

For almost three decades, the concept of "globalization" has been used by scientists to refer to the growing economic, socio-cultural and political interdependence of the world [5]. Apart from this, the process of localization in the scientific literature has no generally accepted definition, as well as the proper attention of researchers. For example, M. Maters believes that localization is the consolidation of ethnic and civilizational entities pursuing a policy of "cultural isolation", the desire for self-preservation of various cultural areas with their particular value systems [6]. L. Serdyukova believes it is the process of using the economic potential of a geographically defined region (within a country) or even a large city in order to successfully implement innovations and compete together through interconnected networks and alliances [7]. The American economist P. Rutland defines the localization as the process of adapting new technologies and ideas to local conditions [8]. According to Giddens, these are restrictions on the time interval, as well as physical and symbolic boundaries [9].

The economic component of localization is related to the processes of economic space formation. The concept of economic space originates from the theories of production placement, where they are considered as a "spatial" economic category. The works of I. H. von Thünen, A. Weber, V. Christaller, A. Lesh traces the dependence of the localization of economic activity from the minimization of transport costs.

The problems of localization of enterprises in different territories are studied in the work of E. Hoover, W. Izard, S. Tzamansky, reflecting the specific properties and changes localized around the major financial centers of the economic space. Localization of the economic space around large centers ("growth poles"), according to the concept F. Perru, is a result of the accumulation of innovations around the dominant industry [10].

Discussion: The authors believes that the concept of transformists is the most promising, as the global financial crisis has clearly demonstrated the interdependence of the global economies: according to the IMF, world GDP showed a negative trend for the first time since the World War II. On the other hand, the isolationism trends in the policies of the states aimed at protecting their own interests points at existing barriers and the indisputable role of public regulation. A striking example is the decision of the UK to withdraw from the EU, or the so-called Brexit, the US withdrawal from the TPP, attempts of economic isolation of Russia by the "overseas partners", or the last referendum for withdrawal from their countries in Catalonia and Iraqi Kurdistan.

The analysis of the scientific literature allowed formulating some approaches to understanding the essence of economic space localization, formed in economic science, with the continuing lack of attention of localization researchers (Table 2).

Table 2. Theoretical approaches to studying the economic space localization

Approach	**Brief characteristic**	**Factors of localization**
Marketing V. V. Tomilov, L. N. Semerkova	The individual segments of the market represent the localized economic space.	industry market segmentation

Factor A. Weber, V. Cristaller; V. Launhardt; A. Lesh; I. G. von Thunen; N. L. Vargin; L. I. Nivorozhkina N. A. Feoktistova	Determined due to geographical or economic zoning.	Economic and geographical factors: - geographical location; - economic specialization; - traditions of production and consumption; - interregional relations; - degree of economic diversification; - degree of development of agglomeration, etc.
Territorial E. Hoover, W. Izard; E. G. Animitsa; V. S. Bochko, N. Yu. Vlasov; A. S. Ginsburga, O. A. Kozlova; A. I. Kuz'min, A. G. Orudzhiev; N. M. Ratner, A. I. Tatarkin	The boundaries are allocated regarding the territorial division.	Level: - mega level (interstate enterprises) - macro level (national); - meso level (regional); - micro level (municipal).
Interdisciplinary F. Peru; J. Budivil'; M. Porter; P. A. Minakir, A. N. Dem'yanenko , N. M.Surnina.	Comprehensive assessment of the impact of factors on the formation and development of a localized economic space.	Analysis parameters: - economic structure; - technological system development; - social structure; - development of information system; - regulatory institutions.

The factor approach shows the reasons of formation and directions of further development of localized space, where locality is recognized as local reproduction.

Within the framework of the territorial approach, localization is understood as the limitation of an object in space, or territory within administrative boundaries. Such object is viewed as a system capable of self-organization and self-management**.**

The interdisciplinary approach covers not only geographical but also economic factors of localization: the localized economic space is considered as a special reproducing system in a limited territory. This system acts as a network of interdependent and complementary productive units that perform the division of labor.

Localized economic space has the following properties: it has its own, defined boundaries and functioning features, manifested in the organized development logic and in the ability to change the nature of relations in case of the transformation of the external environment.

It should be noted that most scientists are interested in one factor of the economic space localization at one of the levels. In authors opinion, localization is a complex and ambiguous phenomenon, which is manifested as an impact of a vast number of factors. Therefore, the interdisciplinary approach seems to be the most comprehensive compared with others.

The interdisciplinary approach formulated the features of the state as a localized economic space (at the macro level). They are the presence of formal (territorial) borders, non-formal borders (zones of attraction, influence), and the integration of various socio-economic relations. As a result of generalization, the authors propose the following classification of criteria and factors of economic localization of the state (Table 3).

Table 3. Criteria and factors of economic localization of the state [11].

Type of localization	Factors of localization	Localization criterion
Historical and cultural	Traditions and customs, mentality, historical community	Late or slow transition to a market economy: - list of the least developed countries according to the UN (51 States)
Geographical	Geographical position of the state	An "island effect" is created that does not allow to benefit from interacting with suppliers and markets of neighboring countries: - land-locked territories (44 states); - sea-locked territories (35 states).
Political	All sorts of pressure from the international community to force the state to change its political course	Sanctions of major international associations or organizations: - UN security Council sanctions list (13 States); - others (Russia, Syria, Israel, etc.).
Socio-economic	Openness of the economy	Level of participation in global economic processes: - high level (e.g. Ireland); - middle level (e.g. China); - low level (e.g. DPRK)

The authors believe that economic localization of the state can be defined as a special state of the economy with a purposeful focus on the development of its internal potential, with elements of limiting external economic relations emerging from the influence of internal and/or external factors. The nature, as well as the degree of influence of these factors on the country's economy, is very diverse, as they have different origin: historical and cultural, geographical, political, and socio-economic.

The local economy has the following features:

- autonomy, viewed as an internal potential for sustainable functioning of a subject of economy being limited by general or certain type of economic relations;
- adaptability, defined as the ability of the economy to adapt to changing operating conditions, taking into account past experience and new realities;
- self-organization, expressed in the ability to concentrate and efficiently use the resources to ensure not only survival, but also development;
- innovation, which is expressed in the adoption of non-conventional mechanisms aimed at efficient economic development according to the scientific and technological progress.

The primary role in the functioning of the localized economy is played by the existing norms in the public sphere, the development of the system of socio-economic reproduction and economy, the degree of resource availability, and the level of integration of external relations. Development at the macro level is fundamentally impossible without taking these factors into account.

Today, globalization is accompanied by a similar, but somewhat contradictory process - economic localization. This process involves countries or groups of countries with the same stages of economic development. They, creating alliances or associations (macro - and mega-levels) on mutually beneficial terms through the liberalization of trade, movement of capital and people according to the interests of their economic security policies.

It occurs in the background of the ongoing intensifying integration processes, when most of the world trade turnover accounts for the share of existing integration associations. They include the EU-28%, NAFTA, ASEAN, MERCUSOR - 54% of world commercial exports and 57% of commercial imports' there is a redistribution of positions between them too. R. I. Khasbulatov noted that since the end of the last century there had been a slight decrease in the share of the largest players of the EU and NAFTA, and a slight increase in ASEAN, MERCOSUR in world exports [12].

It seems obvious that the contradictory development of the modern economy is manifested, on the one hand, by the involvement of globalization, and on the other, by the desire to preserve national identification in the form of economic localization. This statement is justified by three stable trends in the world economic situation, which have been particularly evident since 2000 [13].

The first one is the desire of countries to diversify import flows so as to prevent the prevalence of products manufactured by one country. Analyzing the import flows of countries, it can be noted that in the import of Brazil from 2000 to 2016 has reduced the share of the USA from 23% to 17%; in Saudi Arabia, the share of the USA reduced from 18% to 12%; in Japan, it reduced from 9.5% to 4.6%; in structure of goods imported to China, the share of Japan fell sharply from 17% to 10%. As a result, the volume of flows of any state did not exceed 10% of the China imports. This trend is typical for the economies of large countries such as Turkey (13% of all imports), Israel (13% of all imports), Greece (11% of all imports), and Libya (12% of all imports). Independent foreign economic policy has a positive impact on the economic security of the country considering the availability of alternatives with possible external threats.

The second trend is reduced impact of developed countries on individual regions, in case when their impact on the economic life of the territory is no longer decisive. Free space is developed by the most significant partners. For example, from 2000 to 2016 in Western Europe, the share of U.S. imports in the UK decreased from 13% to 7.5%, in Germany - from 8.4% to 6.2%, in France - from 8.45% to 6.9%, in Italy - from 5.3% to 3.8%, etc. The UK imports share in Norway also decreased from 8.3% to 5.7%, in Finland - from 6.5% to 3%, in Denmark - from 9% to 4.1%, etc. At the same time, the influence of China and to a lesser extent Germany is growing.

In South America, the economic influence of the United States has also reduced: in Argentina it decreased from 19% to 13%, in Brazil - from 23% to 17%, in Peru - from 23% to 19%, and in Colombia - from 33% to 27%, etc. During this period, Brazil would strengthen its position as a regional leader. On the territory of Western Asia, in the UAE, Oman, Saudi Arabia, Qatar, Kuwait, etc., there is a strong decline in the influence of Japan. In various African countries (South Africa, Chad, Sudan, Libya, Congo, Egypt, Algeria, Angola, etc.) the presence of France, Germany, Great Britain, Italy, and the United States has reduced. Even in North America, the share of US imports in Canada and Mexico fell from 68% and 74% to 53% and 49% respectively.

The increasing multipolarity of the world, manifested in the reduction of the zones of influence of world leaders on the economies of different countries, can justify the strengthening of the confrontation between these leaders and developing countries looking for new markets, such as the States of the Asia-Pacific region and some other countries.

The third trend is increasing the role of the regional leader influencing the economic situation in the region. In South America, the share of imports of countries (Argentina, Chile, Peru, Colombia, Venezuela, etc.) has strengthened the position of Brazil (it is from 5% to 24% on the African continent) and increases claims to regional leadership in South Africa. In the setting of the increased competition in world markets and the significant strengthening of China's position, when assessing the prospects of changing the positions of the leading economic powers, one should take into account that despite the decline in the US share in world commercial exports, the US scientific, technological and economic potential allows holding the hold key positions in the most advanced sectors. The basis for foreign economic expansion now is a set of high-tech industries (commercial high-tech services, public high-tech services, high-tech production). Their share in the US economy (about 40% of GDP) is significantly higher than the average for the EU countries and Japan (32% and 30%, respectively). In China, despite significant growth, this figure is twice less than that of the US, especially in services. The same is for India, Brazil and Russia.

Conclusion: Within the framework of integration associations, Russia seeks new formats of trade and economic cooperation. The foreign economic policy of the "Western partners" indirectly stimulates cooperation with countries that face a new choice. The intensification of cooperation between Russia and other member States within the EAEU, SCO, BRICS, and the project OBOR is accompanied by further expansion of trade and economic relations between Russia, ASEAN and other associations, as well as bilateral relations, including China.

The US abandonment of the TPP and the transition to a different format of relations in the region, of course, gives new advantages to integration projects with the leading role of China. To some extent, it contributes to deeper cooperation between Russia and China, and stronger coordination of their actions in order to promote global stability. However, the reduction of trade barriers and other agreements within new trade and economic agreements can significantly complicate the access of goods and services from third countries, including Russia, and contribute to their displacement from the markets of new associations.

In this regard, the task of coordinating the policy of economic security and the development of trade and economic cooperation with other countries on a bilateral and multilateral basis is becoming increasingly relevant in Russia. This task is complicated by the fact that Russia has been integrated into the world economy mainly due to the export of raw materials, and the financial stability of the Russian economy is largely influenced by volatility due to fluctuations in prices and demand for natural resources. Thus, reducing dependence on external risks requires more efficient use of other components of the economic potential of the country.

Long - term strengthening of positions in the world markets requires increasing national competitiveness on the basis of innovation and implementation of a set of measures of scientific, technical, industrial, trade policy in their relationship, creating conditions for commercialization of research and development. It goes beyond high technologies, it is about innovations in low-tech industries and services that make up a large part of Russian economy. Elimination of a significant gap between the existing developments and the degree of their use - patenting, production development, export of high-tech products and technologies.

The current stage of globalization is typical of increased international competition, global instability resulting from a number of factors of economic, financial, social, information, cultural, and religious origin, and increasing contradictions, as well as the asymmetry of global economic development. The authors agree with S. A. Shanin that the situation in the modern world economy is quite complex due to the fact that the world economy is far from global: the developing countries form a closed economy, and international economic exchange is not peculiar to them. Globalization has covered only developed countries, but among them there are problems of its processes that are related to the division of labor and production [14-18]. The ongoing transformations at the national, regional and global levels and the strengthening of the political factor in trade and economic relations are changing the perception of power centers, guidelines for the development of interaction and, along with the associated risks, open up new opportunities for adjusting the conditions and coordinating the positions of countries and their associations.

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The Issue of Gto (Ready for Labor and Defense) Program Implementation Into the System of Higher Education of Nizhny Novgorod Region

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Abstract

The research is acute because Russian physical culture and sports program "Ready to labor and defense" (GTO) is required by time and many social factors. National health has been formed by systematic and regular significant state projects and events. Revival of the modern GTO program in educational institutions may become important for forming of physical activity and healthy lifestyle of students. The purpose of the research is to point out the problems of the modern GTO program implementation into educational institutions. The main method of investigation is monitoring of the GTO system in Nizhny Novgorod region in cooperation with testing centers. The problems of the modern GTO program realization in educational institutions of Nizhny Novgorod region are stated in the paper. They will help to find ways of involving students in systematic physical training and coping with GTO standards. This information may be used as recommendations for heads and responsible for sport and extracurricular work in professional educational institutions of different levels.

Keywords: Russian program, physical culture and sports, ready to labor and defense (GTO), problems of students, examinations and tests.

Introduction

The topicality of this research is determined by the fact that nowadays there are a lot of problems in physical culture and sport in Russia which are connected with low activity of students in systematic physical training. The main problem of students` physical culture is that they do not have a systematic approach to physical trainings, despite having obligatory PT lessons at all the levels of education (Ateş, 2018). Health promotion, balanced and versatile personal development of students is expected as a result of appropriate modern GTO program implementing in high school. This way renovation of physical culture and popular sports system of children, school-children and students in educational institutions is needed.

Considering the problem of GTO program revival it is necessary to mention that it was originated in Russia in the XX century. The reason for its creating was need of the society in a healthy generation ready for labor and defense. Today physical culture and sport still plays an important role in socializing and upbringing of a citizen. GTO program, which was renewed in 2014, was the basis of the physical education system in Soviet time, which was being tested during many years (Kozlova et al., 2016).

Many researchers wrote about the topicality of the modern GTO program implementation into the system of higher education in Russia (Strelchenko et al., 2015; Filimonova, Stolov & Filimonova, 2015a; Blokhin & Petrov, 2015; Gridnev & Shpagin, 2015; Smirnov, 2016; Zhoraeva & Korolev, 2016; Semenova & Batalova, 2017; Chobanu, 2017). They emphasize the necessity of the students` physical culture system renovation which must aim at passing the modern GTO examination, and the importance of students` motivation to systematic physical trainings. The authors also point out that PT lessons should prepare and direct students to passing the modern GTO examination.

In various scientific works the problems and issues on the problem of students' physical culture formation are discussed (Anfilatova & Solgalov, 2015; Filimonova, Stolov & Filimonova, 2015b; Starkova, 2016; Ustinov, 2017; Shunyaev, Kambaratov & Shunyaeva, 2017; Voronkov et al., 2017; Bobkov & Kuzmin, 2017; Semenova & Batalova, 2017; Abayomi, Oyeniyi & Aina, 2017; Glazistov, 2017; Kostenok, Moseeva. & Konyakhina, 2018; Lima, Mendes & Paiva, 2018; Andrianova & Veselkin, 2018, Çimen Polat, 2018; Kostenok, Moseeva & Konyakhina, 2018; Huang & Reynoso, 2018; Ma, 2019; Yan, 2019). It is said that the implemented system encounters significant difficulties connected with its realization at universities. This may become a reason of ineffective students involving in GTO system.

The purpose of this paper is to point out problems of Russian physical culture and sports program "Ready to labor and defense" (GTO) in Nizhny Novgorod region.

Methodological Framework

Prerequisites for conducting an analysis of the implementation of the GTO system in higher education institutions of the Nizhny Novgorod region was the circumstance when the faculty of physical culture and sports of the Federal State Budgetary Educational Institution of Higher Education "Nizhny Novgorod State Pedagogical University named after KozmaMinin" in the fall of 2016 managed to win the right to implement an additional professional program «Training of sports judges of the main judiciary board and judicial brigades of physical and sporting events of the All-Russian sports complex "Ready for Labor and Defense"» (GTO) (Zhemchug, Voronin & Ivanova, 2017). Exactly the same refresher courses were implemented this year, where more than 250 judges, administrators and administrators of the TRP centers in the Nizhny Novgorod region received training.

During the training of judicial brigades, within the framework of the round table, the main problems of the participation of students in the delivery of VFSK GTO standards were identified. The project managers in the Nizhny Novgorod region note the significant interest in the participation of schoolchildren, and the lack of students' interest. Physical fitness tests were held on all age levels of general education schools during 1996-1997. These indicators are available for viewing on the official website. At the same time, there is much less interest from students in launching a project on testing students at secondary and higher educational institutions everywhere in 2018, as it was supposed. Studies show that the GTO project is interesting for students who are systematically engaged in physical culture and sports, and even so, it is difficult for them to carry out a complex on marks of distinction (Pavlyuchenko, 2015; Ajallooeian et al, 2015). Moreover, the return to the practice of physical training of students of the complex of the standards of the GTO in the new format, besides the task of organizing a full sports students' movement with the maximum number of participants at the new qualitative level, includes the formation and promotion of a healthy lifestyle with social and professional adaptation of young people (Kutepov, 2015). The questions of the formation a healthy lifestyle through the inclusion sports activities in preparing students are open not only in our country, but also in a number of other countries (Bystritskaya et al., 2018; R & M, 2017).

Monitoring of the higher education system allows us to include various forms of inclusive education that can motivate students to various activities, including sports (Kudryavtsev & Kashtanova, 2016).

The loss of interest of students to fulfill the standards of the next level is still connected with the fact that some undergraduate students already have a sign of distinction, which they performed before entering a higher educational institution, are not interested in the implementation of standards during their studying. They are not stimulated for performance, and sports students that have a mark of distinction do not see prospects for obtaining an other mark. One form of stimulating students to perform the standards of the GTO is the compilation of a rating or portfolio for them. This can be done through the student rating system.

Such learning technologies with the inclusion of the active students' position in the system have already been successfully applied in practice. These technologies are used in completely different multi-ethnic structures of modern higher education (Ivanova, Bystritskaya & Burkhanova, 2017).

In one of the latest studies it is noted that in order for students to perceive the system of the GTO complex not as regular tasks, under which they will receive credit, we need to show them that this system will allow them to reach a new level of work on themselves and recovery. Thus, one of the tasks of introducing the GTO complex among students is the formation of students' interest in the complex as a whole, and not in the implementation of standards separately (Tuyurov & Blokhin, 2016; Korolev & Salmova, 2017; Medvedev, 2017; Podolyaka & Podolyaka, 2018; Abayeva, 2018; Chahine, 2018).

A notional and significant factor for students in organizing physical education classes during studying which are aimed at realization the standards of the GTO complex is the development of programs, an increase in sports infrastructure and a variety of equipment that allows not only to comply with the standards, but also to produce full training for them (Andrianova & Veselkin, 2018).

An important role in the organization of introducing VFSK GTO in universities is played by the activity of teachers of physical education, university management and the RSSS, which is aimed at competently organizing the studying and training processes in compliance with the leading pedagogical principles, physiological and medical fundamentals, which is the main condition for effective physical improvement of students and progressive development mass (including students) sports in Russia (Shvetsov, 2015).

One of the important components for the effective preparation of students for passing the standards of the GTO complex and maintaining a healthy lifestyle is the need of properly build exercises during the training sessions, pick up a training load, and also organize additional sections on sports, outdoor games and competitions for students to participate in sports life, create open and accessible sports fields, swimming pools and gyms (Chuvilin & Gushina, 2018).

Formation of the competence personality of a student through a healthy lifestyle and joining sports work is one of the important tasks of the modern society of higher educational institutions (Kamerilova et al., 2018).

In addition, the readiness of students of higher educational institutions to implement tests of the GTO should also be considered. Among students boys have poorly developed aerobic endurance at the same time girls have poor high-speed motor qualities and strength endurance. This fact indicates that students pay little attention to independent exercises, and even less engaged in running training. At the same time, it is known that the minimum amount of motor activity of students is up to 8-10 hours per week (Blinkov, 2017).

A separate problem is the preparation for specialized standards, such as tourist activities, despite the fact that students are really interested in such types (Peshkov, Salakhov & Pasishnikov, 2017).

In addition to the adaptive capabilities of the modern complex to systematic physical culture and sports, students of higher educational institutions do not have sufficient physical fitness to implement the standards. According to the results of admission tests in 2017 in Nizhny Novgorod State Pedagogical University named after Kozma Minin, only nine students and two teachers passed the tests for the gold insignia.

The main problems of involving students of higher educational institutions in the modern system of the GTO is that only students who have been involved in any kind of sports agree to take tests for insignia. Students who are engaged in physical culture in the school program do not want to take part in the tests for several reasons. One of these reasons is the low physical fitness of students. The second reason for the refusal to pass the standards of the modern complex, which students face is the receipt of medical admission to the tests. Doctors-therapists have little knowledge of the forms of certificate which is required for admission to the GTO regulations. The lack of a clear agreement between the Ministry of Sports and the Ministry of Health of the Nizhny Novgorod region affects the possibility of obtaining a medical opinion on the admission of the standards of the complex. A pediatrician for children, or a general practitioner for an adult population, in addition to defining a medical group, must conduct functional tests to discharge a certificate to a person who voluntarily wants to implement the standards of the complex. The form on which it is necessary to indicate that a person may be allowed to perform the testing of the complex of the certificate for children and adults remains unclear. This problem may be solved by contacting private and paid clinics where a pediatrician or therapist performs the functional studies which are necessary to enable a person to meet the standards of the All-Russian GTO Sports Complex.

Today, the social project of the Association of Student Sports Clubs in cooperation with the Directorate of Sports and Social Projects (Federal Operator of the GTO Complex), which implemented the

All-Russian Youth Sports Project “From the STO to the distinction mark of the TRP” in 2018, is a great help for engaging students of the Nizhny Novgorod region. This project is supported by the Ministry of Education and Science of the Russian Federation and the Ministry of Sports of the Russian Federation.

This project implements the standards of the complex, which entered into force on January 1, 2018, enshrined in the relevant order of the Ministry of Sports of the Russian Federation dated 06.19.2017.

The purpose of this project is the promotion and involvement of students in the preparation and implementation of test standards of GTO program. This confirms that that the level of student participation in the implementation of GTO program standards throughout the country is low. The development and implementation of this project to attract students to the implementation of standards may be another impetus to motivate students to the modern GTO examination.

The implementation of this project will make it possible to identify not only the state of affairs in involving students in the All-Russian system of the GTO program, but also to check the level of preparation for the GTO program. Each student within the walls of his or her home institution of higher education may evaluate its strengths by fulfilling the standards of the GTO, while being guided by the sports infrastructure of the university.

Results and Discussions

During the theoretical review and identification of a number of practical problems on the implementation of the All-Russian physical training and sports program "Ready for Labor and Defense" in higher education institutions of the Nizhny Novgorod region.

Considering the rating of the All-Russian sports program for the third quarter of 2018, the Nizhny Novgorod region ranks 68th among eighty-five regions of the Russian Federation. With a population of more than three million, the total number of people registered in the GTO system is no more than one hundred twenty thousand, which is only four percent of the total population. At the same time, the share of the population who fulfilled the standards for marks of distinction is about 0.6 percent. At the same time, a large number of published materials on the introduction of the modern GTO program in regional mass media was noted in the Nizhny Novgorod region.

This state of affairs indicates significant difficulties in the implementation of the GTO system, not only among students, but also in the region as a whole. This indicates the relevance of finding new ways to inform, clarify and motivate students to the modern GTO program. The development and introduction of the standards of the GTO program into the system of physical education of students in the youth will make it possible to conduct informational promotion and orientation of students to the system of training and performing tests.

The system of physical education of students in higher education institutions, together with social projects, sports clubs, the Ministry of Education and the Ministry of Sports will create an optimal environment for involving students in mass sports, systematic classes and focus on the GTO distinction.

The system of stimulating student youth by the leadership of higher educational institutions, drawing up a rating and portfolio of a student, taking into account the fulfillment of the distinction by a student, will significantly increase the interest of students in the preparation and implementation of standards of the modern complex.

One of the important components of the voluntary system of preparing students for the testing of the GTO program is the question of independent study. The priority in this direction should be sectional classes in educational institutions, physical culture classes and elective courses in physical culture, which may include elements of teaching a system of self-preparation for the age level of relevant young people.

The conducted study of the problem of introducing the modern GTO program in higher education institutions of Nizhny Novgorod region is consistent with the scientific results of other authors who addressed the problems of introducing the modern GTO program among students. Analysis and synthesis of the problems presented by authors from other regions of Russia made it possible to single out the most current problems among the common: 1) Low motivation and lack of incentives to comply with the standards of GTO program at the student's age; 2) Poor agitation of students to the purposeful involvement in systematic classes for the implementation of GTO program for merit badge; 3) Partial inclusion of GTO program in the curriculum in physical education during classes with students; 4) Lack of material and technical base for full preparation for the implementation of the modern GTO program.Particular problems of Nizhny Novgorod region, which can be separately identified, taking into account the general problems that are mentioned above: 1) Difficulties in obtaining medical admission for the implementation of the modern GTO program; 2) Insufficient number of projects and sports events for students of higher educational institutions focused on attracting students for the implementation of the modern GTO program; 3) Lack of coherence with student sports clubs and institutions of higher education for the implementation of GTO events; 4) Insufficient campaign work with students to attract them to systematic classes aimed at further implementation of standards of the modern GTO program.

Conclusion

The authors identified the main problems of the implementation of All-Russian physical training and sports GTO program among students of higher educational institutions of Nizhny Novgorod region. These problems largely intersect with problems in other Regions of the Russian Federation. However, there are particular problems peculiar to Nizhny Novgorod region. The reviewed sources of scientific literature on the problem of introducing the modern GTO program among university students do not point to the difficulty of obtaining a medical certificate for the implementation of the modern GTO program. During studying in 2016 and 2018, more than 500 judges, administrators and heads of testing centers in Nizhny Novgorod region, in the panel discussion, this was one of the main problems that could not be resolved. The perspective of solving the problem of coordinating medical admission is possible with the agreement of the Ministry of Sports and the Ministry of Health of Nizhny Novgorod Region. Thus, to improve the implementation of the modern GTO program among students of higher educational institutions of Nizhny Novgorod region, it is necessary to solve the most important problems of medical admission, increasing sports competitions aimed at familiarizing with GTO program and coordinating sports structural organizations on agitation and introducing the modern complex among students.

Recommendations

The identification of common and particular problems of the implementation of All-Russian GTO sports program among students of higher educational institutions of Nizhny Novgorod region reflects the urgency of improving the ways of introducing the system of mass sports and physical education among students. The inclusion of modern program elements in the content of courses on physical education, the modification of program material with the inclusion of the modern GTO program in the standards of the academic discipline will allow students of higher educational institutions not only to familiarize themselves with the GTO program, but also to test their ability to fulfill the standards for the mark of distinction. Comparison of students' own standards of higher educational institutions and stimulation by the teacher to systematic classes in order to improve physical fitness will help motivate young people to get acquainted with the modern system and perform tests. The results of the research conducted by the authors can be useful for teachers of the discipline of physical education, elective courses and modules on physical education of higher educational institutions. The use of the data of the reviewed article allows for a wider indication of the problems of introducing a modern GTO program among students, and allows teachers and organization leaders to develop and apply a set of measures to stimulate students to systematically engage in physical culture and the implementation of standards for the modern GTO program on insignia.

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Modern Approaches to Organizing the Evaluation of Trainee Teachers' Academic Achievements

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Abstract

The importance of the topic to be investigated is due to the fact that a brand new approach to the academic achievement evaluation is one of the key elements in the modernization of pedagogical education. Since the assessment reveals both the academic content of education and its organization, new approaches to the creation of evaluation instruments shall be developed to evaluate both assimilated knowledge and practical skills. The purpose of the study consists in developing new approaches to the creation of assessment instruments to evaluate university students' academic achievements based on the systemic and activity-based approaches. The leading method of research used is analyzing the instruments of academic achievements evaluation that already exist and developing new approaches to the creation of evaluation instruments in the form of flow charts. The article provides some examples of new evaluation instruments being designed as well as methodological guidelines that include forms of presenting results, objectives being diagnosed, evaluation criteria, and goals realization indicators. The article defines the structure of the methodological part of a student's paper and the conditions and requirements that allow for it to become an instrument of the academic achievement evaluation. The findings can be applied in the organization of trainee teachers' evaluation aimed at obtaining an objective evaluation of the academic results achieved as well as evaluating the competence of the teaching staff that work in the vocational training and additional education institutions.

Keywords: teacher, competence, academic achievements, indicators, objectives being diagnosed, evaluation instruments.

Introduction

The importance of the topic to be investigated is due to the fact that a brand new approach to the evaluation of academic achievements is one of the key elements in the modernization of pedagogical education. The assessment reveals both the academic content of education and the organization of student's preparation (Kasprzhak & Kalashnikov, 2014; Shekhonin, Tarlykov & Kleshcheva, 2014; Sangalova, 2014; Bahremand, 2015; Mukwambo, 2016; Ismail et al, 2017; Marques et al, 2018; Kariuki & Mbugua, 2018; Tastan & Davoudi, 2018; Kodekova et al, 2018; Bentley & Bossé, 2018) that together form an integral unity; as a trainee teacher shall not only assimilate some knowledge but also be able to apply it in the ever-changing educational environment and respond promptly to the new challenges. That is why learning to create new evaluation instruments is important. The evaluation instruments should be designed in such a way that allows a student completing a task to demonstrate both their knowledge and practical skills (Rebrin, 2014; Abramov, Artemyeva & Makhutov, 2013; Kashtanova & Kudryavtsev, 2015; Kagoiya & Kagema, 2018). That is to say, when developing new evaluation instruments, one should take into account the relationship between the key concepts of the modern professional pedagogical education: competences, academic achievements, work actions (Ismagilov, 2013; Ivanova et al., 2017; Koldina, 2015; Pishiy & Makashova, 2015; Santana et al., 2017).

The competences listed in the professional standard for teachers, in accordance with the learning standard Federal State Educational Standard of the Higher Education "Pedagogical education" of 2013, shall be considered norms describing a graduate's preparedness for various types of professional activities. The Federal State Educational Standard sees a competence as an ability to apply knowledge, skills and experience in professional occupation. Competences are determined by the type of professional occupation as well as by the fields of their practical application and are related to the professional objectives that a higher education institution graduate shall be ready for. In other words, the measurement and evaluation of competences formed can only be possible when a student is involved in some real professional activity or some organized academic activities which require the application of assimilated competences that, in their turn, will help to master real work actions that are going to define the level of a teacher's professional preparation (Egorov & Vasilyeva, 2015; Gustyakhina, 2009; Uvarovskaya, 2014).

Methodological Framework

The methodological framework for the elaboration of new approaches to the evaluation of a student's academic achievements − being considered both knowledge and practical skills − is based on an epistemological theory that the process of learning consists of various stages and requires both the acquisition of new information and its comprehension e.g. when applying it in practice (Gustyakhina, 2009). The activity-oriented approach that the Federal State Educational Standard is based on, implies students' inclusion into various activities and allows to describe the results of students' academic activities through their academic achievements (AA) (Perevoshchikova et al., 2016; Bystritskaya et al., 2018; Perevoshchikova & Lekomtseva, 2016).

Following the activity-based approach, the structure of the planned academic achievements shall consist of the knowledge required to perform certain work actions; work actions; skills that demonstrate one's individual level of mastering actions (Karpushkina & Kudryavtsev, 2015). This approach allows to find the relation between competences and work activities and understand what are the academic achievements that shall be measured and evaluated (Perevoshchikova & Lekomtseva, 2016).

The study suggests a number of indicators and control tasks as evaluation instruments for each type of activity mastered in the education process. All the evaluation instruments designed have to do with various types of academic activities i.e. with a product that a student creates, elaborates and submits to the teacher or their fellow-students in the dates and form that were specified beforehand. That is why the methodological framework contains the description of forms in which the results and their specific characteristics shall be presented (Perevoshchikova, 2016).

Results

In accordance with the professional standard and following the logic of the activity-based approach, the structure of the academic achievements shall consist of the knowledge required to perform certain work actions; work actions; skills that demonstrate one's individual level of mastering work actions. So that, to evaluate to what extent a student has assimilated competences in the chosen speciality, decomposition of competences included in the curriculum shall be performed conforming to the Professional Standard where each competence shall imply certain academic achievements.

By academic achievements we mean the results of students' academic activity presented in the form of the description of the actions performed. As O.I. Rebrin (2014) rightly states, the results shall reflect "what a student shall know, understand or be able to demonstrate after completing a course or its part" (Rebrin, 2014; Prokhorova & Semchenko, 2018; Chelnokova, Agaev & Tyumaseva, 2018). Such a procedure allows to select academic subjects, determine their academic content and single out the objects of evaluation in the form of a set of academic achievements. Let's take professional competence number 2 (PK-2), "the ability to use modern methods and technologies of teaching and diagnostics" from the pedagogy education standard

44.03.05 Pedagogical education (professional standard for teachers, 2013). This competence includes two interrelated aspects of the future profession. The first has to do with methods and technologies of learning in various fields of study. That is why subjects dealing with different methods and technologies of learning, including practices adopted in other countries, shall be added to the curriculum. The second aspect implies a student's preparation for the design of testing and assessment materials which requires studying the subjects that shall help to develop students' skills in designing and using testing and assessment material technologies; the effectiveness of the said preparation can nowadays be evaluated by means of academic monitoring (Makhotin, 2014; Perevoshchikova, 2014).

Let us consider the part of the procedure of the PK-2 competence decomposition (the ability to use modern methods and technologies of teaching and diagnostics) that has to do with diagnostic methods and technologies (table 1).

Table 1. Relationship between work activities, competences and academic achievements in "Physical culture teaching methodology".

Academic achievements			Indicators	Evaluation instruments
Knowledge (shall know)	Work actions	Skills (Shall be able)		
basic concepts of the physical culture theory and methodology; physical education instruments and methods applied at physical culture lessons; subject matter and structure of diagnostic activity, types and functions of diagnostics; different methods of diagnostics and evaluation criteria of the education quality in education institutions	control and evaluation of academic achievements, current and final results of a course being completed	demonstrates skills in design and usage of modern teaching methods and technologies, controls and evaluates students' academic achievements	designs a system of monitoring for students' academic achievements; knows methods of curriculum comprehension diagnostics	Case-type task: "Methods of development and diagnostics of students' physical qualities in the process of physical culture education in an education institution" Test on terminology

The PK-2 competence academic achievements are shown in the table as knowledge, work actions as per the teachers' professional standard, and skills in the usage of modern methods and technologies aimed at the development and diagnostics of students' physical qualities in the process of physical culture education in an education institution. The 'indicators' column that will help in the evaluation of academic achievements, is of crucial importance. The last column of table 1 contains the evaluation instruments applied to the academic achievements given in the first three columns.

Considering the abovementioned, evaluation instruments for current, interim and final assessment shall assume such a form that will allow to measure academic achievements. In other words, the instruments that are supposed to be elaborated shall be used in the evaluation of students' profession-oriented knowledge and skills, on the one hand, and the evaluation of competences that have been formed, on the other hand. (Prokhorova & Semchenko, 2018)

We are going to list and explain the major stages of the AA evaluation instruments design based on the technologies of developing AA evaluation instruments suggested by E.N. Perevoshchikova (2014) and E.A. Chelnokova, N.F. Agaev and Z.I. Tyumaseva (2018).

1. Write out all the Federal State Educational Standard competences that shall be subject to control.

2. Should only a part of a competence be subject to check, the parts that require assessment shall be singled out.

3. Write out the work actions stipulated in the professional standard that correspond to the competences or their parts singled out.

4. Formulate academic achievements (objects of evaluation).

Academic achievements shall be formulated in the way that clearly reflects a student's activities (action indicators) that will constitute the basis for further evaluation.

5. Single out structural components of a control assignment.

6. Formulate an assignment. It shall be noted that an evaluation instrument is supposed to be created and formulated in the context of a professionally relevant situation as in this case some real work actions that a student chooses in order to resolve the task, can be observed. Depending on the academic achievements that are subject to evaluation, a list of requirements (questions) shall be formulated to indicate how a student is expected to act in such a situation. The other two components (the basis and the solution) usually are not included into the control assignments. However, the basis of a control assignment being fulfilled shall be specified in order to differentiate between the already assimilated material and the new one. Moreover, the basis is important for a teacher as it allows to determine what activities are going to be checked by means of this or that assignment. An evaluation form being designed shall contain a benchmark solution. But since a solution is a complex process, instead of a benchmark, a series of indicators is used to assess the completeness and correctness of the actions that a student opted for.

7. Formulate evaluation criteria, single out indicators and create an evaluation scale as in (table 2):

Table 2. Academic achievement evaluation criteria

Evaluation criteria	Indicators	Evaluation mark
1. If the solution is complete	The designed scheme meets all the requirements of the task in question	3
	The designed scheme meets the requirements only partially but it can be used for the systematization of knowledge	2
	The designed scheme meets some of the requirements and shall be improved	1
	The scheme is not designed or does not meet the requirements	0
If it is well-explained (argumentation of the solution)	The specific design of the scheme is explained (all the key aspects of the solution are explained)	2
	Only some of the aspects of the task solution are explained	1
	The explanation to the scheme contains inaccuracies, omissions and does not conform to the universal educational actions (The explanation contains inaccuracies and omissions)	0

That is to say, maximum mark for assignment 1 is five points.

8. Determine levels of academic achievements (table 3).

Table 3. Determining levels of academic achievement.

Levels	Evaluation mark in points	Share of the assignments fulfilled
Optimal	5, 4	No less than 85%
Acceptable	3	No less than 70%
Critical	2	No less than 50%
Unacceptable	Less than 2	Less than 50%

9. Formulate a conclusion from the assignment being resolved.

The structure of the evaluation instrument can include three interconnected elements: organizational and methodical; academic content-based; and criterial-evaluational. (Perevoshchikova, 2016; Shabalina & Dovydova, 2015; Kuznetsov et al., 2016) The first stage of the evaluation method design requires finding a solution to a series of organizational and methodological issues, in particular, the object of evaluation shall be found and a professionally relevant situation shall be formulated to allow a student to show their knowledge and skills. That is why the first stage is called organizational and methodical.

This part of a form shall include the section of an academic subject and particular competences and work activities that are formed in the process of learning. According to the competences and activities singled out, academic achievements that are subject to context-based evaluation, shall be formulated.

After that, the organizational-methodological part of the evaluation form presupposes that a specific situation shall be selected or created, requirements (subtasks) to its solution shall be formulated (analysis, reflection, search of actions to be undertaken), the basis of the task shall be indicated (theoretical facts, laws, logic, principles that provide some basis for the task solution). The first part of the evaluation form shall also contain a solution that will serve as the benchmark for evaluation or a range of indicators shall be developed to assess qualitative characteristics of a solution (if it is complete, correct, well-grounded, logical, etc.). To make explicit the practical significance of a situation, additional information can be provided to a student to give them a better understanding of the real situation and shed light on possible solutions.

The second and the third parts of the AA evaluation method that includes the content of the assignment and the evaluation procedure, are intended for students.

The second, content-based, part of an evaluation instrument includes an assignment or a task which also describes assignments and requirements.

In the third AA evaluation part dealing with criteria and evaluation, criteria and indicators, levels and scale of evaluation are shown.

Conclusion

Developing the design technologies for academic achievement evaluation instruments is based on the following principles that reflect the innovative character of evaluation methods design.

1) decomposition of competences considering work actions listed in the teachers' professional standard;

2) usage of innovational methods and technologies of teaching that help to form competences and develop AA evaluation instruments on their basis;

3) determining the structure of evaluation instruments according to the measurement and assessment principles: validity, objectiveness, accessibility of evaluation procedures;

4) determination of evaluation criteria and indicators in conformity with the indicators of students' actions specified in the definition of academic achievement.

In our opinion, designing a brand new system of evaluation instruments will ensure that a teacher-to-be should realize that the relationship between the existing teachers' standard and teachers' professional activity also consists in understanding the levels of a teacher's professional development specified:

The first level is the level of a beginning teacher. They can work as teachers after successfully passing a qualification exam; have assimilated competences at a basic level and can undertake work functions that are presupposed by their professional qualification.

The second level includes advanced-level teachers that have assimilated a variety of competences e.g. those that imply working with specific groups of children, such as children with deviant behaviour, special needs, children with no or little knowledge of the language, gifted children.

The third level is of a specialist in teaching methods that has mastered teaching methods and technologies at such a high level that they have the right to teach other teachers.

The forth level has to do with a teacher-researcher that summarizes professional experience to develop new educational technologies and that can approve of and implement innovational technologies in education.

We believe that it can encourage teachers-to-be to see their personal ecosystem as an environment where they will exist and develop and make them understand the regulations and mechanisms of interaction in the educational environment, so that a teacher of the future will be born, the one that can combine the roles of a corrector, a moderator, and a tutor.

Recommendations

To design a modern system of academic achievements evaluation, objects of control shall be determined i.e. academic achievements obtained in the course of learning, and then the ones that are subject to evaluation shall be singled out as well as the instruments for their adequate evaluation shall be designed. The decomposition of competences implies the description of academic achievements based on the indicators reflecting activity-oriented characteristics of the competences. The indicators of planned goal achievement shall be described through a student's actions that were singled out and can be measured. The hierarchy of indicators shall specify the levels of goal achievement (bottom to top), e.g. Bloom's taxonomy, allow its adequate evaluation at each stage of education process in order to build a variable and interactive learning environment for teachers' preparation.

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Implementing a Model for the Creation of Mentoring Centers for Postgraduate Education

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Abstract

The relevance of the study of the organization of postgraduate education is determined by the need to ensure the high professionalism of young professionals, including teachers. In this regard, this article is aimed at substantiating the scientific and theoretical foundations of the organization of training and development of specialists of educational organizations, the development of practical recommendations on the formation and implementation of a model for the creation of Mentoring Centers for postgraduate education. The methodological basis of this study was the results of advanced fundamental and applied domestic and foreign studies on the problems of postgraduate education, as well as general scientific methods of cognition, including theoretical studies (analysis, synthesis, aggregation), survey methods, survey, expert assessments. The article presents the results of the activity of the successfully implemented model of creating the professional development environment of the municipal education system - the "Center for Mentoring and Working with Young Specialists" Balashikha of the Moscow Region, created with the aim of networking teachers for their professional development. Considered promising technologies, organizational schemes that provide professional and personal growth of novice teachers. The results of the research work carried out by the authors of the article over a number of years in the field of building the practice of postgraduate education are presented. Successful solutions to the current problems of methodological support of young specialists in this Center are described. The system of mentoring activities presented in the article has great potential and can be used in other regions and for young professionals from other spheres of professional activity.

Keywords: continuing education, professional development, mentoring model, young professionals.

Introduction

The need to address this problem is primarily due to the fact that the most important factor in the success of transformations in the education system throughout the world is the high professionalism of teachers and the quality of professional training of teachers (Bauer, Kopka & Brindt, 2006; Dorozhkin & Shcherbina, 2014; Bakhshandeh et al, 2015; Mukwambo, 2016; Peres, Moreira & Mesquita, 2018; Kariuki & Mbugua, 2018; Tastan & Davoudi, 2018; Etcuban & Pantinople, 2018).

In the Russian Federation, much attention is paid to the issues of improving the vocational education system, the purpose of which is to train a qualified, competitive, competent, responsible worker, fluent in his profession, oriented in related fields of activity, capable of effectively working in the world-class specialty, ready for permanent professional growth, social and professional mobility (Lazarev, 2017). But besides vocational education in colleges and universities, it is important to create postgraduate education centers where young specialists can get answers to questions arising at the first workplace, acquire the knowledge and skills necessary to work in a particular position and taking into account the specific features of a particular organization. Payment for training young specialists in such centers can be made either on the basis of subsidies from regional and municipal budgets, or at the expense of the organizations — the places of work of young specialists, and the own means of the young specialists.

If we consider the option of payment for receiving graduate education of young specialists by Russian companies, then based on the results of the research conducted by PricewaterhouseCoopers (PWC), it can be concluded that the cost per employee in our country is $ 112 thousand per year, and in Western Europe they the figure reaches $ 203 thousand. In general., according to PWC calculations, the return on investments in human capital in Russia is much higher. For every dollar invested in an employee in our country, Russian companies receive $ 2.3, while European - only $ 1.16. According to the personnel holding ANCOR, only in 2–3% of Russian and foreign companies operating in our country this item takes 5-10% of the budget. Most Russian (53%) and foreign (46%) companies spend only 2% of their budget on staff training (Larionova et al., 2017).

Specialists in the field of personnel training and development identify four main elements of a set of personnel development measures: staff training, delegation of authority, work with the personnel reserve, planning and career development. Thus, training is only one form of staff development, including young professionals.

Considering educational organizations as the subject area of this study, it should be noted that when starting a professional activity in an educational institution, beginning teachers inevitably face difficulties as they pass the period of adaptation as young specialists. At the same time, young professionals are responsible for learning outcomes on a par with experienced staff. Even with a sufficiently high level of readiness for pedagogical activity, personal and professional adaptation of a novice school teacher or university teacher can be difficult and can take a long period of time.

As the results of various studies show (Novikova, 2018; Prahalad & Hamel, 2009), for the adaptation period to be successful, young teachers need not only help, but help purposefully, systematically, targeted, and personified. It is necessary to build an integrated system of support for young specialists, characterized by the unity of fundamental and applied aspects of pedagogical research, based on the creation and implementation of a model of postgraduate education, including in the municipal education system, which, according to the authors of the article, can be implemented in Mentoring Centers (Pivovarov & Skurikhina, 2017; Močinić & Feresin, 2017).

Methodological Framework

The methodological basis of this study was the results of advanced fundamental and applied domestic and foreign studies on the problems of postgraduate education, the use of various types of mentorship, as a form of training and development of young professionals.

Conducting a study of the theory of the use of mentoring to provide postgraduate education was carried out using general scientific methods of cognition, including theoretical studies (analysis, synthesis, aggregation). Evaluation of the effectiveness of the creation of Mentoring Centers for postgraduate education was carried out using comparative analysis and expert assessments. The center of mentoring and work with young specialists and the virtual platform EMERCOM Laboratory were selected as the object of research.

In the course of the study, a complex of questionnaires and surveys was developed for young specialists, beginners and experienced teachers, tutors. With the help of the developed toolkit and monitoring, it was possible to identify professional deficiencies and personal difficulties. A model of professional development of a young specialist in the system of continuous postgraduate education based on the resources of the municipal education system has been created. On the basis of requests, programs of advanced training and psychological training have been created. Developed comprehensive activities that combine the basic principles of the Center. Methodological manuals for constructing individual trajectories of the professional development of young specialists have been published.

Literature Review

Such authors as D. Mettyuz, D. Megginson & M. Stuart (2006) identify the following main areas of staff development:

– individual development;

– development to meet the needs of the current job or situation;
– development in relation to new working conditions;
– development aimed at improving and filling the meaning of the activities of individuals, companies or the wider community.

Since personnel development is a process of discrete, complex transformational improvement of workers in their professional activities for self-realization and the timely formation of personnel competencies required by an enterprise, this process can be managed at several levels - the employee himself, the management of the organization in which he works, the state authorities responsible for the sector of the economy to which the particular enterprise belongs.

Personnel training is an important area of personnel development, as in the modern world there is an acute problem of consolidating and updating acquired knowledge and skills. Often, the improvement of professional training becomes a decisive factor in the development of an enterprise. Let us further consider the main scientific approaches to the definition of the essence of the concept "personnel training" (Table 1).

Table 1. The main scientific and theoretical approaches to the definition of the essence of the concept "personnel training"

№	Concept definition	Authors, source
1	Personnel training is an important feature of improving professionalism, since training is based on the development of professional knowledge and skills of employees, taking into account the goals of the relevant departments, which are determined by the organization's strategy.	T.A. Afanasyeva & S.A. Yarusheva (2016)
2	Personnel training is a purposefully organized, systematically and systematically carried out process of mastering knowledge, skills and ways of communication under the guidance of experienced teachers, mentors, specialists, managers.	A.Ya. Kibanov (2010)
3	Personnel training is a deliberately conducted activity aimed at improving the abilities of the staff required to perform the work at present and to develop the potential of employees. Training is focused on the present and is designed to solve the immediate problems of the business, and its goal is to instill in the employee specific skills that are needed today and now.	V.M. Maslova (2015)
4	Personnel training is a systemic training of employees for changes occurring both in the external environment of the enterprise (state economic policy, legislation and taxation system, the emergence of new technical standards and quality systems), and in the internal (enterprise restructuring, change in the social and age structure of personnel, the emergence of new jobs)	B. Gütl, F.M. Orthey and S. Laske (2006)

Conditions for the effectiveness of training are: first, the awareness of the learner of the need for learning, the perception of the purpose of learning as his own; secondly, the focus of the educational process on the achievement of predetermined specific labor results by all participants in the training; thirdly, the focus is not so much on the possibilities and accumulated experience in organizing the process of personnel training, but on the existing need of employees for updating their knowledge, that is, prioritizing (primary) plans for staff training and the secondary plans for training centers in meeting these needs (Emerson & Stewart, 2011; Zaitseva et al., 2017; Feizuldayeva et al, 2018).

A.Ya. Kibanov (2010) identifies two forms of personnel training: on-the-job training (carried out with a specific task setting at the workplace) and out-of-work training (necessary for obtaining theoretical knowledge and acquiring the ability to behave in accordance with the requirements of the production environment).

Education outside the workplace is carried out using methods such as: lecturing; programmed training courses; conferences, seminars; a method of leadership training, based on the independent solution of specific problems from industrial practice; business games; methods of solving production and economic problems using models; working group ("quality circle" and "instead of studying"). A.L. Slobodskoy (2013), as well as M.I Magura and M.B Kurbatova. (2003) propose the following classification of personnel training methods: traditional methods, active teaching methods, on-the-job training methods.

Results and Discussion

The main problems identified by the results of the first years of the functioning of the Young Specialist School, as a Mentoring Center, their causes and ways of elimination.

In 2012, as part of the pedagogical campaign "The experience of the winners of PNPE to young specialists" (PNPE - priority national project "Education"), a round table of the participants of the conference "The thorny path of my profession" was held by the teachers of the winning PNPE, methodologists and young specialists. Certain shortcomings and problems were identified in the activities of the existing Young Specialist School, which did not allow achieving the stated goal. In particular, it was noted that "classes at the School of Young Specialists will allow the recent university graduate to quickly adapt to work at school, avoid moments of self-doubt, establish successful communication with all participants of the pedagogical process, form the motivation for further self-education on the subject and methods of teaching , "To feel the taste" of professional achievements, to reveal their individuality and, finally, to start forming their own professional trajectory "(Borodin & Borodina, 2012).

The present project of creating a mentorship model at the municipal level assumed a study of the issues of organizing a postgraduate educational space, ensuring the readiness of a young specialist to successful and professional creative activity, to productive interaction with all participants of the educational process in modern society (Sarafanova et al., 2018).

This research project was a logical continuation of the project "Young Specialist School", previously developed (from 2010 to 2013), in Zeleznodorozhniy of Moscow region. When the authors of the article summed up the experimental work, a problem analysis of the pilot project was made and the unresolved contradictions were revealed:

– between the requirements for the professional competencies of the modern teacher and the discrepancy between the university education and the realities of the school;
– between the needs of the subjects of the educational process and ways to meet them.

In the process of the study, the main problems identified by the results of the first years of the young specialist's school were identified (Table 2)

Table 2. The main problems identified by the results of the first years of the young specialist's School, their causes and ways to eliminate

Problem	Causes of the problem	Possible solutions to the problems
Low attendanc e.	1. The topics of classes that were incorrectly planned are not sufficiently relevant for young specialists, even before the start of classes and acquaintance with the target audience. 2. Ineffective forms of work with young professionals. Selected lecture informative classes did not meet the modern requirements of adult education. 3. Great workload of young specialists, which makes it impossible to attend full-time classes monthly.	1. It is necessary to develop a work plan for the Center, based on the requests of young teachers, their professional deficiencies, topical issues of modern education, and to do targeted classes for a specific target audience, even if they do not cover the entire community of young professionals. 2. Lectures and conversations, as a form of work, are not suitable for training and inclusion of young professionals in the process of professional growth, therefore, the main forms of work should be organizational-activity, interactive, which will enable all young professionals to be involved in solving the problem of classes at different levels. 3. It is recommended to conduct face-to-face classes for everyone once a quarter on general topics, and the other face-to-face meetings - by targeted request of a certain category of young professionals or through

		individual consultations with mentors. At the same time, part of the work should be transferred to a specially created virtual platform in the social network, as well as created internship and methodological platforms on a specific topic.
Low activity of young teachers.	1. The low level of awareness of young teachers about events taking place in the educational space of the municipality, ignorance of the rules and criteria for participation in events. 2. The uncertainty of the trainees in their own abilities, the fear of not meeting a certain professional level, as a consequence of low self-esteem of young professionals. Also, there are cases of inadequate, high self-esteem. 3. Many young specialists in parallel with work receive an education of bachelors, are trained in a magistracy, are busy during sessions that occur simultaneously with events in which they could take part.	1. The need to increase the number of channels informing students about the events held in the Center. In addition, all information should be available in a specially formulated group on social networks, where plans for upcoming events are published. 2. To increase self-confidence, it is necessary to conduct "trial" events, open lessons and discuss them together, as well as develop programs for psychological and pedagogical trainings. 3. For a greater inclusion of young teachers, the learning process should be "individualized", suggesting that young professionals, on the basis of their own deficiencies, develop an individual trajectory of professional growth and personal development, create a set of methodological recommendations and manuals for drawing up individual plans for young professionals.

Development of a model for the creation of Mentoring Centers for postgraduate education

The model for creating mentoring centers for postgraduate education is based on ideas for building relationships based on cooperation, dialogue, partnership, taking into account the need to maximize the individuality of the teacher, while maintaining collective interaction and co-creation. The principles of the human-like approach are used (Khutorskoy, 2018); provisions of the theory and practice of personality-oriented, humanistic education (Borodin & Borodina, 2018; Donskoy, Oboskalov & Utkina, 2018).

When developing a model for the creation of Mentoring Centers for the provision of postgraduate education, a list of indicators and the effectiveness of the functioning of this center were determined:

1. Quality indicators:

– the need for young professionals and other actors in the products of the Center, the demand for postgraduate education programs, and ongoing activities;

– the nature of the initiatives taken by young professionals in the educational organization, the educational space of the city;

– ways to implement initiatives and new projects;

– the productivity of cooperation, its resultant component both within educational organizations where young professionals work, and beyond;

– the role of the mentoring center in the life of the municipal education system and requests for the dissemination of experience;

– prestige and public recognition of the Center among the professional community of the city, region, country;

2. Quantitative indicators:

– the number and significance of activities initiated by the Center;

– quantitative growth of participants of the Center and its structural divisions;

– the number of external organizations, creative and professional personnel, researchers involved in the activities of the Center;

– the quantity and quality of the produced methodic products, etc.

Results of the implementation of the model for the creation of Mentoring Centers for the provision of postgraduate education.

According to the results of the Mentoring Center for young professional teachers in 2012–2018, measures were implemented in the following areas of activity:

– identification and analysis of "problem areas" of young specialists, drawing up a list of situations of difficulties in professional activities;

– recruitment and training of curators from among experienced and efficient specialist teachers; creating a map of the resources of the municipal education system;

– provision of scientific, methodological and practical assistance to young specialists of educational institutions;

– providing practical methodological and psychological support (supervision, mentoring, tutoring) with the aim of the fastest professional adaptation in the workplace;

– assistance in advanced training in various specializations of young specialists together with subject CMAs (city methodical associations);

– formation of a methodical package of tools for a young specialist - teacher;

– creation of "individual plans for professional and personal growth" and assistance in promoting young teachers along individual trajectories.

The structural elements of the Center created with the participation of the authors of the article are: "Mentoring Center", "MCHS Laboratory", "School of Tutors", "School of Leaders", "Association of the Best Teachers Balashikha city"(table 3) have different goals, tasks and activities, but together they create optimal conditions for continuous professional development of young professionals, finding opportunities to improve their performance and self-development.

Table 3. Structural elements of the model of the Center for Mentoring and Working with Young Professionals

Elements of the model	Mentoring Center (including the "Association of the best teachers")	Laboratory of Young Specialist	School tutors (including "School of the asset")
Who carries out the activity?	Members of the Association of the best teachers, mentors, supervisors, working as consultants. An open base of mentors, special events in the format of "quick dates" when new temporary tandems can be defined: mentor - young specialist (instructed)	Young professionals (length of service 0-3 years) as part of the creative team on problematic issues, identified as difficulties in their activities.	Young teachers with experience of more than 3 years, "grown up" in the Center and trained in the "School of tutors" and received the status of a tutor.
Problem to solve	What forms of support and training of young teachers to choose and develop new relevant methods of support.	How to create individual trajectories for each young teacher, the plan of his individual personal development and professional growth.	How to use network interaction through coordinators - tutors and to ensure the interrelation of traditions and innovations, the system of norms, value systems,

			allowing to build a development strategy for the Center.
Resources	Lectures on NMR, creative groups of teachers - winners of PNPE, resource centers for teachers, internship platforms for educational institutions, third-party organizations.	Network professional community, VC "MCHS Laboratory" group, tutors from young professionals, experienced mentors.	Young teachers with work experience of more than 3 years.
Possible risks	The workload of experienced teachers who spread the experience, the unwillingness of the teachers themselves to be mentors, the "proprietary" positions of administrations, the unwillingness to "let go" or load valuable personnel.	Innovative work in this mode, a large proportion of independence and unwillingness of young professionals themselves, the lack of an experienced mentor or tutor.	Non-traditional and new for secondary schools the role of a tutor, the vagueness of its functional responsibilities, high dependence on personal desire and motivation to be a tutor (in fact, a volunteer).
Expected results	Various methods of transferring the experience and training of young specialists have been compiled, the most effective forms of mentors work have been selected, including internship sites for teachers and educational institutions, a Map of resources of the municipal educational environment has been created, regulations have been developed, public events and teaching materials have been published.	Each young teacher identified his own difficulties, made a plan to overcome them at the beginning of the next school year, developed an individual trajectory of professional development and personal growth, an individual strategy for effective activity, and a stable motivation for self-development, design and construction of effective means of teaching and communication.	A community of tutors who are ready to continue cooperation with the Center on a voluntary basis has been created. Each educational institution has its own tutors - coordinators who send young specialists to the Center and accompany them as a curator.

Analysis of the effectiveness of the created environment allows us to state the real development of the subjective position of young teachers to their own professional self-education and self-development. 87 young specialists successfully passed the certification with assignment of qualification categories to them.

Conclusion

In the process of research and practical implementation of the results of this study, the authors of the article developed a set of conditions and mechanisms for the professional development of a teacher, which ensure the development effect. In addition, extensive practical material was obtained: the creation of author projects and scientific and methodological developments; the creation of design teams of schools and individual creative groups of teachers - internship and municipal methodological sites; preparation of competitive works of various levels; participation in the work of scientific conferences, in national projects in the field of education, governor prizes. The accumulated material indicates the effectiveness of the study and the practical implementation of the mentoring model from the standpoint of personal growth and the development of professional competence of young professionals as a key indicator of professionalism.

Effective activity of the analyzed Center for mentoring and working with young specialists (the number of working young specialists in general education organizations, the number of young professionals participating and winning in professional competitions, events, passing advanced training programs, the number certified for the category, the qualitative growth of professionalism, answers to questioning, and etc.) allows considering it as an effective system for improving the professional competence of young specialists. The presence of performance criteria, as well as quantitative and qualitative results suggest that the presented mentoring system has great potential and can be used in other regions for young professionals from other fields of professional activity.

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Methodical and Conceptual Aspects of Innovation System Evaluation and Monitoring (Resource Approach)

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Abstract

The relevance of the study is due to the need to improve the competitiveness and productivity of domestic producers, which is currently considered as one of the key areas of sustainable socio-economic development of the country. The purpose of the article is to develop methodical aspects of assessing the development of potential of the socio-economic system's productivity and the formation of the main elements of the monitoring system's productivity. The leading approach to the study of this problem is the resource approach, which allows at the stages of justification and implementation of targeted productivity enhancement programs to form rationally a set of projects and activities, taking into account resource constraints and program-target planning. The main results of the study consist in the development of a categorical apparatus for the development of productivity potential, the formation of a system of economic efficiency indicators of productivity potential development, the characteristics and structuring of the main elements of the system of monitoring the socio-economic system's productivity. The significance of the results is that the developed methodical framework for assessing the economic efficiency of productivity potential's development can determine the degree of productivity impact on the competitiveness of the socio-economic system, quantify the current productivity potential, and develop a scheme for monitoring productivity. The practical significance of the study involves the development of methodical toolkit for assessing the productivity of the socio-economic system at different levels of management. The results of the study are intended for their use in the formation of methodical and regulatory framework to improve the efficiency of socio-economic systems, preparation of organizational and economic mechanisms for the implementation of projects and measures to improve productivity.

Keywords: resource approach, program and target planning,productivity potential of socio-economic system, productivity intensification, productivity monitoring, national economic effect.

Introduction

1.1. The Study Relevance

The overall situation of the Russian economy today is characterized by financial and economic instability, a marked reduction in research on the priority areas of innovative development, including in the field of science, techniques and technology and, as a consequence, a decrease in the competitiveness of domestic enterprises. At the same time, the majority of Russian enterprises in terms of competitiveness is significantly inferior to foreign companies and organizations. With significant potential for all types of economic resources, the Russian economy occupies a modest place in the global division of labor.

Assessing the efficiency of domestic production systems, it is necessary to take into account the high resource capacity of most types of products associated, including a high level of production and non-production losses, which increases production costs and worsens the competitive position of Russian enterprises (Mingaleev, 2006; Fartash et al., 2018).

In this regard, the market of goods and services is becoming increasingly important due to productivity growth as a whole as a condition of reducing production costs, improving the quality of products and enterprise's obtaining of a set of competitive advantages (Davoudi et al., 2018).

In the assessments of the country's leadership, low productivity of enterprises, including labor productivity, is one of the main problems of the domestic economy that requires urgent solutions. As one of the main, the President of the Russian Federation set the task of four-fold increase in labor productivity by 2020 (Order of the Government of the Russian Federation 2227-R, 2011). This problem is particularly relevant in the context of the transition of the country's economy to import substitution in key areas of science, techniques and technology. This is primarily due to the increasing role of labor productivity in achieving competitive advantages of domestic industrial enterprises (Pavlov, 2007). The current situation in the Russian economy requires a serious rethinking of productivity problem and a fundamental change of attitude to it at all levels of management.

Serious domestic research on the problems of productivity growth of the socio-economic system, its relationship with modern toolkit for the organization of production based on integrated accounting of all types of resources is quite small. Scientific concepts devoted to the study of these important problems are considered as if in parallel, without taking into account their mutual influence and mutual conditionality.

In this regard, of particular importance for improving the efficiency of industrial enterprises is the research aimed at developing scientific and methodological approaches to assessing the economic efficiency of the development of productivity potential to determine the degree of impact of productivity on the competitiveness of the socio-economic system, quantify the current potential of productivity and develop a conceptual framework for monitoring productivity (Mingaleev, 1999).

2. Methodological Framework

2.1. The Study Methodological Apparatus

The methodological basis of the study was the program-target approach (Koshkin & Mingaleev, 2003) to the planning of increasing the productivity of the socio-economic system and a systematic approach to the effective implementation of programs in this area. In the course of the research the following research methods were used: analysis of legislative and regulatory acts, critical analysis of methods, productivity improvement programs, statistical analysis, multivariate analysis of methods for assessing the potential of productivity, methods of forming a set of measures to improve productivity, integration of economic efficiency indicators, systematization and generalization of facts and concepts, modeling, design, analysis, study and generalization of the experience of production systems' results, multiplicative methods.

2.2. Object of Research

As the object of research were enterprises: KAZ named after S. P. Gorbunov - a branch of PJSC "Tupolev", JSC "Elecon Plant", JSC "POZIS", JSC "Kazan motor-building production Association".

2.3. The Study Stages

The study was conducted in three stages:

– at the first stage-the preparatory stage- the current state of the problem in economic theory and practice, the variety of scientific approaches to the definition of the economic category *productivity* were analyzed; a classification of objects, socio-economic results of increasing the productivity of the socio-economic system and means to achieve them were developed;

– at the second stage-the main stage-the system of indicators of national economic efficiency's increase of social and economic system's productivity was developed; the concept of an assessment and monitoring of increase of social and economic system's productivity was formed; experimental work on check of efficiency of this concept was carried out;

– At the third stage – the final stage-the systematization and generalization of the study results were carried out; the theoretical conclusions were clarified; the processing and registration of the study results were carried out.

Results

3.1. Current State of the Problem under Study

The productivity of the socio-economic system is becoming an important condition for economic development, as the growth of the output of traditional and innovative products and services, the improvement of existing and the development of new technologies provide a significant share of gross domestic product's growth in the leading countries of the world. The increase in productivity largely determines the level of national economic development, as it affects the competitiveness of both business and the economy as a whole.

Before we talk about the assessment of productivity potential, directions and methods of its development, the search for reserves to improve productivity and programming of a set of measures, it is necessary to define the concept of *productivity*.

Analysis of scientific approaches and modern information resources to the definition of the economic category *productivity* allows us to establish that the interpretation of this concept's content throughout the history of economic science was very diverse and depended on the initial positions of economic theory, the peculiarities of economic schools' methodology or the goals and objectives of specific economic research.

All the variety of the considered theories of productivity can be divided into two main groups: the theory of productivity study and the theory of the study of all types of resources' productivity, including natural, industrial and socio-cultural.

Having considered the existing definitions, the authors propose the following definition of productivity-an aggregate indicator of the socio-economic system's efficiency, characterizing the ratio of the total volume of sales (services) for a certain period of time to the total cost of all types of resources produced over the same period of time in all areas of the system (production, non-production and IT-sphere).

However, morphological analysis of the *potential* definitions shows that not all contain reserves (a set of resources) that can be developed with a certain degree of efficiency over a period. In addition, the existing interpretations of the *potential* do not provide a comparative description of the socio-economic system's *potential*.

In this regard, the following definition of the productivity potential is proposed-it is the result of comparing the productivity of the socio-economic system with an exemplary level (indicator).

The development of productivity potential is characterized by the intensification of productivity. Under this term, the author understands the speed of mastering of the socio-economic system's potential productivity at different levels of management (micro, mesa, and macro).

To make informed management decisions in the field of productivity improvement, it is necessary to classify the objects, socio-economic results of the socio-economic system's productivity increasing and the means to achieve them. This classification includes several objects: industry, agriculture, construction, education, housing and communal services, etc. The classification of the object *national economy as a whole* is presented in table 1.

Table 1. Object - national economy as a whole

Means of achievement	Socio-economic results
Development and implementation of a long-term strategy to increase the productivity of the socio-economic system. Development and implementation of the national program of labor productivity enhancement and GDP growth. Development and implementation of regional productivity enhancement programs. Creation of the expert Council of the national program of labor productivity enhancement and GDP growth; State support for projects with a multiplier effect,	Structural restructuring of the country's economy by increasing the productivity of all types of resources including labor ones (increase in value added for each employee). The increase in production and services, the creation of new high-tech jobs that provide a high level of productivity and product quality. Changing the structure of GRP in the direction of increasing the production and sale of competitive science-intensive products with a high share of intellectual component in the value added; the growth of the share of science-intensive products in

including in related industries. Improvement of regulatory and methodical support to increase productivity. Active transfer of technologies in universities and institutes, the introduction of new high-performance technologies in enterprises, the creation of technology parks and engineering centers of various types of property, territories of advanced development (Salimov & Mingaleev, 2012). Development of the system of venture funds, direct investment in productivity enhancement programs at all levels. Efficient use of supercomputers for large-scale socio-economic calculations and forecasts of national and world economy development; multi-purpose use of space satellites.	the volume of GRP. Ensuring sustainable balanced economic development and improving the quality of life of the population by creating conditions for the growth of competitiveness of production, import substitution in the domestic market Increasing the productivity of labor and the socio-economic system as a whole is a key (most important strategic) task, since it is the growth of the economy, the growth of citizens' incomes to the level of developed countries, the increase in taxes, the growth of pensions and wages of citizens.

The classification developed by the authors, shows that the increase in the productivity of the socio-economic system is a factor of economic growth of national welfare.

Based on the above-mentioned socio-economic results, the authors proposed a system of economic efficiency's indicators of the socio-economic system's productivity increasing.

3.2. The System of Indicators

Evaluation and consideration of the productivity potential in the region are the most important components of the process of improving the efficiency of the development of innovative potential. The validity of management decisions depends on the reliability of the economic assessment of innovation potential.

Efficiency is the effectiveness of economic activity, which is the ratio of the effect (result) to the costs that led to the achievement of this effect. An effect is a result of economic activity, which is the difference between the resulting income and costs. Economic efficiency is a relative indicator, and the economic effect is absolute.

The development of productivity potential is associated with the implementation of a set of projects to improve productivity and as a result, the effectiveness of the management of these projects depends on the development of productivity potential in General.

Justification of measures to assess the effectiveness of productivity potential's mastering requires a comparison of results and costs, by determining the need for resources, which in turn implies, in the author's opinion, the use of indicators of economic efficiency of productivity potential's mastering, which are presented in table 2.

Table 2. The system of national economic efficiency indicators of mastering the productivity potential

№. p / n	Indicator's name	unit of measurement	The symbol and formula for determining
1	Potential of the region productivity	RUB	$PP_r = \sum_{i=1}^{n} (P_{w_i} - P_{r_i}),$ (1) Where: PP_r – Potential of the region productivity; P_{w_i} - Productivity of i –th of type of industrialized country's resource, taken as a model, RUB.;

			Pr_i - Productivity of i –th type of region's resource (entity of the Russian Federation), RUB.
2	Intensification of productivity	RUB / year	$I_{PP}=\frac{\Delta PP}{\Delta T}=\frac{PP_{i+1}-PP_i}{t_{i+1}-t_i}$, (2) Where: ΔPP - the development of productivity potential, the RUB; ΔT –the period of mastering the productivity potential, the year; PP_i, PP_{i+1} – the value of the productivity potential before and after mastering, RUB.; t_i, t_{i+1} – the time series chosen for the calculations, the year.
3	Investing in productivity enhancing	RUB	$I_P=\sum_{i=1}^{n}\frac{I_i}{(1+r)^i}$, (3) Where: I_i - investments in activities in order to enhance productivity for the periods $i=1\ldots n$, RUB; r - discount rate (rate).
4	Net profit of enterprises (commercial effect)	RUB	$PV_P=\sum_{i=1}^{n}\frac{PV_{Pi}}{(1+r)^i}$, (4) Where: PV_{Pi} – component of the economic effect which is caused by the net revenues from the exploitation of the potential performance for the periods $i=1\ldots n$, RUB; r - discount rate (rate).
5	The economic effect due to reducing fees for environmental management (ecological and economic effect)	RUB	$PN_P=\sum_{i=1}^{n}\frac{PN_{Pi}}{(1+r)^i}$, (5) Where: PN_{Pi} – ecological and economic component of the national economic effect for the periods $i=1\ldots n$, RUB; r - discount rate (rate).
6	Economic effect due to tax revenues (fiscal effect)	RUB	$PB_P=\sum_{i=1}^{n}\frac{PB_{P_i}}{(1+r)^i}$, (6) Where: PB_{P_i} – budget revenues for the implementation of projects to improve productivity for the periods $i=1\ldots n$, RUB; r –discount rate (rate).
7	National economic effect	RUB	$PP_P=PV_P+PN_P+PB_P+PP_S-I_P$, (7) Where: PP_S –socio-economic component due to the improvement of living conditions and habitat, RUB;
8	Integral indicator of national economic efficiency	-	$\overline{PS}_P=(PV_P+PN_P+PB_P+PP_P-I_P)/I_P$, (8)

At the stage of formation of the system of national economic efficiency's indicators of mastering the potential's productivity, there are some difficulties (Babushkin, 2012). They are caused by the lack or incompleteness of the list of possible long-term projects (activities) to improve productivity, and for projects in the near future with an assessment of the integral indicator of economic efficiency from their implementation.

Thus, the evaluation of the comparative efficiency of the productivity potential's development is reduced to the comparison of the resources' productivity of the industrialized country, taken as a model and the productivity of the resources of a particular region under consideration.

3.3. Productivity Enhancement Evaluation and Monitoring Concept

A system-based approach to the effective implementation of productivity programs involves the justification of the concept of evaluation and implementation (development) of productivity potential (Mistakhov, Mingaleev & Silenov, 2015). The structure of the concept elements may vary. However, the peculiarity of its formation involves the development of an integrated system of decisions at possible hierarchical levels of management of the national economy in time under financial, time and other constraints (figure 1). Therefore, a system-based approach (Trutnev, 2011), characterized by a multilevel hierarchical system with the formalization of the main stages according to the cyclic principle, should be chosen for the formation of the concept.

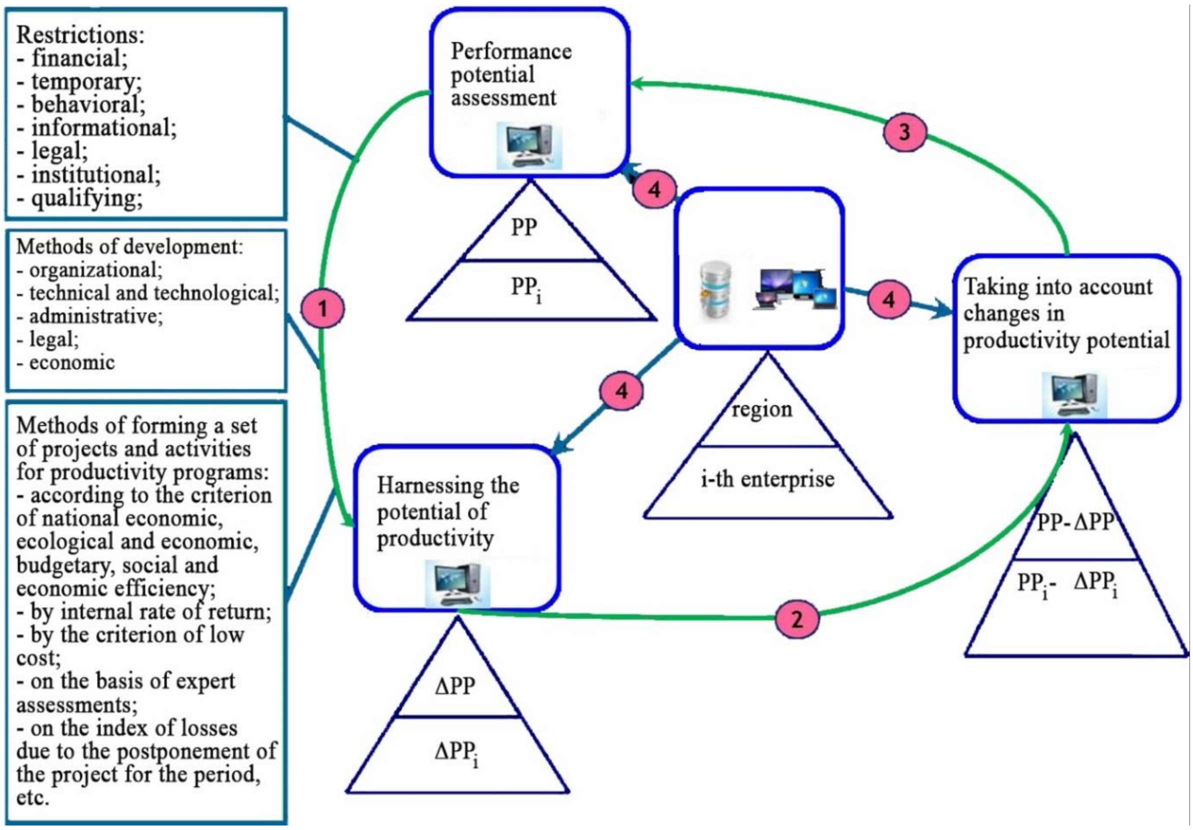

Figure 1. Scheme of interaction of the concept's main elements

In this concept, the increase in the productivity of the socio-economic system can be considered as a result of the implementation of a set of control actions on the potential of productivity at the regional level and at the enterprise level. Based on this, the scheme of interaction of the main elements of the concept includes capacity assessment, development of productivity potential and taking into account its changes (decrease due to development and increase due to scientific and technological progress) (Pavlov, 2007).

PP productivity potential evaluation is necessary to determine the value of the initial argument of control actions.

Harnessing the potential of productivity ΔPP is associated with the creation, implementation and adjustment of scientifically based scenarios of socio-economic system.

Taking into account changes in productivity potential PP - ΔPP and its components depending on volume and terms of carrying out the planned program actions taking into account available investments and methods of optimization of sequence of their implementation.

In the future, they measure the practical results of the work with the planned scenarios, adjust them and make the necessary management decisions to achieve the goals (Trutnev, 2011).

The results achieved need to be taken into account in order to further re-evaluate the productivity potential. This ensures the rapid exchange of information between the identified hierarchical levels (Gumerov et al., 2016), allows at any stage to identify priorities for the development of productivity potential and to adjust programs, subprograms and activity plans (Uraev et al., 2016).

Discussions

The theoretical foundations of the concept of productivity from the point of view of human resources and definition of the productivity are described in the works of O.A. Ermansky (1924), S.E. Kamenitzer (1955), M.E. Kunyavskiy, I.M. Kublin and K.O. Rasporov (2004), P.E. Petrochenko, I.A. Lyasnikov and G.N. Kholodnaya (1970), A.K. Tashchev and I.I. Prosvirina (2013), Kondubaeva et al, (2018), Mendoza & Mendoza, (2018), G.N. Cherkasov (2004) etc.

Theoretical aspects of solving a number of problems of increasing productivity, approaches to the assessment of total labor productivity as one of the components of productivity in a market economy are presented in the works of V.V. Adamchuk and O.V. Romashov (2001), V.N. Belkin and N.A. Belkina (2005), N.A. Volgin (1998), B.M. Genkin (2005), O.E. Germanova (1996), N.A. Gorelov (2002), V.M. Zubov (1990), E.V. Kuchina (2007), L.V. Labunskiy (2003), Y.G. Odegov, G.G. Rudenko and L.S. Babynina (2007).

Such domestic scientists as A.G. Bondarenko (2000), P.B. Gavrilov (1985), G.F. Mingaleev (2012), V.V. Novozhilov (1972), A.Yu. Petrov (2003), S.G. Strumilin (1982), S.S. Kudryavtseva et al. (2015), Yazdekhasti, A. et al. (2015), Kaithari, D. K. et al. (2017), M.V. Shinkevich et al. (2017) and others made a significant contribution to the justification of the need to increase productivity and its assessment.

In the writings of J. Kendrick (1984), A. Lawlor (1985), R. Kaplan and D. Norton (2008), I.I. Prokopenko (1990), D.S. Sink (1989), H. Emerson (1997) and other authors presented foreign approaches to the understanding of productivity, its assessment and management at different levels of management.

However, most scientists have explored other aspects of increasing productivity and its potential, proving that this is an important criterion of modern development, without which no socio-economic system cannot do without, seeking to gain a leading position among other similar systems. A comprehensive analysis of the works of scientists in this area leads to the conclusion that they have studied the issues of productivity either too widely (from the standpoint of macroeconomic growth and increasing the competitive advantages of the state), or rather narrowly (any specific resource as an element of productivity, for example-labor).

Conclusion

According to the results of the study, the following conclusions can be drawn:

The theoretical and practical significance of this study is in the formulation of problems: the enlargement and development of the concept of *productivity* from the perspective of resource and program-target approaches, taking into account the specifics of the national economy; classification of objects, socio-economic results of increasing the productivity of the socio-economic system and the means to achieve them, the theoretical development of methodological foundations for the assessment and consideration of the potential of the socio-economic system's productivity in the region; development of the conceptual framework for the evaluation and monitoring of productivity improvement as one of the main resources of the socio-economic system.

It is established that the productivity of enterprises in the region, and, as a consequence, the volume of output, can significantly increase through the implementation of targeted programs to improve the productivity of socio-economic systems at various levels of the economy (departmental, regional, And Federal).

Managers and specialists of economic entities of all sectors of the national economy can use the materials of the article.

Summing up, it is important to note that the results of this study can serve as a basis for identifying a number of scientific problems and promising areas that require further consideration: deepening and expanding some of the provisions set out in the article related to increasing the productivity of the socio-economic system.

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Formation of Innovative Programs Sub-Goals In Energy Saving

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Abstract

The relevance of the study is due to the need to use evidence-based approaches in the development of resource-saving programs at all levels of management based on the methodology of program planning, which is aimed at improving the effectiveness of national projects developed today in various fields of activity. The purpose of the article is to develop methodical aspects of energy efficiency measurement using modern approaches to the economic justification of engineering and technical developments. The leading approach to the study of this problem is the resource approach, which allows at the stages of justification and implementation of targeted energy saving programs to form a set of energy saving measures taking into account resource constraints. The main results of the study consist in the development of an approach to the ranking of activities within the framework of energy saving programs, which allows taking into account the economic losses associated with the lack of the possibility of developing the energy saving potential of each project when ranking energy saving projects. The significance of the results obtained is that the scientific toolkit is developed, including a method of forming and determining the sequence of measures' implementation, taking into account the ranking and time optimization of the totality of existing energy-saving projects, which is based on the fundamental principles of existing methods of financial and economic analysis of investment projects, including in the field of energy saving. The practical significance of the study lies in the fact that the proposed method allows the development of energy saving programs to ignore the factor of subjectivity inherent in the widely used method of expert evaluations. The results of the study are intended for use in the formation of methodical and regulatory framework of activities in the field of resource conservation, preparation of organizational and economic mechanisms for the implementation of projects and programs to improve energy efficiency.

Keywords: energy saving, program and target planning, expert evaluation, return on investment, ranking of energy saving projects.

Introduction

1.1. Relevance of the Study

The impact of scientific and technological progress on the rational use of resources is manifested mainly in two directions. On the one hand, there are many opportunities for the development and production of new types of raw materials and materials with improved technical and economic parameters, rational use of fuel and energy resources, on the other-there are prerequisites for technical re - equipment and expansion of the boundaries for technological processes improvement of raw materials and energy production (Mingaleev, 2006; Eisvandi et al, 2015; Jurenoks et al, 2017; Tang & Chen, 2019). This involves the implementation of measures, including the development of a measures' program) to create a rational structure of consumption of raw materials, and materials, improve working conditions, environmental protection, etc. In turn, scientific and technical progress, stimulating an increase in the production of material resources, at the same time causes a relative decrease in the need for them as a result of reducing the specific consumption of raw materials, materials, fuel and energy, the introduction of advanced technologies and various types of products, etc.

The first phase of each targeted integrated program involves the definition of the General goal and target attitude, representing the concept of targeted comprehensive program. Then the formation of sub-goals and objectives, considered by the level of importance and in the sequence of their achievement, according to which the composition of the performers of the targeted complex program is formed.

Formation of the goals of the lower level is carried out based on analysis and examination of energy-saving projects with the identification of indicators characterizing the economic feasibility of each event (Mingaleev, 1999). However, for example, the subprogram may include a set of activities in different sectors of the territorial economy:

– industry;
– construction;
– transport;
– agriculture;
– Housing and communal services, etc.

At the lower level, the quantitative characteristics of the sub-goals of the energy saving program are determined, which are related to the issues of assessing the economic efficiency of each activity and bind each sub-goal to financial resources.

At the same time, the set of sub-goals of the energy saving program should fully reflect the General goal.

Determining the importance of each sub-goal of the energy saving program, depending on the possible contribution to the achievement of the General goal, is required for the subsequent assessment of the sequence of implementation of energy saving measures. To do this, it is necessary to assess the importance of the sub-goal to achieve the General goal. Different approaches are also possible. These approaches (methods) to the ranking of energy saving measures should be discussed in more detail.

2. Methodological Framework

Methodological apparatus of research

The methodological basis of the study is the program-target approach (Koshkin & Mingaleev, 2003) to the formation of a complex of resource-saving measures, the development and effective implementation of programs in this area. In the process of research the following research methods were used: analysis of legislative and normative-legal acts; critical analysis of approaches to ranking of energy-saving programs' activities, multi-criteria analysis of objectives' significance; analysis of the possibilities of using indicators when assessing economic efficiency, the examination and selection of projects aimed at energy saving, the generalization of the results of energy saving projects for individual sectors of the national economy.

2.2. Object of Research

Projects and programs of energy saving, programs of social and economic development of territories, branches and separate enterprises were the object of research.

2.3. The Study Stages

The study was conducted in three stages:

– at the first stage, the current state of energy saving in economic theory and practice, the reasons for the slow development of energy saving potential, sources of financing and existing restrictions in the formation and implementation of programs at all levels of management, methods for determining the sequence of implementation of a set of energy saving projects were analyzed;

– at the second stage, a critical analysis of approaches to ranking energy saving measures, determining the importance of sub-goals of energy saving programs, generalization and analysis of existing methods for assessing economic efficiency and selection of investment projects for energy saving, determining the conditions for making a positive decision on energy saving projects on the basis of the given economic criteria;

– at the third stage, the feasibility of using the proposed indicator of the energy saving potential of the project as a criterion indicator in assessing the economic efficiency and ranking of energy-saving projects was justified, the essence and sequence of application of the method for formation and determination of the sequence of measures' implementation taking into account the ranking and time optimization of the set of existing energy-saving projects were clarified.

3. Results

3.1. Current State of the Problem under Study

In General, the economic efficiency of energy saving can be judged by the fact that the investments required for this purpose are 2.5-8 times less than those required for the production of an appropriate amount of energy; the costs for the development of fuel production and production of thermal and electric energy are more than 5 times more than for energy saving. Despite this, the process for formation and implementation of energy saving programs in the regions of the Russian Federation has significant prospects. The reason for the slow development of energy saving potential is the limited funds and the lack of effective organizational and economic mechanisms for the implementation of energy saving programs, which should be reflected in the likely energy saving scenarios. Financing of energy saving programs is expected at the expense of Federal, Republican, local budgets, investors' funds, enterprises' own funds, expected future energy savings (Salimov & Mingaleev, 2012; Mussabekov et al, 2018).

Thus, on the one hand, we have financial constraints in the formation and implementation of programs; on the other hand, the delay of their implementation is fraught with significant economic losses. Selective financing of projects and activities directly or indirectly containing energy - saving effect, the main purpose of which is the creation of demonstration zones or their haphazard replication, cannot be a guarantee of an effective investment policy in this area and does not allow to achieve the main goal - the rational development of energy saving potential (Trutnev, 2011). Thus, it is necessary to use science-based methods of development of energy saving potential, allowing reducing economic losses in the formation and implementation of energy saving programs.

3.2. Approaches to Ranking Events

In one of the widespread approaches to ranking, the priority of implementation within the framework of energy saving programs is given to activities that do not require large investments (Pavlov 2007). The condition for decision-making on a set of energy-saving projects within the framework of the energy saving program is the expression:

$$I_k < I_{k+1}, \qquad (1)$$

where k - the rank of the project.

Thus, the specificity of this approach, which for comparison can be considered in the development of energy saving scenarios, is to determine the importance of the goals, followed by ranking activities based on the criterion of least cost. In this case, the rank of the event is determined by the required amount of investment for its implementation. The smaller the volume of investments, the higher the rank of the energy saving project (Shinkevich et al., 2018).

The second approach is a group assessment of the importance of each sub-goal of the program. A pretty simple the method of individual expert evaluation with the subsequent averaging, which for comparison with other approaches to ranking used in the development of scenarios of energy saving which allow eliminating some of the characteristics of subjective uncertainty got the greatest distribution for the group peer assessment. When using this method, the calculation of the priority of the final sub-goals in relation to the General goal is carried out according to the known formula:

$$\omega_j = \prod_{x \in S_j} \eta_x, \; j \in M \, , \qquad (2)$$

where η_x- priority of each sub-goal,

ω_j - Priority factor of the j-th event in relation to the General goal,

S_j - Many goals on the way from the final sub-goal to the General,

M - A lot of final sub-goals.

In this case, the sum of the coefficients within any Bush of measures should be equal to one:

$$\sum_{j \in M} \omega_j = 1 \qquad (3)$$

To assess the significance of the goals in the conditions of multi-criteria (the existing set of defining quantitative characteristics of the event), convolutions of criteria (additive, multiplicative, according to the limit values of the importance coefficients) are used, which are estimated by the vector of the significance coefficients, the dimension of which is determined by the number of criteria. If expert assessments are carried out under the conditions of the need to assess one criterion, for example, the contribution of an energy saving measure to the development of energy saving potential, the significance of the final goals can be determined by the formula (2). Ranking of measures for energy saving is carried out based on calculations of the coefficients of priority ω_j by assigning a rank to each of them (1, 2, ..., m, where m - is the number of events).

None of the considered approaches to the formation of a set of measures in the framework of energy saving programs does not consider when ranking energy-saving projects economic losses associated with the lack of the possibility of developing the energy saving potential of each project as a result of financial and time constraints. Before proceeding to their consideration, it should be borne in mind that at the present stage in the formation of a set of energy-saving investment projects one should take into account the level of institutional maturity in the field of energy saving in the Russian Federation and regions.

In the first case, the justification of energy-saving investment projects should be carried out according to a specially developed method (for example, using existing methodical approaches) which is approved by-laws for the development of investment projects for energy saving. In the second case, a set of energy-saving investment projects, developed according to the available and recommended methods of planning and justification, is examined in existing financial institutions to determine the reliability of the declared parameters of the project (Reznikov et al., 2016; Osman et al., 2018).

Generalization and analysis of existing methods for assessing economic efficiency and selection of investment projects show that the indicators of ranking projects to improve energy efficiency can be: net reduced effect (net discounted income) (in the economic literature, there are various designations and names of criteria for assessing economic efficiency and selection of investment projects. We will stick to the terminology and symbols used in the latest works of Russian scientists in the field of financial analysis.), the return on investment index, the rate of return on investment (internal rate of return), the payback period of investments (Gumerov et al., 2016). For objective selection of investment projects on energy saving to the above mentioned it is necessary to add an indicator that would generally take into account the expected economic effect from the project's implementation in the form of a likely reduction in energy consumption due to the development of energy saving potential.

Thus, the decision on energy saving projects in the examination of financial and economic efficiency of investments in the energy saving program, taking into account the above mentioned indicators, can be justified by a set of criteria and conditions presented in the table.1.

Table 1. Conditions for making a positive decision on energy-saving projects based on the above-mentioned economic criteria

Criterion	Condition
The net present effect	$NPV > 0$
Return on investment index	$PI > 1$
The rate of return of the investment	$IRR > r$
Investment payback period	$T \to t_{min}$
Energy saving potential of the project*	$\boldsymbol{PE_p \to max}$

* PE_p is calculated for each individual case in different ways; usually $PE_p = \Delta C_0 M$, where Δ - saving; C_0- energy consumption; M - scale of use. For example, savings in i-m year from the implementation of the device X in the program M = 1 PCs per node (m_{node} = 100 000) is 10% of the average monthly consumption C_0 = 1000 Вт ч. In this case, $PE_p = 0{,}1 \cdot 12 \cdot 1 \cdot 10^5 = 120\ 000$ kV·h; or in conventional units $PE_p = 120\ 000 \cdot 0{,}000086 = 10{,}322$ t c.f., or at the tariff 1 kWh = 26 cop $PE_p = 31\ 200$ rub.

In assessing the NPV one can account for the distribution of investments in the calculated periods, residual values and possible release working capital, inflation and risk premiums in the course of the project. Despite the dimensionless nature of the return on investment index, which allows for the same (or similar)

NPV values to select projects from a set of alternative ones, the use of this property of the indicator is not suitable for summing up the economic effects of the project implementation in the time aspect.

Using the rate of return on investment (internal rate of return) allows you to estimate the maximum allowable amount of costs (level of costs) that are associated with the implementation of the project. However, with possible changes in the price of capital sent to the investment process, the comparison of projects leads to the need to determine the "Fisher point" for which the net effect of the compared projects *is* $NPV=f(r)$ = *idem.* In this situation, the use of *IRR* may not be effective because to judge the priority of a project when it comes to r = *var* is possible only by values *NPV*. Without mentioning the complexities involved in the IRR iterative process definition, it should be noted that with a significant difference in projects but the absolute value of accumulated cash flows, it is almost impossible to conclude about the contribution of a project to capital growth and economic potential as a whole. In addition, IRR, unlike NPV, does not have the property of additivity.

One of the main drawbacks of using the payback period as a criterion for ranking energy-saving investment projects, in addition to its relativity (non-additivity) and the presence of undiscounted estimates (in the case of determining a simple payback period), is the lack of accounting for income subsequent to payback periods. In this case, the profitability of the project (including in terms of the possibility of increasing over time the amount of energy released during the project) fades into the background, and the determining factors are liquidity and risk reduction.

The feasibility of *PEp* as a criterion indicator in assessing the economic efficiency and ranking of energy-saving projects is obvious, since it characterizes the contribution of the claimed project to the rational use of energy resources, and can be calculated both in natural and in value units (in kilowatt-hours (kWh), gig calories (Gcal), mega joules (MJ) and so on.). This universal criterion from the point of view of development of potential of energy saving on specific types of energy resources allows to bring the specified units of measurement to tons (kilograms) of conditional fuel (t c.f.), expressed in coal or oil equivalent. Finally, using the current values of tariffs for types of energy, you can get the value of PE_p in ruble equivalent. Taking into account its dependence on the formation of price and other types of state policy, including the current cost of energy resources in the country, and Vice versa, the use of this indicator as one of the criteria for evaluating the effectiveness and selection of energy-saving projects becomes an economically justified necessity.

Proceeding from the stated, for practical application it is possible to offer a method of formation and determination of sequence of implementation of actions taking into account ranking and time optimization of set of available energy saving projects which is based on the basic principles of the existing techniques of the financial and economic analysis of investment projects including in the field of energy saving.

The essence of the first two stages is now widely consecrated in the scientific literature. The content of the third stage in accordance with the methodology of the program-target approach in the formation of a set of measures is determined by the need to assess the sequence of implementation of existing energy-saving projects in terms of financial and time constraints. The above-mentioned limitations are taken into account due to the fact that this stage includes a temporary optimization of investment distribution for alternative energy-saving investment projects. The main task of optimizing the sequence of their implementation is the quantitative determination of the evaluation criterion, which allows to judge the implementation of which of the alternative projects will be associated with the maximum (monetary, energy) losses for the recipient and the considered territorial entity as a whole, taking into account the amount of invested funds.

These losses are measured by the index reflecting the ratio of the decrease in the net discounted income in the following for the current period due to undeveloped nature of potential energy savings for a given time to the volume of investment in energy efficiency. Thus, the index of losses due to the postponement of energy-saving measures is the value of:

$$J_{PE} = \frac{\sum_{i=1}^{n} \frac{PV_i}{(1+r)^i} - \sum_{i=1}^{n} \frac{PV_i}{(1+r)^{i+1}}}{\sum_{i=1}^{n} \frac{I_i}{(1+r)^i}}, \tag{4}$$

Where I_i - discounted flow of investments in energy saving (RUB.),

r - Discount rate,

J_{PE} - index of losses due to the postponement of the development of energy saving potential from the current time to the next period.

When ranking energy-saving projects, this index should be used as follows: the greater the level of economic losses caused by the delay in the implementation of the relevant project, the higher its rank. Thus, this method allows you to ignore the factor of subjectivity inherent in the widely used method of expert evaluations.

The recommended index characterizes the economic losses of the recipient enterprise in case of postponement of the proposed event for a certain period. However, we should be interested in the losses of society, which it will suffer because of this delay. Taking into account the economic meaning of the method, the formula of the index of economic losses will be as follows:

$$J_{PS} = \frac{PS_i - PS_{i+1}}{\sum_{i=1}^{n} \frac{I_i}{(1+r)^i}} \qquad (5)$$

Here $(PS_i - PS_{i+1})$ - losses of the national economy due to the postponement of energy saving measures for the period (RUB.),

Wkere PS_i - national economic effect of energy saving, which can be obtained as a result of the introduction of energy-saving project for the current period (RUB.),

PS_{i+1} - national economic effect in case of postponement of the project for the period (RUB.);

J_{PS} - index of economic losses.

The current economic losses caused by the lack of consistent implementation of energy saving policies also require economic evaluation. It can be carried out by means of the received national economic indicator of ranking taking into account all items of income and expenses (decrease in the payment for environmental pollution, replenishment of the budget, etc.). Estimated by the indicator of undeveloped energy saving potential *PE* losses from a possible delay not only one, but also the entire available set of energy saving projects provide a more accurate assessment of the energy saving potential.

It is obvious that when using existing approaches to assessing the effectiveness and ranking of investment projects in relation to the problems of rational use of energy, such economic effects are difficult to see. Thus, the ranking of projects is carried out taking into account the development of energy saving potential in time, and the use of the method allows to achieve the main goal - the optimal development of energy saving potential in conditions of limited funds for it, as well as time constraints due to daily losses due to irrational use of energy resources.

Discussions

Theoretical, methodological, and practical problems of formation and implementation of projects in the field of energy saving are presented in the works of famous scientists: G.V. Degtev (2002), V.V. Elistratov (2001), K.G.Kozhevnikov (2000), Yu.D. Kononov, E.V. Galperova and O.V. Mazurova (2002), I.V. Kuznik, M.Yu. Tiunov and V.A. Bryukhanov (2001), B.L. Kurbatov (2004), A.V. Lyakhomski and B.Ya. Malyavin (2002), V.S. Samsonov and M.A. Vyatkin (2003) and others.

Approaches to solving the problems of improving the efficiency of energy saving and its evaluation were considered in the works of both Russian economists and foreign authors, among them: I. Ansoff (1999), V. Berens and P.M. Khavranek (1995), S.V. Valdaitsev (1997), O.S. Vikhansky (2002), G.S. Gamidov, V.G. Kolosov & N.Oh. Osmanov (2000), S.Yu. Glaziev (1993), N.Yu. Kruglova & M.I. Kruglov (2003), Mohd Beta, R. M. D., & Ali, K. (2017), I.I. Mazur and V.D. Shapiro (2003), G.F. Mingaleev (2006), etc.

Most scientists have also studied other aspects of improving the efficiency of energy saving and approaches to the development of its potential, proving that this is a really important direction of ensuring the competitiveness of economic entities in the conditions of stricter environmental requirements and existing resource constraints in the formation and implementation of energy saving programs at all levels of management.

Conclusion

Thus, the development of the target tree and their ranking is performed according to the above-mentioned research algorithm. At the same time, the more fractional will be the local goals, the more accurate reflection in the energy saving program will be found by the characteristics of time and financial resources for the implementation of the entire complex of energy saving measures.

The use of a set of energy-saving projects as a tool for temporary optimization allows us to determine the sequence of implementation of energy saving measures, taking into account financial resources and time constraints.

The development of scenarios for the implementation of the energy saving program and the choice of the best option from a variety of alternatives is carried out as a result of alternative justifications for the development of the energy saving potential with the determination of the rates for coverage of energy saving measures in the segment selected for the implementation of the energy saving program. At the same time, to improve the accuracy of the calculations they should be carried out in the widest possible range of basic parameters' change.

Detailed study of selected energy saving program, which is designed to be implemented, is carried out with reference to the schedules to reflect the intermediate and final deadlines of measures' implementation, identifying sources of funding, in accordance with the requirements of the process control system of energy saving for specific performers.

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Indicators of Resource Efficiency and Safety of Production Organization

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Abstract

One of the most important tasks to improve the efficiency of domestic enterprises is to minimize losses in production processes and to search for possible methods, tools and ways to eliminate them. To solve this problem, the concept of lean production is used. It is also worth noting that the existing level of production processes' organization in domestic enterprises in most cases does not allow them to adequately and timely respond to the rapidly changing conditions of economic activity, taking into account the presence of losses in the processes, which in turn adversely affects the efficiency of production systems as a whole. Therefore, in this paper, an attempt was made to combine existing information technologies and lean production tools at the industrial enterprise of JSC Kazan motor-building production Association, to obtain a synergetic effect that affects the growth of productivity of the enterprise, which is the novelty of this work. According to the results of the study, an adapted technique for calculating the overall efficiency of the equipment (OEE) was proposed, the total efficiency of the equipment was calculated based on the proposed technique and the results of OEE were obtained.

Keywords: organization of production, leanmanufacturing, labor productivity, information technology, overall equipment efficiency (OEE).

Introduction

1.1. The Study Relevance

The conditions of the market system raise a new question about the forms and methods by which it is possible to assess the result of the enterprise and the degree of their functioning. The relevance of this topic is that in a competitive environment the competitive economic entities are important not only to avoid the deficit, but also to develop successfully. This can be achieved thanks to competencies in the field of techniques, technology, Economics, management, for example, one of the concepts in the field of organization of production is lean production (LP), which is used in the production and non-production areas (Tastan & Davoudi, 2013; 2015; Parvizian et al, 2015; Malysheva et al., 2016; Uraev et al., 2016; Gumerov et al., 2016; Mingaleev et al., 2016; Mingaleev, Margulis & Kosterin, 2016; Shinkevich et al., 2017; Svistilnikov & Chinenov, 2017; Kadyrmetov & Labutin, 2017; Kumari & Alexander, 2018; Mingaleev, Kosterin & Lopatin, 2018; Alpeisso et al, 2018; Afriyani et al., 2018).

The purpose of this work is to develop recommendations for the implementation of LP tools in an industrial enterprise using available modern information technologies in the organization.

To achieve this goal it is necessary to solve the following tasks:

1. To calculate OEE based on the data of production processes;
2. To describe and adapt the technique for calculation of OEE at the investigated industrial enterprise of JSC *Kazan motor-building production Association*;

3. to analyze the improvements after the implementation of LP tools at the industrial enterprise of JSC *Kazan motor-building production Association* with the use of modern information technologies available at the enterprise.

Methodological Framework

2.1. Methodological Apparatus of the Study

The methodological basis of this study is a system-based approach to the effective implementation of program measures to improve the efficiency of production processes' organization and elements of Lean Production's concept in terms of search, identification and analysis of losses in the production activities of the enterprise.

2.2. The Study Object

The object of the study is the site №6 of the machining processing shop №2 in industrial enterprise JSC *Kazan motor-building production Association*, and the subject – methods and tools of LP, namely the calculation of the overall efficiency of the equipment (OEE) (Salimov & Mingaleev, 2012).

2.3. The Stages of the Study

The study was conducted in three stages:

– at the first stage – the preparatory stage – the toolkit of the adapted technique for calculating the overall efficiency of the equipment (OEE – Overall Equipment Effectiveness) was formed);

– At the second stage – the main stage-losses on the specific equipment were identified, taking into account data on planned Fund of operation of the equipment;

– At the third stage – the final stage-recommendations were developed, including the introduction of automated calculation of the OEE on the Numerical control lathe Leadwell F1, which led to: reducing the duration of downtime, by eliminating such a loss as *the cause is not established*, increase the volume of production by quickly identifying and responding to downtime when they occur (Mingaleev, Margulis & Kosterin, 2016).

Results

3.1. Formation of Toolkit of the Adapted Technique

The total efficiency of the equipment (OEE-Overall Equipment Effectiveness) is one of the ways to monitor the equipment and improve its efficiency. This indicator is generally calculated according to the following formula:

OEE = Availability (A) * Performance (P) * Quality (Q) * 100%, (1)

where:

Availability – (A) - the actual time during which the equipment was ready or available to perform the work;

Productivity – (P) - the actual time spent directly on the processing of products;

Quality (Q) – the actual time spent on the production of suitable products.

We present a table of losses that affect each component of the overall efficiency of the equipment (table. 1):

Table 1. Classification of losses for each component of OEE

Constituent of OEE	Losses on each OEE indicator	Loss examples
Availability	Planned downtime	Installation and configuration of equipment, Autonomous maintenance (cleaning), readjustment.
	Unplanned downtime	Breakdowns, equipment repair, tool replacement
Pproductivity	Losses due to suspensions and idling	Idling, human factor
	Loss due to reduced speed	Equipment operation at speed below the rated one
Quality	Losses due to defects and rework	Revision of details, an incorrect configuration (build)
	Losses at hardware startup	Damage in the process

The planned Fund of equipment operation is presented in table 2:

Table 2. Planned Fund of the equipment operation

<table>
<tr><td>Time, min.</td><td colspan="3">Useful time, min.</td><td>Bad time, min.</td></tr>
<tr><td>T (pfo)</td><td colspan="4">Planned Fund of the equipment operation</td></tr>
<tr><td>T (atr)</td><td colspan="3">The actual time during which the equipment was ready to perform the work</td><td>Losses are not value-adding (NVA) and non-value-adding but necessary (NVAN), T (r)</td></tr>
<tr><td>T (att)</td><td colspan="2">The actual time spent directly on treatment products</td><td>Productivity losses, T (t)</td><td></td></tr>
<tr><td>T (atp)</td><td>Actual time spent on production of usable products</td><td>Defects, T (d)</td><td></td><td></td></tr>
</table>

Availability (A) of equipment is calculated by the formula:

$$A = \frac{T\ (atr)}{T\ (pfo)}. \quad (2)$$

Productivity (P) is calculated by the formula:

$$P = \frac{T\ (att)}{T\ (atr)}. \quad (3)$$

Quality (Q) is calculated by the formula:

$$Q = \frac{T\ (atp)}{T\ (att)}. \quad (4)$$

On the considered Leadwell F1 equipment, losses are determined, the classification of which is presented in table 3 (Valitov et al., 2017; Mingaleev, 2012):

Table 3. The classification of losses on equipment Leadwell F1

Number	Losses
1.	Clarification of the controller program
2.	Equipment repair required
3.	Technological stop
4.	Tool/equipment selection
5.	The reason is not established
6.	installation of equipment
7.	Clarifying the parameters of the control program
8.	Clarification of the process
9.	Missing part/workpiece
10.	Missing tool
11.	Equipment is switched off
12.	Regulated rest
13.	technical control Department operation
14.	Central measuring laboratory control
15.	Coordinate measuring machine control

Production losses of equipment can be classified as follows: losses associated with the repair and shutdown of equipment (unpreparedness of equipment); losses associated with the implementation of the production process (Bikmullin et al., 2018; Bakeeva et al., 2018).

The grouping of losses due to their occurrence is presented in table 4:

Table 4. Grouping of losses due to their occurrence

Number	Losses are not value-adding (NVA) and non-value-adding but necessary (NVAN), T (r)	Causes of productivity losses, T(t)
1	Clarification of the control program	technical control Department operation (TCD)
2	Equipment repair required	
3	Technological stop	
4	Tool/equipment selection	Central measuring laboratory control (CML)
5	Regulated rest	
6	installation of equipment	Coordinate measuring machine control (CMM)
7	Clarifying the parameters of the control program	
8	Clarification of the process	The reason is not established
9	Missing part/workpiece	
10	Missing tool	
11	Equipment is switched off	

Based on reports on shifts and the above-mentioned approach, we will calculate OEE components per day (table 5):

Table 5. Calculation of OEE per day

Name of parameter	Calculation formula	1 shift, min.	2 shift, min.	3 shift, min.	Availability per day
1	2	3	4	5	6
Condition including time in the planned operation Fund		yes	yes	No	
1.T (pof)	T (pof)	540	480	420	1020
2. T(r)	T(r)	89,48	146,75	395	236,23
3. T (atr)	T(atr)=T(pof) -T(r)	450,52	333,25	25	783,77
4. Availability (A)	A=T (atr)/ T (pof)	0,83	0,69	0,06	0,77
Name of parameter	Calculation formula	1 shift, min.	2 shift, min.	3 shift, min.	Productivity per day
Condition including time in the planned operation Fund		yes	yes	No	
1. T (atr)	T (atr)	450,52	333,25	25	783,77
2. T(t)	T(t)	99,55	0	16,44	99,55
3. T (att)	T(att)=T(atr) -T(t)	350,97	333,25	8,56	684,22
4. Productivity (P)	P= T (att)/ T (atr)	0,78	1,00	0,34	0,87
Name of parameter	Calculation formula	1 shift, min.	2 shift, min.	3 shift, min.	Quality per day
Condition including time in the planned operation Fund		yes	yes	No	
1. T (att)	T (att)	350,97	333,25	8,56	684,22

2. T(d)	T(d)	0	0	0	0
3. T (atp)	T(atp)=T(att) - T(d)	350,97	333,25	8,56	684,22
4. Quality (Q)	P= T (atp)/ T (att)	1,00	1,00	1,00	1,00

Visually, the work of the first and second shift can be represented as a Gantt chart (Fig.1-2), where 1 – Equipment is switched off, 2 – Technological stop, 3 – The reason is not established, 4 – treatment on the task and 5 – Tool/equipment selection.

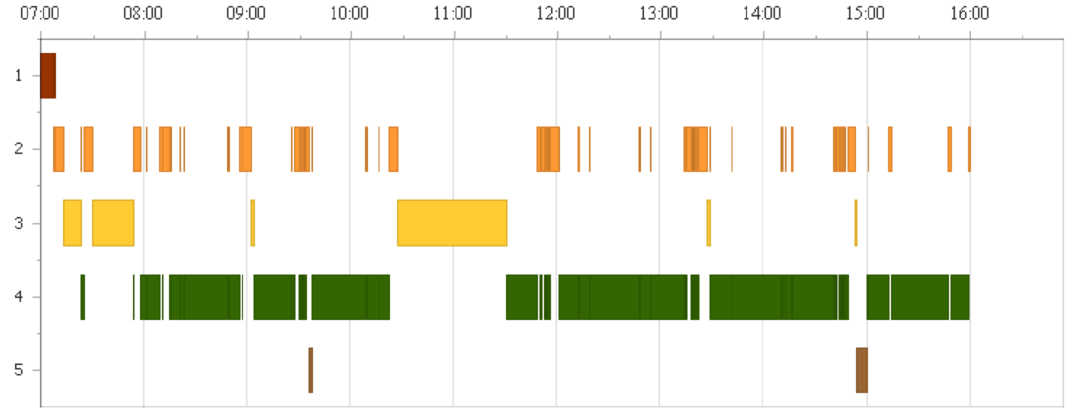

Figure 1. Report on the operation of the equipment in the first shift

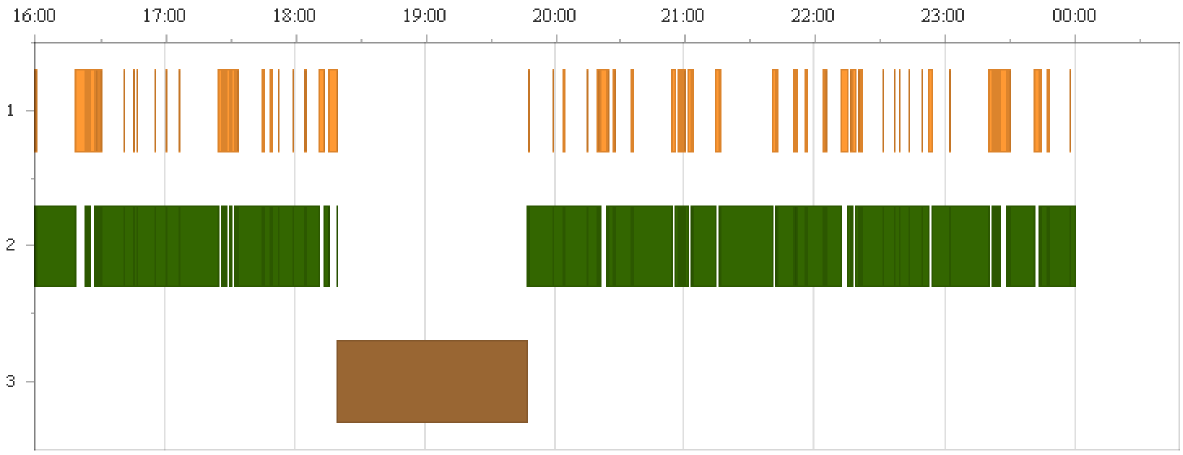

Figure 2. Report on the operation of the equipment in the second shift

After the shift calculation of the OEE, the calculation of the OEE indicator for the month of the equipment operation was carried out (23 days – the actual Fund of working time in the study period) (table. 6).

Table 6. Calculation of OEE per month

Name of indicator	Amount per month
1	2
1. T (pfo)	17880
2. T(r)	4535,9
3. T (atr)	13344
Availability (A)	0,75
1. T (atr)	13344

2. T(t)	2037,42
3. T (att)	11306,6
Productivity (P)	0,85
1. T (att)	11306,6
2. T(d)	0,00
3. T (atp)	11306,6
Quality (Q)	1
OEE	0,63

As can be seen from table 6, availability (A), productivity (P) and quality (Q) for the month were 0.75, 0.85, 1, and OEE = 0.63 or 63%, respectively, indicating insufficient equipment utilization.

3.2. Loss Identification

Analysis of losses in a month based on report of download work center Leadwell is presented in figure 3.

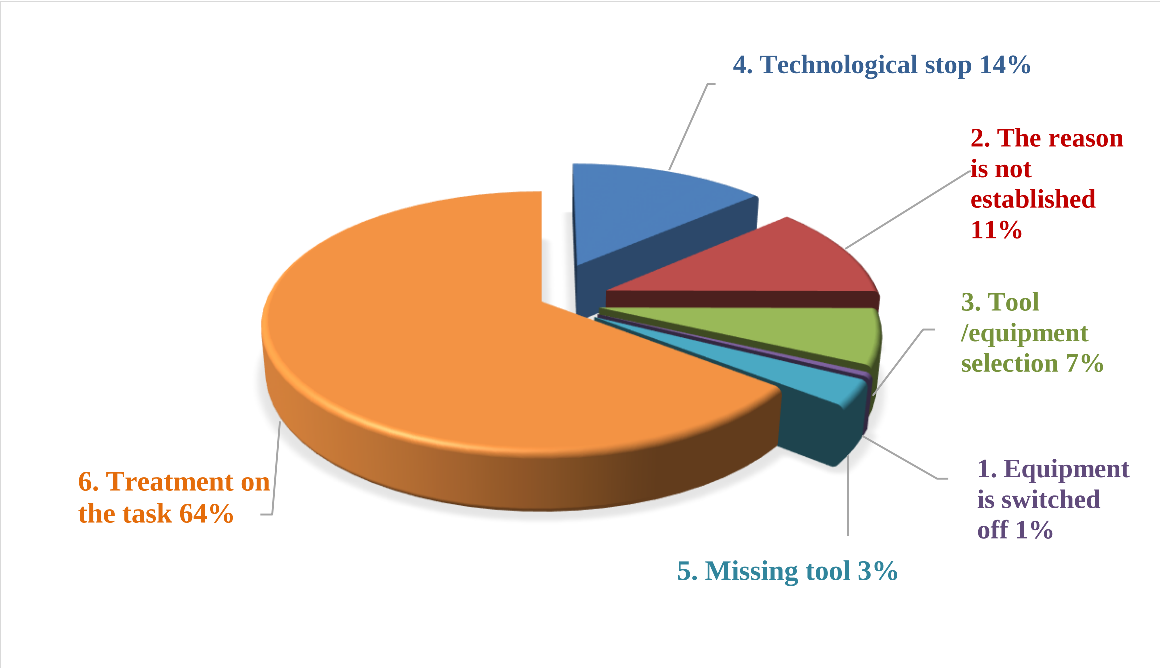

Figure 3. The distribution of losses by type for the month prior to the implementation of measures

Fig. 3 main losses are concentrated in three sectors:

1. The reason is not established – it is the loss associated with the human factor;

2. Technological stop is the loss associated with equipment shutdown that lasts less than five minutes, but is often repeated;

3. Tool/equipment selection is carried out – it is the losses connected with search, the choice of tools and equipment.

The article gives a practical example when losses *the reason is not established* were analyzed and eliminated. This reason will be eliminated by automated calculation of the overall equipment efficiency (OEE).

Calculation of production costs for five types of losses in rubles on the LEADWELL F1 equipment for the month before the implementation of measures will be carried out according to the following formula (Bakeeva et al., 2018):

$I = tc*k*T,$ (5)

Where: I-production costs, expressed in losses of the production process, rubles;

tc - existing losses, min;

k- The cost of overheads of the shop, RUB;

T-calculation period (number of months).

Calculation by types of losses:

1. Loss of working time among the main production workers in the machining shop №2, on the sixth section, on the Numerical control lathe Leadwell F1due to the stop of the equipment, which lasts less than five minutes, but often repeated (technological stop) (Nadreeva & Abramov, 2018; Bakeev et al., 2018):

I1 = 2410, 57*1*12 = 28 926, 84 RUB.

2. Loss of working time among the main production workers in the machining shop №2, on the sixth section, on the Numerical control lathe Leadwell F1, associated with the human factor:

I2 = 2031, 54*1*12 = 24 348, 48 RUB.

3. Loss of working time among the main production workers in the machining shop №2, on the sixth section, on the Numerical control lathe Leadwell F1, associated with the search, selection of tools and equipment.

I3 = 1216, 32*1*12 = 14 595.84 RUB.

4. Loss of working time among the main production workers in the machining shop №2, on the sixth section, on the Numerical control lathe Leadwell F1, associated with the off equipment.

I4 = 85, 31*1*12 = 1 023, 72 RUB.

5. Loss of working time among the main production workers in the machining shop №2, on the sixth section, on the Numerical control lathe Leadwell F1, associated with the lack of tools.

I5 = 554*1*12 = 6 648 RUB.

Total losses: 28 926, 84+24 378, 48+14 595, 84+1023, 72+6 648 = 75 572, 88 RUB per year on this machine.

Calculation of four types of losses (due to the introduction of automated calculation of OEE) in rubles on the equipment LEADWELL F1 for the month after the implementation of measures:

1. Loss of working time among the main production workers in the machining shop №2, on the sixth section, on the Numerical control lathe Leadwell F1 due to stopping equipment, which lasts less than five minutes, but often repeated (technological stop):

I1 = 2410, 57*1*12 = 28 926, 84 RUB.

2. Loss of working time among the main production workers in the machining shop №2, on the sixth section, on the Numerical control lathe Leadwell F1, associated with the search, selection of tools and equipment.

I2 = 1216, 32*1*12 = 14 595.84 RUB.

3. Loss of working time among the main production workers in the machining shop №2, on the sixth section, on the Numerical control lathe Leadwell F1, associated with the off equipment.

I3 = 85, 31*1*12 = 1 023, 72 RUB.

4. Loss of working time among the main production workers in the machining shop №2, on the sixth section, on the Numerical control lathe Leadwell F1, associated with the lack of tools.

   I4 = 554*1*12 = 6 648 rubles.

   Total losses: 28 926, 84+14 595, 84+1023, 72+6 648= 51 194, 40 RUB per year on this machine.

The cost of the event was determined as follows: the introduction of automated calculation of OEE requires the work of two programmers. The average salary of programmers in the field of C-sharp (programming language) in Kazan is 50 000 rubles (Gareev & Kirshin, 2013).

The duration of this event, according to programmers, is 3 months. After counting: 50 000*2^{*3} = 300 000 rubles

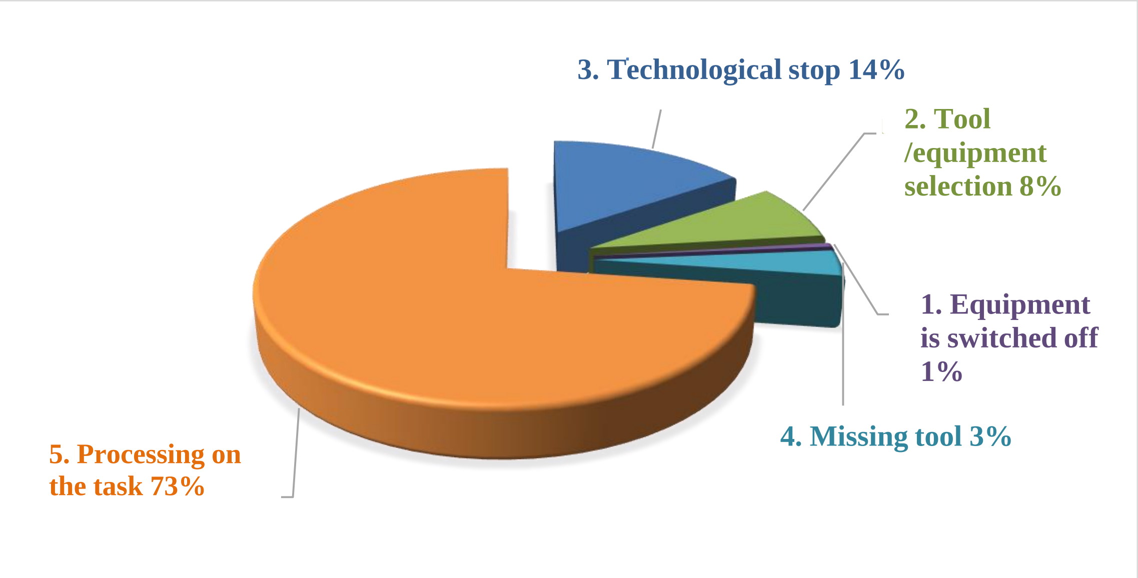

Figure 4. Distribution of losses by types for the month after the implementation of measures

The payback period for the implementation of the OEE automated calculation was 13 months.

Conclusion

According to the results of the study, the following conclusions can be drawn:

Lean production involves carrying out activities with minimal investment, but where LP tools are powerless, it is possible to use modern information technologies that require certain costs, but pay off over time.

The article for OEE calculation proposes the adapted technique of calculation, which involves identification of losses on specific hardware based on the data on planned Fund operation of the equipment; the group loss for 3 indicators (availability, performance and quality). The study first gave an example of the calculation of the OEE based on the report of the first and second shift, which was 0.64 and 0.69. Then the example of calculation of an OEE for a day, which was 0.67, was given. Based on these calculations and the above-mentioned technique, it was 0.63 or 63% for the month.

Based on the results of the OEE calculation, recommendations for the introduction of automated calculation of the OEE on the Numerical control lathe Leadwell F1, using the data of production processes were formed. Implementation of these recommendations at the enterprises will lead to: reducing the duration of downtime, by eliminating such a loss as *the cause is not established*; increasing the volume of production by quickly identifying and responding to downtime when they occur (with the help of a specialized module for sending e-mail, SMS alerts, which is built into this system).

Next, the paper presents the calculation of costs for the types of losses in RUB on the equipment of the model LEADWELL F1 for a month. Costs before and after implementation of activities amounted to 75 572, 88 51 RUB and 194, 40 RUB, respectively.

To visualize the ratio of actions that add value and losses for the period from 02.04.2018 to 25.04.2018, diagrams were built showing the change in the percentage of actions that add value before and after the implementation of the event.

The main results of the work are the following: reduction of downtime during the implementation of the event by 9%, increase in the number of operations that add value by 9%, the economic effect of the event on the test equipment will be 24 378.48 RUB per year, the payback period of the project for the introduction of automated calculation of OEE at the enterprise was 12 months and 9 days, and the discounted payback period - 13 months and 16 days, which indicates the high attractiveness of the project and the need to replicate the experience for other divisions of the enterprise.

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Elderly People Social and Psychological Adaptation to Nursing Home Conditions

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Abstract

The relevance of the study is to study the individual characteristics, psychological and emotional States of elderly people in the nursing Home. It is important to study the possibility of socio – psychological training program for the elderly adaptation to the conditions of nursing Home. The leading method of this problem research are the following: the methods of unfinished sentences and author's methods, allowing to highlight a number of negative and positive aspects in the process of older people adaptation to new living conditions. The authors revealed that the socio – psychological accompany (socio – psychological training, psychological counseling of the elderly and their staff) will contribute to the favorable adaptation of the elderly to the conditions of the nursing Home. The data obtained in the work can be used in medical centers, nursing homes, practical psychology, sociology, medical psychology, as well as for further theoretical development of this issue.

Keywords: old age,nursing Home,gerontology

Introduction

The ageing of the population as a phenomenal socio-demographic process is inevitably a matter of concern for all countries. This problem is also relevant for Russia-the policy of social support for the elderly reflects the essence of any society and state, regardless of the political system. A new type of age structure poses serious socio-economic, moral and psychological challenges to modern society.

In recent decades, both foreign and domestic scientists have studied various aspects of the life of the elderly.

Many scientists have studied social and psychological problems of gerontology (Antsyferova, 1993; Alexandrova, 1974; Khrisanfova, 2002; Yatsemirskaya & Belenkaya, 1999). These researchers note that there are features of aging: normal, pathological and optimal processes, as well as interpersonal diversity (heterogeneity) of the elderly population.

They considered aspects of assistance organization to the elderly in their grief and depression about the loss of friends and relatives (Guslyakova & Popkova, 2000; Ananiev, 1991; Giessen, 1980; Ermolaeva, 2002; Tastan & Davoudi, 2013; Ardakani et al, 2015). They note that in cases of loss, the elderly and old people undoubtedly fall into a high-risk group, become very dependent on medical, social and economic services and especially need psychological support.

Various aspects of the elderly adaptation to old age are studied in detail (Aries, 1992; Satina, 2001; Shulepikov, 2000). These researchers note that in the approaches to adaptation, they should be flexible; to address potential reserve abilities of older people; to take into account the peculiarities of the psyche of the older person.

The researchers also note that the peculiarity of the current situation in this country is that *getting into old age* occurs against the background of a decrease in the standard of living of many people, and this often entails not only poverty and economic dependence, but also excessive deterioration of health, thereby exacerbating social isolation, mental and psychological distress (Torinston, 1999; Satina, 2001; Tutushkina, 1998).

Actively developing element of social policy in modern Russia is social work with the elderly. Specialists in working with the elderly believe that in order to learn how to provide effective and qualified assistance to old people, an individualized approach to everyone is necessary (Zworykin, 1992; Karsavskaya & Shatalova, 1998; Kozlov, 1995; Cherdymova 2011; Krasnova, 2005; Syam et al, 2017).

These aspects of work with elderly people become particularly relevant in special conditions, when elderly people move to a *nursing home* for various reasons (Firsov & Studenova, 2000; Stuart-Hamilton, 2002).

The situation of forced resettlement in new, different from home, unusual conditions of social relations, can inevitably be accompanied by a deterioration in psychosomatic health - an exacerbation of many diseases, an increase in the level of anxiety, aggression and frustration. The inevitable companions of these phenomena are insomnia, apathy, anxiety, anger, irritability, depression, etc. Therefore, timely social and psychological assistance can contribute to a less painful adaptation of the elderly in a *nursing Home*, adaptation to a new social environment. Traditionally, there are three gradations of the period of gerontology-genesis: elderly age (for men – 60 – 74 years, for women – 55 – 74 years), senile age (75 – 90 years) and centenarians (90 years and older). However, modern research shows that the aging process has slowed down in recent decades. A person in 55-60 years may not feel old at all and may be among Mature people in terms of social functions, and the aging itself within these phases is not uniform - someone gets tired of life by the age of 50, and someone in 70 years can be full of strength and life plans (Roshchak, 1990; Tutushkina, 1998; Shorokhova, Lomova & Zhuravleva, 2004; Mailybaev et al, 2018).

Aging is usually considered as a process consisting of three components:

1). Biological aging is the increasing vulnerability of the body and the increasing probability of death.

2). Social aging-changing patterns of behavior, status, roles.

3). Psychological aging-the choice of ways to adapt to the aging process, new strategies to overcome difficulties (Krasnova, 2005; Ermolaeva, 2002; Giessen, 1980; Aries, 1992; Antsyferova, 1993).

Materials and Methods

2.1. Methods of the Study

The following psych diagnostic techniques were used:

1. The technique for diagnostics of mental States self-assessment (G. Eysenck) was used to identify old peoples' levels of anxiety, frustration, aggression and rigidity. The technique allows identifying self-esteem, attitude to failures and difficulties, the degree of restraint in relationships with others, reactions to changes in the social situation.

2. Stress resistance and social adaptation was revealed by the technique of Holmes and Raga. Studying the dependence of diseases (including infectious diseases) on various stressful life events, Holmes and Raga revealed that mental and physical diseases are usually preceded by certain serious changes in human life and the reaction (adequate or inadequate) of a person to them. This technique was used to identify the degree of stress resistance of elderly.

2.2. The Experimental Base of the Research

The study was conducted based on *nursing Home*. The sample of subjects was 28 people aged 65 to 85 years.

2.3. The Study Stages

The study of the problem was carried out in three stages:

Stage one - development of initial positions based on theoretical analysis of the literature on the subject of research; development of a General concept of the study, which includes methodological principles and a project to develop a research tool.

Stage two - development of the research tool.

Stage three - a sample was formed, empirical data were collected. Preliminary results were obtained. Analysis and interpretation of the results was made.

1) The first stage included diagnosis of self-mental conditions of the elderly (G. Eysenck) and their stress resistance. (The quantitative characteristics of the individual indicators are given in Table 1), the percentages are presented in table 1.

Table 1. Results of anxiety and stress resistance study

Levels	Anxiety	Frustrating	Aggress	Rigidity	Stress resistance
	% ratio				
High	51 %	51 %	47 %	13 %	9 %
Average	37 %	40 %	42 %	44 %	30 %
Low	12 %	9 %	11 %	43 %	61%

Qualitative analysis of the results is as follows:

As can be seen from the table, a high level of anxiety was detected among 51% of the elderly, average anxiety rates - among 27% and low rates - among 12% of the subjects.

As for frustration, a high level was also found in 51%. Probably, these elderly are characterized by low self-esteem, avoidance of difficulties, and fear of failure. The average level was found in 40% and the low level was only in 9% of the elderly. Thus, only 9 % have high self-esteem and are resistant to difficulties.

Aggressiveness and high unevenness in the relationship was revealed in 47 %, the average level – in 42 %. Low level, calmness and restraint in the relationship was found only in 11 % of the elderly. A high level of rigidity was found in 13 %, in this case, with any rehabilitation measures, positive dynamics might be difficult. The average level of rigidity was revealed in 44 %, and the low level was revealed in 43%, which allows us to hope for the possibility of positive changes in the process of rehabilitation work.

Results of stress resistance and social adaptation determination look as follows: high stress resistance was found only in 9 %. The average level was found in 30 % and low - in 61 % of the elderly. Among the most prominent reasons, which in the last year led to dire sufferings of older called: the death of a spouse 27 %, a forced rupture (separation) with partner - 18 %, injury (disease) – 60 %, change in financial status – 54 %, problems with family – 48 %, the change of living conditions, 57 % and change of habits related to nutrition (downside) – 48 %, rejection of any personal habits (due to the dissatisfaction of children and loved ones) – 57 %.

Further, the whole sample was divided into two identical groups, but in the experimental group, we included according to the diagnostic data the most stress-prone elderly taking into account, at the same time, and their personal wishes. The rest of the subjects were a control group. For greater efficiency of experimental rehabilitation work, each participant of the experimental group was interviewed to identify the causes (factors) of anxiety and stress. Based on these interviews, some common factors emerged:

1. Anxiety due to changes in the situation was detected in 72% of the sample.
2. 36% of them indicated inability and unwillingness to communicate with other vacationers (hostility and negative attitudes). They also revealed alexithymia.
3. The desire for, and doubts about, the necessary and effective care has also been a source of anxiety.
4. In 66% of the sample, doubts about the *humanistic attitude* of the staff towards them were a factor of anxiety.

Along with the common factors emerged personal reasons for anxiety:

1. The children and grandchildren stayed at home.
2. Anxiety and fear of the last *transition*.

With these campers, we used individual counseling. In order to at least to some extent eliminate the common factors that cause anxiety, we have prepared a number of conversations on the ability to communicate, the ability to engage in auto-training, conversations about stress management, etc., with all the elderly. A specially designed seminar with medical and service personnel was held on the theme *the influence of the relationship style of medical staff on the convalescence of the patient.*

Results

One can give examples of the main stages of the experiment.

The first and second sessions were devoted to familiarity of the training participants with each other, with the rules of further work; mainly exercises for defrosting and acquaintance were used. The work was quite difficult, although the participants themselves expressed a desire to participate. When speaking about the expectations of the participants, it turned out that they were mostly people which in their families and in relations with relatives were tired of manipulation, suffered from unceremonious relations and criticism from family members. The most popular tactic in the relationship was *leaving*. It was these kinds of factors that led to outbreaks of aggression and the suppression of these outbreaks within themselves that aggravated the painful conditions.

The following classes were basic and were devoted to identifying situations of manipulation and mental trauma and practicing a variety of effective communication skills. Very interesting material for further work was received and recorded on tape with the use of unfinished sentences, which were to be completed by the participants of the training.

Here are the most striking statements obtained with the use of unfinished sentences:

"I feel powerless when my teenage grandson begs me for a pension,"; "I feel powerless when I have to stand in a pharmacy queue,"; "I feel furious when my daughter – in-law does not listen to me and just shuts me up."

"I get angry when children start talking about who will get the living space ... when relatives do not consider me and do everything in their own way .... when they limit my diet, although I give them my money, etc."

"What I sometimes really want is to have good food - fruit, ice cream, ... I want to be respected,.....to have opportunity to talk to someone spiritually and mentally,.....watch on TV not those programs that my grandson wants, but those which are interesting for me, etc. "

"I especially don't like it when I'm often escorted to distant relatives, when the house is arranged gatherings."

"I'm familiar with an acute sense of loneliness. I remember lying in the hospital and to everyone came someone to visit every day, and to me only once a week."

"I really want to forget that there are even more difficult years ahead, and I ask the God for an easy and quick death.... "

"Even close people sometimes do not understand me. I once tried on a family holiday to Express my heartily wishes and as usually, I was sent to other relatives"

"I have had occasion to show cowardice. In order to keep relationships with loved ones usually I agree with everything, although I do not like much".

"Especially irritates me that not only strangers, but and relatives sometimes treat me rudely", "I feel that I annoy every-body at home and that they dream to get rid of me finally...."etc.

In the following classes, the skills of confident behavior were tested with the help of "I – messages". Exercises on the development of the ability to perceive criticism from the outside were performed quite difficult, as the elderly reacted very painfully and, apparently, this pain was developed over time. However, the responses with the use of humor they used more readily. After each lesson, feedback was provided.

At the last lesson parting words were given. At the end of all classes, each participant filled out a questionnaire about their thoughts and feelings.

For example, exercises aimed at overcoming grievances and those exercises in which each of them received approval and respect had biggest impact on the course of the lesson, according to one of the participants. Among the factors that prevented the work, they called shyness, uncertainty and the usual fear of being worse than others are.

Almost all participants admitted that they learned a lot about themselves, that they are not so "boring", and that they, it turns out, are similar in their experiences to each other and this should not be shy.

In addition, the elderly admitted that they learned a lot about others and that they will certainly continue acquaintance after classes.

Because of the work in the group, some part (about 60 %) expressed a desire to change some attitudes and continue to exercise their skills with those with whom they would like to communicate in the future.

However, it should be noted that about 30 – 40% of the elderly mostly with severe rigidity were simply present and did not take much part in the development of skills. After each session, they were also given individual consultations. However, both participants and medical and service personnel noted that it was rather difficult to interact with them, that they are constantly *straining* with their discontent, complaints and thirst for constant attention.

Upon completion of training the repeated diagnostics of the anxiety level of all older people was carried out. As it can be seen from table 2, 53.3% of participants with a high level of anxiety had a decrease to a moderate level. Among 40% - moderate anxiety dropped to a more moderate. This, though not very significant, but the result. 13.3 % still have high anxiety-these are participants with a high level of rigidity and old enough age, although some participants of the same age had positive changes. Perhaps the absence of positive changes was influenced by the character features, but this factor is in this study, we have not taken into account. After the experiment, measurements were made in the control group of the elderly. The results of the repeated diagnosis of the level of anxiety in the elderly control group are given in the Table 2. After a training workshop with staff, a small proportion of 6.6% of the elderly with average level of anxiety in the control group had a low level of anxiety. 33.3 - elderly kept high level. Nevertheless, the 20% with low level increased it to a moderate level.

Table 2. Comparative values of anxiety levels in groups before and after the experiment

Groups	High		Average		Low	
	before	after	before	after	before	after
The experimental group	53,3 %	13,3 %	46,7 %	73,3 %	-	13,4 %
Control group	40 %	40 %	33,4 %	46,6 %	26,6 %	20 %

The table shows that in the experimental group there were significant positive changes compared to the control group.

For example, in the experimental group, 53.3% of the participants had a high level of anxiety, and after the rehabilitation activities, only 13.3% of the participants had a high level.

The high level remained among those participants who had a high level of rigidity in the primary diagnosis, in addition, they were elderly old enough (74 and 75 years), when personal changes and changes in relationships became quite difficult. In the experimental group, in addition, the number of elderly with an average level of anxiety increased, the average level was among 46.6%, and became among73.3 percentage.

If before the experiment in this group no one had low level, now the low level was revealed in 13, 4% of the elderly.

In the control group, the high level remained in 40% of the elderly, slightly increased the number of elderly with an average level – and it was 33.3%, and became 46.6%, and slightly decreased the number with a high level of anxiety, it was 26, 6%, and became 20% likely after General preventive conversations with the elderly, individual counseling and seminars with staff. However, changes in anxiety rates in the experimental group after rehabilitation work were more significant than possible situational changes in the control group.

The effectiveness of social and psychological rehabilitation work with the use of the training program and its appropriateness can be judged by the fact that the elderly began to seek advice from a social psychologist, became friendlier with the members of the group in which they were rehabilitated, became more friendly and patient.

The calculations were carried out using the computer program SPSS-12. The results of our calculations are presented in table 3.

Table 3. Results of comparison of the studied factors in the control group

Factors	Empirical value of criterion U	Significance level	Sum of ranks in *the first measurement*	The sum of ranks in *the second measurement*	The conclusion that there are significant differences
mental state					
Anxiety	102,5	0,674	242,5	222,5	No
Frustration	111,0	0,949	231	234	No
Aggression	105,0	0,746	225	240	No
Rigidity	111,5	0,965	233,5	231,5	No
Stress resistance	107,5	0,835	237,5	227,5	No

Based on the calculations, we can draw the following conclusions:

There was no significant difference between the indicators of anxiety, frustration, and aggressiveness, stress resistance in the control group *before* and *after* corrective action.

Discussions

Old age is called the age of *social loss*. What social changes are taking place at this age?

For many people, retirement is accompanied by a decrease in social activity, reduction of certain roles and material losses. It is especially difficult for those pensioners who have never found satisfaction in anything other than work - neither in Hobbies, nor in reading, nor in obtaining additional education, nor in participating in any organizations. Experts believe that retiring elderly people do not necessarily have to stop working. If the state of health allows, pensioners are quite capable of working on an individual part-time schedule (Stefanishin, 2001; Tashcheyeva, 1993; Firsov & Studenova, 2000; Torinston, 1999; Stuart-Hamilton, 2002; Singh et al., 2018; Satir, 2000).

People, men and women approaching old age, can be divided into the following groups:

1. Those who really want to retire to do something else. They are actively preparing for this, get an additional specialty or just learn new, necessary information. Pension is perceived as the beginning of a new life, when you can do what you love with full return.

2. Those who are very afraid of retirement. By any means try to extend the time of work, feel useless if they cannot earn enough, from their point of view, the amount of money.

3. The third group of people can be called indifferent, they do not work with full efficiency for a long time, and retirement does not bring them significant experiences associated with the need to redistribute vital energy. They continue their existence, long ago and habitually painted with all shades of depersonalization to a full life (Dmitriev, 1980). However, for an elderly person not less than retirement, the problem of changing the status due to the change of relations with family and friends is important. As in any other period of life, a person's role and responsibilities, as well as his or her satisfaction with life, are defined in the social context of his or her family and personal relationships.

At the later stages of ontogenesis, as M.D. Alexandrova (1974) notes, there are new trends in relations with spouses, children and grandchildren. Older people continue to feel obliged to help children when needed (from monetary support and supervision of grandchildren to advice). Grandchildren are often one of the greatest joys of this period. The roles of grandparents give a sense of personal and family renewal, bring diversity to life and at the same time are signs of longevity. Some grandparents feel a special importance of their role in maintaining the stability and moral standards in the period of the split in the family. It is stated that for the majority of elderly people the satisfaction with marriage increases after their grown-up children begin to live separately. Although, of course, initially and may arise some difficulties, because, when neither children nor work distract, people need to re-learn to live together (Alexandrova, 1974). However, most couples who have raised children and survived marriage experience less stress and a stronger sense of satisfaction and harmony. In addition, pairs that show a high level of satisfaction with the marriage often say that marriage began to occupy a more important place in their emotional life. Marriage becomes a true source of comfort, support and intimacy for them. Happy marriages, preserved in old age, often become the basis of mutual support, help and love. However, the death of a married spouse leads to the acquisition of a new status and a new role - widow or widower.

For many, according to research A.I. Tashcheyeva (1993), it is a very difficult transition associated with a real lifestyle change and risk to be isolated from others. Women are almost three times more likely to be widowed than men are, and therefore older men are married and older women are unmarried. By the age of about 85, four out of five women become widows. In addition, this imbalance is expressed not only in quantity but also in time. On average, elderly widows live 50% longer after the death of their spouse than widowers of the same age (Tashcheyeva, 1993; Satina, 2001). According To L.V. Satina's (2001) research, widows and widowers living alone often face practical and psychological difficulties. They are forced to solve domestic problems, maintain social contacts and make financial decisions. Widows possibly are better able to maintain social contacts because the very wives, according to tradition, maintain contact with family members and meeting with friends usually occur on their initiative. Widowers are therefore more likely to be isolated, losing the social contacts that the couple had. Theoretical analysis of the problems of the elderly, the problems and features of the provision of professional assistance allows us to draw the following conclusions:

The organization of assistance to the elderly should be based on the fact that the elderly — an adult, Mature, wise experience, able to learn new experiences. This approach is fundamentally different from treating older persons as damaged objects in need of rehabilitation or as innocent victims of the negative effects of an oppressive social system.

It should be believed that an elderly person has the ability to learn new experiences.

It is necessary to have or develop in social workers certain important psychological qualities for successful performance of work: the presence of positive motivation to work, friendly attitude to people, communication skills, empathy, neuro-psychic and emotional stability, patience.

It is necessary to develop the necessary psychological qualities of social workers in special classes, courses and trainings, business games, to develop self-control and reflexive skills to optimize their professional activities.

In working with the elderly, it is necessary to prevent professional burnout or psychosomatic diseases caused by emotionally stressful work, to develop a service of psychological support for social workers to optimize professional activity.

Conclusion

Understanding the psychological problems of the elderly in modern times, allowed to formulate the theme of the study. The aim of the study was to theoretically substantiate the necessity and possibility of rehabilitation work with the elderly in the conditions of their stay in the *nursing Home.*

In the course of solving the problems of the study, the factors of the unfavorable psychological state of the elderly in the *nursing Home* were identified. Based on a comprehensive analysis of the results of diagnosis and factors of adverse mental States, the program was justified and rehabilitation work was carried out with the elderly, who revealed anxiety of medium and high level.

Repeated diagnostics of mental States of elderly control and experimental groups allowed to be convinced of possibility and expediency of carrying out with elderly of rehabilitation work with application of the training program and psychological consultation.

Our experiment made it possible to make sure that such work is necessary and can positively influence the mood, more confident behavior, well-being of the elderly who are in the *nursing Home* under certain conditions:

a) Diagnostics of individual personal characteristics and psychological States of elderly people in the *nursing Home* with the help of selected diagnostic tools;

b) According to the individual characteristics of the elderly, the development of a program for their adaptation to the conditions of the *nursing Home*, which includes consulting work with staff to improve their socio - pedagogical, psychological and professional competence.

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Organization and Presentation of International Students Knowledge's Modern Picture: The Aspect of Framing of Pedagogical Technologies

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Abstract

The relevance of the study is due to the trends in the transformation of the University educational process, the key idea of which is the structuring, organization and presentation to the international student of constantly expanding amount of knowledge in terms of budget standards of academic time. The established disproportions determine the need to use non-traditional approaches to the construction of a new reality of the educational process in the University, among which in the synthesis of knowledge elements' integrated system, the transformation of educational information in the content of training, the transformation of verbal information into non-verbal, the creation of innovative symbolic structural schemes of its presentation to international students the importance and universality of frame pedagogical technologies is proved. In this regard, the article reveals the features of the frame approach to the organization and presentation of knowledge's modern picture of an international student in the educational process of the University. The universal format of consolidation of knowledge didactic units in the design of frame technologies is established. Based on the results of the study, the priority of technologies - concepts and technologies - scripts of the organization and presentation of knowledge's modern picture of an international student is justified and the effectiveness of their implementation in the educational process of the University is proved.

Keywords: frame, frame technology, educational process of the University, the identity of the international student, organization and presentation of knowledge's modern picture, the new reality of the educational process, the format of frame-based technologies, technology – concepts, technology – scripts,pedagogical observation

Introduction

1.1. The Relevance of the Study

The beginning of the XX1 century is determined by the formation of a new picture of the world - four – dimensional space - time, allowing considering reality as a relative value (Bateson, 2005; Vakhstein, 2011; Hoffman, 2004). In physics, scientists are increasingly moving away from the study of the visible world, go beyond the upper atmosphere, study the organization of near-earth space and develop nanotechnology. Bold hypotheses are realized in human space flights, achievements of robotics, attempts to create artificial intelligence. The computer industry is developing rapidly, which affects not only further scientific progress, but also the structure and organization of society. At the same time, in the development of scientific thought there are many interdisciplinary connections and boundary Sciences, resulting in special methods and concepts inherent in the earlier one scientific field, penetrate into another and acquire a different meaning. This process of borrowing is largely due to the fact that the meanings of new categories and methods of various fields of modern science do not yet have a clear definition and can describe different subjects of study (Gladush, Trofimova & Fillipov, 2008; Kolesnik, 2002; Makarov, 2003; Nekrasov & Molchanova, 2009; Ardakani et al, 2015). It is established that at the beginning of the new Millennium in modern science increasingly important are the theories, the semantic essence of which is the structuring of the system of knowledge from different fields of science (Batygin, 2003; Bateson, 2005; Vakhstein, 2011; Drozhzhina, 2013; Douady, 1997; Nekrasov & Molchanova, 2009; Tastan et al., 2018). In these conditions, the boundaries of traditional concepts and theories of University student training are also transformed. New science and the industrial areas need specialists of a new generation, the quality of which match the most advanced technology. Priorities are increasingly inclined to frame approach in the transformation of training content, characterized by practical orientation of understanding the knowledge's modern picture and improving the effectiveness of new structural schemes of their presentation to the student (Bateson, 2005; Hoffmann, 2004; Guselnikova, 2009; Morenko, 2018; Nekrasov & Molchanova, 2009; Sukhonosova, 2012; Vinogradova et al., 2018; Hashim et al, 2018; Semin & Kurdymov, 2018). These trends are consistent with the search for effective solutions in transforming the content of training international students in modern University and substantiate the significance of frame technology, constructing a new reality of the educational process at the expense of enlargement of didactic units (Itinson & Rubtsova, 2015; Kolodochka, 2004; Lozinskaya, 2009; Sukhonosova, 2012; Bicer et al., 2018). It is established, enlargement of didactic units in the learning process of an international student is provided by a complex of pedagogical conditions, due to the content of information, its intellectual capacity, interdisciplinary nature, creating a new educational environment for the implementation of frame-based technologies of organization and presentation of knowledge's modern picture of international students (Hoffman, 2004; Ivanova, 2001; Lozinskaya, 2009; Petrov, 2009; Fedorova, 2008; Erdniev, 1992). In this regard, the main attention in this article is given to the development of theoretical and methodical approach to the design of the learning process of an international student based on frame technologies of organization and presentation of a modern picture of knowledge to students. The article reveals the features of the frame approach to the organization and presentation of the modern picture of knowledge of an international student in the educational process of the University. The universal format of enlargement of didactic units of knowledge in the design of frame technologies is established. Based on the results of the study, the priority of technologies - concepts and technologies - scripts of organization and presentation of knowledge's modern picture of an international student is justified and the effectiveness of their implementation in the educational process of the University is proved.

Literature Review

The methodological basis of this study is a set of concepts of G. Bateson (1972), I. Hoffmann (1974), M. Minskiy (1979), developing in the framework of philosophy, sociology, psychology, cognitive linguistics, Cybernetics, self-organizing around the problem of information, on the basis of which a person makes predictions and correlates them with his/her behavior. The semantic content of the frame in this article is used as a *collective designation of context* (Vakhstein, 2011; Hoffman, 2004; Guselnikova, 2009). The study examined the work of leading philosophers, sociologists, psychologists, experts in linguistics, teachers and educationists on various aspects of the problem of frame (Bateson, 2005; Vakhshtein, 2011; Hoffmann, 2004; Gurina & Sokolova, 2005; Douady, 1997; Kolesnik, 2002; Kolodochka, 2004; Lozinskaya, 2009; Makarov, 2003; Medvedenko, 2017; Minskiy, 1979; Sukhonosova, 2012; Fedorova, 2008; Erdniev, 1992). Scientific and methodical ideas and conclusions of these authors in this study are used as a basis for the development of frame technologies of organization and presentation of knowledge's modern picture of an international student in the educational process of the University. It is established, the use of frame-based technologies in the educational process of international students by many authors is considered as one of effective approaches to teaching professional, natural - scientific and socio - humanitarian disciplines through the enlargement of knowledge's elements, generalization of imaginative and logical knowledge, algorithmization of a universal structure of the schemes – supports in iconic – symbolic form (Gurina & Sokolova, 2005; Drozhzhina, 2013; Ivanova, 2001; Itinson & Rubtsova, 2015; Lozinskaya, 2009; Medvedenko, 2017; Petrov, 2009; Fedorova, 2008). Pedagogical research in recent years presents a classification of frames, justifies the theoretical and practical feasibility of the design and implementation of frame technology as an innovative element of the University educational process, highlights the advantages, identifies the requirements for creating (Gurina & Sokolova, 2005; Kolesnik, 2002; Lozinskaya, 2009; Morenko, 2018; Fedorova, 2008). At the same time, some chaotic character is established, which is present in the use of conceptual apparatus, structure and subject content of frame technologies in the training of an international student (Guselnikova, 2009; Kolodochka, 2004; Makarov, 2003; Medvedenko, 2017; Fedorova, 2008). In the course of this study, an attempt was made to classify frame technologies structured based on pedagogical goals of transforming the content of education through the enlargement of didactic units. It is established that the process of enlargement of didactic units creates the necessary educational environment for the productivity of the frame in the organization and presentation of knowledge's modern picture of an international student, as the studied material can be expressed in tables, diagrams, slides, which significantly saves time and provides the student the opportunity on the basis of independent study of the material to form their own solution to the problems encountered in the learning process. Some authors (Gurina & Sokolova, 2005; Fedorova, 2008) correlate the frame technologies with the instruction of formation of the approximate basis of personality actions, although they recognize the originality and importance of using the specific features inherent in frame technology: structure, awareness, stereotype, visualization, repeatability, the presence of frame form, associativity of connections, etc. Despite the extensive bibliography devoted to the study of the research problem, aspects of the theoretical and methodical approach to the construction of a new educational environment in the educational process of the University on the basis of frame technologies of organization and presentation of knowledge's modern picture of an international student, need for a more extended, scientifically based study.

Results

3.1. Pedagogical Essence of Frame Approach to Organization and Presentation of Knowledge's Modern Picture of International Student

The study found that the frame theory in the pedagogical process of the University is used since the 70s of the twentieth century. In educational process of international students in the development of an expanded interpretation of the semantic content of the notion *frame* a significant contribution is made by V.S. Vakhshtein (2011), R.V. Gurina and E.E. Sokolova (2005), T.N. Kolodochka (2004), M. Makarov (2003), S.V. Sukhonosova (2012). These authors investigated the possibility of the frame in the problem, modular, project, concentrated training of international students as a technological mechanism for rethinking the structure and content of educational information. In the most General form, the frame in their works is defined as a unit of knowledge organized around a certain concept, and as a way of organizing an international student's ideas about the modern picture of knowledge stored in memory. The authors identify it with such concepts as scheme, associative connections, semantic field in cognitive linguistics, and use it as a General generic designation of scenario discourse, script, and cognitive model in pedagogy. General information about the frame technologies of knowledge formation in the training of international students are presented by periodically repeated ways of organizing educational material (frame as a concept) and educational time (frame as a script) for disciplines, the theoretical material of which is subjected to *compaction* and has a frame structure (Makarov, 2003). Despite differences in the specific areas of knowledge, all the authors use frame-based approach to teaching international students share common goals, identical mechanisms for the implementation of frame-based approach, describe the identical factors that necessitate the use of frames in training and therefore have the same student learning outcomes using frames (Domorovskaya, 2007; Drozhzhina, 2013; Ivanova, 2001). It is established that the traditional lecture-seminar system of higher education is having trouble due to modern educational transformations, including the dynamics of the growth of new subjects, the increase in the volume of knowledge, as well as the dominance of new forms of training based on Internet resources. Therefore, one of the ways to solve real problems in the training of international students is the implementation of modern pedagogical technologies that allow to expand the amount of assimilated knowledge without increasing the amount of time allocated to their study, as well as to integrate learning objectives with individual creative abilities of the individual and with the educational resources of the University (Makarov, 2003). It is proved, from the point of view of training technique frames have the requisite productivity because the learning material is quickly transformed into tables, charts, slides, which helps to save training time for international student and extend the capabilities of self-organization of knowledge's modern view and forming their own solutions to problems. The study found that the frame approach in the organization and presentation of knowledge's modern picture of an international student, due to the properties of the frame (the categorical principle of knowledge organization, the representation of knowledge about the typified situation, well-structured hierarchical structure, the presence of the conventional beginning and prospects of development) provides many advantages in the design of the content of training focused on the deepening and stability of the basic knowledge of the student of actual, perspective and reflexive value. In addition, the conventional beginning of the frame turn it into a pedagogical mechanism that extends the memory and attention of an international student, the speed of perception and memorization of information, contribute to the development of system thinking, design competencies and implementation of a variety of intellectual operations, the construction of clear and competent structural and logical schemes that expand operational, tactical and reflexive perception of the modern picture of knowledge. The frame concretizes and confirms the specificity and typicality of certain episodes of educational, cognitive, social and personal interaction (lecture activities, participation in seminars, laboratory work, independent, research forms, leisure communication and other educational activities). Frames organize understanding of the world as a whole by the international student, form ordinary behavior through representation of a stereotypical situation (behavior in an audience, algorithm of lecture, laboratory, independent or research work). The study proves that each frame determines specific behaviors of an international student in learning activities for the assimilation of information: 1) the use of information; 2) the expectation of consequences after use; 3) the problem-based situation, if the expectations are not confirmed (Gladush, Trofimova & Fillipov, 2008). It is proved that such an algorithm of assimilation of information by an international student is a frame format of training, involving a nonlinear organization of the educational process, characteristic of multi-level education, implementing a research approach to learning by action (Lozinskaya, 2009). It is established that the frame approach also provides the orientation of the student to perform a full, closed cycle of productive activity - from the idea, image, to implementation and reflection. To achieve this goal, it is necessary to solve a number of tasks related to the implementation of certain stages of educational activity, first with the help of a teacher, which gradually shifts towards counseling, and then – to the full independent productive activity of an international student. The efficiency of three parallel lines of frame approach to the organization and presentation of knowledge's modern picture of an international student is established:

- The first line-the solution of traditional educational tasks as mini-frames of educational activities corresponding to situational activity;
- the second line-the solution of educational problems of the second level - tactical, appropriate supra-situational activity - larger training frames, where students can formulate the goals of their activities, actively apply knowledge in various areas in practice, interact with each other, etc. At this level, value-oriented, transformative, communicative, emotional and visual components enhance the educational process. The implementation of these components is achieved by using of oral and written reports, messages, the use of business games, game modeling, interdisciplinary, research projects, etc. in the process of organization and presentation of knowledge's modern picture in the educational process;
- The third line is the solution of educational tasks of the third level, corresponding to the creative activity of the student, strategic educational tasks of large educational frames. These frames can be implemented in practical training and educational design through organization of the student's own experience in the implementation of integrative educational and professional activities.

During the research the importance of frame approach is established: 1) for the learning process and for the process of solving real problems of international students through active participation in their formulation, design, implementation and discussion of the solutions; 2) for the student's acquisition of valuable experience with various databases, involving the formation of skills to choose and make decisions based on specific situations; 3) For the student's acquisition of critical thinking experience, skills of responsibility for their own choice of solutions. In the whole, in the aggregate of the established directions, the implementation of the frame-based approach to the organization and presentation of knowledge's modern pictures of international students allows to solve the important task of the educational process – the connection of knowledge with the ability to use it in real educational and life situations.

3.2. Universal Format of Enlargement of Knowledge's Didactic Units in the Design of Frame Technologies

The modern picture of knowledge, due to the dominance of the organizational and methodical level of the set of basic invariant courses, variable and elective disciplines, all kinds of practices, and on the content level - the presence of large information units, structures and complex imagery material, complicating their assimilation by an international student in the educational process of the University, is characterized by radical transformations. The key idea of these transformations in the process of acceptance and understanding of educational information by a person is the enlargement of didactic units. The phenomenon of didactic units' enlargement by leading experts is considered as a universal format of processing of educational and scientific information, as an extended and multilateral generality and structure, characteristic of the whole process of cognition, human thinking, memory (Bateson, 2005; Batygin, 2003; Vakhstein, 2011; Hoffman, 2004; Guselnikova, 2009; Sova, 1984). The task of enlargement of didactic units in the learning process of an international student by many authors is related to the task of understanding and highlighting by the personality of the meaning of the text (Gurina & Skolova, 2005; Domorovskaya, 2007; Douady, 1997; Itinson & Rubtsova, 2015) In pedagogical science, two semantic structures of the text are considered to be generally recognized: structure № 1 is the meaning that is laid down in the text, structure № 2 is the meaning that the student comprehended in the process of understanding (interpretation) of the text. The complexity of the process of understanding (interpretation) of the text lies in the fundamental impossibility of coincidence of knowledge forming the structure № 1 and structure № 2. Since the structure № 1 is formed due to the totality of ideas, needs, interests, experience of the authors of information, respectively, the structure № 2 is formed in the process of understanding (interpretation) of the text by attracting the totality of educational, scientific and personal potential of the student.

The Central point in the process of adoption of the text is the formation of semantic structure: the allocation of key words or semantic milestones, as well as the Union of semantic milestones in a single knowledge structure. In the text, as a rule, there are two types of connections: explicit (visible) and implicit (hidden). Explicit links divide the text into sections, chapters, paragraphs, highlight keywords, laws, formulas, principles, categories. Implicit cause major difficulties in understanding. They are based on content-based connections of information of actual, retrospective, perspective and reflexive character, on competences of the student to understand all text entirely and to be able to allocate the main values of information. The process of acceptance of the text by the student is influenced by his personal experience, General scientific erudition, and background knowledge. The procedure of splitting the text into parts, then compacting into a semantic milestone, is the basis for any individual process of adopting the text. A set of keywords is a set of reference points on which the text is deployed when encoded in memory and is realized during decoding as the information core of the system. It is proved that this approach to the enlargement of knowledge's didactic units of an international student accurately reflects his process of thinking by determining the basic unit of information and a closer connection of knowledge based on facts, procedural mechanisms due to the content of information, its intellectual capacity, and interdisciplinary nature. In addition, the enlargement of didactic units in the learning process of an international student is provided by a set of pedagogical conditions, among which priorities are given to:

- Systematization – which is effective in text, tabular, hierarchical, symbolic forms of educational information. It is focused on the structuring of educational content, the transformation of verbal information into nonverbal (figurative), the use of significant and stereotypical links between the elements of knowledge, the synthesis of an integrated system of knowledge elements;
- Generalization – which is effective in tabular, graphic, databases, hierarchical, telecommunication forms of educational information. It is focused on the development of figurative and logical thinking based on the use of structural schemes of information presentation, supporting abstracts, units - schemes of information, logical-semantic matrices;
- The occurrence frequency of ways of organizing the teaching content and teaching time for subjects, theoretical material of which undergoes enlargement;
- Algorithmization – which is priority in the use of concise, capacious, universal rules-regulations of educational actions and their sequence in the process of solving educational problems of a certain class:

immersion in the problem-formulation of the problem-setting goals and objectives-organization of work groups-phased distribution of the content of the frames (indicating intermediate results) - determining the role of each participant in the group - planning of joint and individual activities - discussion of research methods - a discussion of the outcomes' design (presentation, role play, video, report, etc.) summarizing, and presentation of results, presentation – insights - introducing new problems (Hoffmann, 2004; Ivanova, 2001; Lozinskaya, 2009; Petrov, 2009; Fedorova, 2008; Erdniev, 1992).

3.3. Priorities of Frame Technologies of Organization and Presentation Knowledge's Modern Picture of an International Student

In the course of the study, the discourse of framing pedagogical technologies of organization and presentation of knowledge's modern picture of an international student in the educational process of the University is substantiated as a periodically repeated way of organizing educational material (frame concept) and educational time (frame script) for disciplines whose theoretical material is subjected to compaction (Sukhonosova, 2012; Fedorova, 2008; Erdniev, 1992). The established technologies allow an international student to expand the volume of acquired knowledge and information without increasing the amount of time to study them, as well as to bring learning goals closer to individual creative possibilities. Frame technology priorities of the organization and representing the knowledge's modern picture of an international student are proven – oriented on the organization of the educational material - frame technology - concept and organization of learning time –frame technology – script.

1. Structure and content of frame – concept technology. It is a *window* (similar to a computer), which is loaded with certain educational information, focused on specific goals. Four pedagogical rules that must be followed in the design and implementation of the frame concept technology:

- updating of knowledge - information is loaded in the *window* in the form of concepts, formulas, short definitions, values corresponding to the didactic problems of the previous material;

- Specification of cause-and-effect relations between the previous, already studied material and the new, forthcoming for study;

- Visual placement of drawings, diagrams and other symbolic texts that complement the content of the information;

- Design of reference abstract of the studied content:

1) formulation of goals, objectives;

2) Structuring the requirements for the content of the basic abstract;

3) The definition of the format of information (performed in a variety, depending on the creativity of the teacher, forms);

4) Definition of functions, methods and means of implementation of the basic abstract in training;

5) Design of the content part (basic knowledge, structured in a logical sequence and presented in the form of visual graphical tools, symbolic texts);

6) Definition of the logical-semantic scheme of the basic abstract. It performs the function of a framework for the content of information that establishes the most typical, significant, system-forming relationships between the semantic cells of educational information:

- Units- diagrams representing the whole structure of educational information. Based on the general structural elements of theoretical knowledge's content, it is possible to build a frame unit-diagram consisting of cells: the field of theoretical knowledge (topic, section) and elements of knowledge (scientific facts, concepts, laws, theories). The selected structure can be refined and supplemented with the introduction of other cells that establish system relationships that reveal the meanings of the scheme elements;

- Logical and semantic matrices, with which the systematization of knowledge, the development of analytical and diagnostic skills of students in the structuring of educational content is fulfilled. Linear and multidimensional matrices are defined: linear matrices – enlarged educational knowledge, allocated on a certain basis, are arranged in order along one axis. An example of a frame-linear matrix is the time axis, which marked the stages of development of scientific knowledge in a particular area. Multidimensional matrices are constructed in the form of tables based on the comparison or generalization of structural elements of knowledge (for example, regularities-prerequisites-cause-effect);

- supporting - connecting schemes. The high level of efficiency of supporting - connecting schemes' use in the process of students' presenting with the basic structural elements of information is proved. For this purpose, in the center of the scheme there is a generalized concept corresponding to the topic, the section of the discipline from which the rays of the structural elements of knowledge radiate (scientific facts, concepts, laws and theories). On each ray, the components of the knowledge elements necessary for the study are placed with the help of nodes;

2. Structure and content of the frame – script technology. It is based on the sequence of execution or correction of educational actions and analysis of the educational situation. The hierarchical structure of the frame script consists of information terminals (slot nodes) and non-terminal nodes. The terminal presents and describes the subject under study, its specific features, as well as information about the relationship with other subjects, about the way the frame is used, about the next action or about the action to be performed if the assumption is not justified. Nonterminal nodes contain additional information and information related to the object that describes the frame, as well as data required for exit procedures. To explain the student's rapid understanding of the situation, it is necessary to correlate the frame script terminals with the most typical questions caused by this situation. The frame script (often is identified with the frame scenario) is the procedure for performing the task, action: description of algorithmic requirements using the established language of information transmission (description of the sequence of the problem solving, the instruction of actions in the case of negative results, advice on solving certain problems), is a unit of questions about the topic under study, the problem, the expected situation, solutions and answers to them. In the course of the research the structure and content of frames – scripts technologies, the most adapted to the content of the international student's education, are substantiated:

- frame algorithm technology. They form and develop educational skills of assimilation and systematization of knowledge on discipline. Work on a given algorithm requires students to perform a variety of intelligent operations and update information from other frames;

- frame-description technology. It reveals the regularities of events or processes, the characteristic features of which are the high generality of the structure of the text and the sequence of development of the situation or cause – effect relationship of the basic content of the text. Technology-description is presented in sign-symbolic or graphical form with the help of digital, algorithmic, symbolic logograms;

- problem-solving frame technology. The study identified the stereotypical, didactic elements of the technology of the problem-solving frame: problem actualization - formation of knowledge about the ways to solve the problem – the choice of the problem solution – the problem solution – the assessment of the optimality of the decision. The main purpose of this type of technology - the development of logical, problem-based, creative thinking of an international student.

Conclusion

The study confirms the theoretical and practical significance of the problem of design and implementation of frame –based pedagogical technologies as an actual practice-oriented direction of transformation of the educational process of the University, the key idea of which is the organization and presentation of knowledge's modern picture to an international student, determined by the synthesis of an integrated system of its elements, the transformation of educational information in the content of training, the transformation of verbal information into non-verbal, the use of innovative sign-symbolic structural representation schemes. Based on the results of the study, the universality of didactic units' enlargement of educational and scientific information in the organization and presentation of knowledge's modern picture of an international student in the implementation of basic frame technologies (technology – concepts, technology - scripts) is proved. This trend is provided by a set of pedagogical conditions, among which priorities are given to: systematization, generalization, repeatability of methods of organizing the content of training and educational time, algorithmization. It is proved that in the course of didactic units' enlargement in the content of training there is a *materialization* of educational information in concise, succinct, substantial texts; verbal information is transformed into imaginative (non-verbal); a complete system of knowledge and abstract thoughts of students is formed: their theoretical knowledge is systematized, deepened, expanded, their subconscious abilities of creative initiative, independent creative thinking are developed, practical competence for information management in educational activities are formed. In this regard, this article theoretically justified and experimentally confirmed the effectiveness of theoretical and methodical approach to the design of the learning process of an international student based on frame technologies of organization and presentation of the modern picture of knowledge. The article reveals the features of the frame approach to the organization and presentation of knowledge's modern picture of an international student in the educational process of the University. The universal format of enlargement of knowledge's didactic units in the design of frame technologies is established. Based on the results of the study, the priority of concepts - technologies and scripts - technologies of the organization and presentation of knowledge's modern picture of an international student is justified and the effectiveness of their implementation in the educational process of the University is proved.

The study of didactic resources of frame technologies is not completed by solving the problems of the study. The frame approach to the integration of network technologies with educational technologies of the University is of particular interest to future researchers.

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Lexical Representation of Emotions in Contemporary Russian Economic Mass Media

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Abstract

The paper describes language aspects of verbalizing emotions in the texts of the Russian online mass media on economy and finance. Some statistical data obtained from the comprehensive analysis of the words that name and describe emotions in the Russian articles are given and studied. The emotive vocabulary was broken down into groups following the authors' classification. The authors focus on syntagmatic relations and functions of the names of emotions, as well as on their correlation with economic and financial terms.

Keywords: verbalization of emotions, language representation of emotions,emotive lexis, names of emotions,
Russian economic mass media.

Introduction

Contemporary linguistics of emotions sees the next stage of development: new blended research areas emerge that study the issue of emotions from different perspectives. Hence, a new research discipline within anthropocentric linguistics, i.e. linguistic ecology, has been created. V.I. Shakhovsky(2016), a famous Russian scholar, states that this discipline focuses on emotional aspect of speech. He also describes emotional linguistic ecology as a science studying "health safety of a language, language environment of a person being the part of nature".

The language of emotions in mass media on economy and finance plays a truly significant role due to trends in modern intercultural communication. Globalization and integration processes open new opportunities, types and forms of communication, the existence of which is impossible without mutual understanding between different cultures (Birova, Vasbieva & Masalimova, 2017). Contemporary economic mass media is widely used for educational purposes to master students' professional communicative competence, socio-cultural and intercultural skills, developing creative thinking (Kalugina, 2016; Vasbieva & Kalugina, 2016; Novikova et al., 2018; Kulamikhina et al., 2018; Kalugina & Tarasevich, 2018; Khorrami et al, 2015; Zulkifli, & binti Ali, 2017; Chernopyatov, 2018; Adedeji, 2018). Students have difficulty mastering lexical units that form the lexical side of foreign speech and are characterized by a particular semantic and structural properties (Vasbieva, 2015, 2016). In such terms, linguistics needs a comprehensive analysis of emotive lexis used in this context. No previous study has thoroughly investigated verbalization of emotions in the texts of Russian economic and financial online mass media.

The main purpose of this study is to perform an analysis of the names of emotions in Russian economic and financial mass media following the concept classification developed by the authors. To achieve this purpose, we set several objectives:

– to present contemporary literature review on the issue
– to make up an alphabet and frequency word list of the names of emotions, which were identified in the texts under investigation
– to distinguish these names of emotions according to the classification developed by the authors
– to study structural and semantic properties of the words within the clusters of the classification.

Literature Review

V.I. Shakhovsky (2016) names two approaches to language study in terms of linguistic ecology: its interaction with the user, and with other languages. In the more recent paper, the scholar addresses the problems of the language personality theory, supports the idea of including an emotional component into the structure of a language personality concept. He also explains the necessity to use the new scientific term – 'emotional and communicative personality'. The researcher highlights the factual communicativeness of any language personality and states that communication is impossible without feelings for the topic, content or selection of linguistic/stylistic devices within the process of communication (Shakhovsky, 2018).

L. Alba-Juez and T. Larina (2018) separate the terms *emotional* and *emotive communication*. The scholars believe that the first type stands for "instinctive, spontaneous, unplanned expression of inner emotional states", whether emotive communication is considered as "intentional expression of emotions for communicative purposes".

It is common research practice for linguists to separate such notions, as *feelings*, *emotions*, *affects*, *experiences*. English speaking scholars use the term *emotions* to describe sudden and strong reactions to environment and accompanied by some physiologic changes. *Feelings* are more constant. The most common term, which includes the whole range of *moods*, *emotions*, *feelings*, is the word *affect* (Yus, 2018). Nevertheless, M. Schwarz-Friesel (2015)disagrees with this point of view and suggests that *emotions* should be considered as a complex knowledge system created with inner sensations that performs primarily an evaluation function in a human body. He understands *feelings* as emotions experienced consciously, qualifying them as mental representations.

Stating that communication is impossible without the emotional factor, V.I. Shakhovsky(2018) refers to contemporary intercultural interaction, within which famous officials, politicians and businessmen use aggressive, sharp utterances, expressive language. The scholar's analysis of Russian mass media texts indicated new trends and changes in the language of emotions. Thus, V.I. Shakhovsky (2016) claims that the scale of emotive names has become more asymmetric. He connects this phenomenon to the process of losing applicability and contextual significance of some positive emotional concepts, as well as to their low demand or even total absence of demand in speech.

It is obvious that today scientists focus more on the relationship between emotionality and financial human behavior. Some researchers state that patients suffering from emotional disturbance make more successful decisions on investment than those who suffer from other disorders or even than healthy ones (Shiv,2005). J.L. Mackenzie(2018) studies the usage of nouns *sentiment* and *confidence* in financial English within the texts of the Hong Kong Financial Services Corpus. The results of his research show the negative side of emotionality, for example, in case of irrational human behavior while making decisions at the stock market.

Methodology

This paper investigates 12 articles from Russian websites (*Ведомости / Vedomosti, Коммерсант / Kommersant, Эксперт / Expert*).

The first step was to generate a word list of the names of emotions identified in the articles. The vocabulary items were selected following various conceptual dictionaries with those meanings that were only valuable within the scope of this study. The basic word classes represented in the list are nouns and verbs with modifiers (adjectives and adverbs) derived from them.

1) беспокойство 'worry' *n*
2) бояться 'to fear' *v*
3) виноватый 'guilty' *adj*2
4) возмущение 'indignation' *n*
5) возмущенный 'indignant' *adj*
6) волновать 'to excite' *v*
7) грустно 'sadly' *adv*
8) довольный 'pleased' *adj*
9) любить 'to love' *v*3

10) любоваться ‘to admire’ *v*
11) мучительно ‘agonizingly’ *adv*
12) наслаждаться ‘to enjoy’ *v*
13) настороженно ‘cautiously’ *adv*
14) нелюбимый ‘unloved’ *adj*
15) неприятный ‘unpleasant’ *adj*
16) нравиться ‘to like’ *v*
17) обвинять ‘to blame’ *v*
18) обеспокоенность ‘anxiety’ *n*
19) обидный ‘offensive’ *adj* 2
20) опасаться ‘to be apprehensive’ *v* 2
21) опасение ‘apprehension’ *n*2
22) отчаянно ‘desperately’ *adv*
23) паника ‘panic’ *n*
24) печалиться ‘to sorrow’ *v*
25) позавидовать ‘to envy’ *v*3
26) понравиться ‘to be liked’ *v* 2
27) пострадать ‘to suffer’ *v*4
28) пугать ‘frighten’ *v* 2
29) рад ‘happy’ *adj*
30) разочарование ‘disappointment’ *n*
31) страх ‘fear’ *n*2
32) счастье ‘happiness’ *n*
33) тревожный ‘anxious’ *adj*2
34) удовольствие ‘pleasure’ *n*
35) ужасный ‘horrible’ *adj*
36) чувствовать ‘feel’ *v*2
37) эмоция ‘emotion’ *n*

According to the quantitative analysis of the word list, 37 language items in 53 word usages were identified in the texts of the Russian online economic and financial mass media.

The next step was to distinguish the lexemes according to the word classes (Table 1).

Table 1. Names of emotions according to word classes

Word classes	Number of lexemes	Word usages
Noun	10	12
Verb	14	25
Adjective	9	12
Adverb	4	4

As can be seen from table 1 the verbs dominate quantitatively both in the number of lexemes and in word usages. Adjectives are second top of the list with nouns occupying the third position and adverbs at the bottom. It is also important to note that only 12 linguistic units, i.e. 32 percent, were used more than once. The alphabetical and frequency word list of names of emotions shows that the most frequently used Russian lexeme is the verb *пострадать* ‘to suffer’ (4 word usages – w/u).

Results and Discussion

For the purposes of comprehensive linguistic analysis, it was decided to implement the classification of Russian words naming emotions first introduced in the previous research (Smakhtin, 2012). The names of emotions under investigation were broken down into ten categories:

Table 2. Names of emotions according to classification

I. Affections in General	волновать ‘toexcite’ *v* чувствовать ‘feel’ *v* 2 эмоция ‘emotion’ *n*
II. Various Feelings, Emotional States:	
1. Delight, joy, cheer, contentment, tranquility	наслаждаться ‘to enjoy’ *v* довольный ‘pleased’ *adj* рад ‘happy’ *adj* счастье ‘happiness’ *n* удовольствие ‘pleasure’ *n*
2. Love, tenderness, liking, affection, gratitude	любить ‘to love’ *v* 3 любоваться ‘to admire’ *v* нравиться ‘to like’ *v* понравиться ‘to be liked’ *v* 2
3. Compassion, sympathy	-
4. Suffering, regret, embarrassment, shame	виноватый ‘guilty’ *adj* 2 мучительно ‘agonizingly’ *adv* обвинять ‘to blame’ *v* пострадать ‘to suffer’ *v* 4
5. Fear, anxiety, impatience	беспокойство ‘worry’ *n* бояться ‘tofear’ *v* настороженно ‘cautiously’ *adv* обеспокоенность ‘anxiety’ *n* опасаться ‘to be apprehensive’ *v* 2 опасение ‘apprehension’ *n* 2 паника ‘panic’ *n* пугать ‘frighten’ *v* 2 страх ‘fear’ *n* 2 тревожный ‘anxious’ *adj* 2 ужасный ‘horrible’ *adj*
6. Insult, disappointment, discontent	возмущение ‘indignation’ *n* возмущенный ‘indignant’ *adj* обидный ‘offensive’ *adj* 2 разочарование ‘disappointment’ *n*
7. Despair, grief, sorrow	грустно ‘sadly’ *adv* отчаянно ‘desperately’ *adv* печалиться ‘to sorrow’ *v*
8. Disgust, contempt, envy, dislike	неприятный ‘unpleasant’ *adj* позавидовать ‘to envy’ *v* 3
9. Anger, rage, fury	нелюбимый ‘unloved’ *adj*

The data in the table 2 demonstrates quantitative and qualitative composition of each cluster. We can see that the most verbally represented group of emotions in the Russian articles under investigation is ‘Fear, anxiety, impatience’ (11 lexical units (16 w/u)), which consists of 5 nouns with 7 w/u, 3 verbs with 5 w/u, 2 adjectives (3 w/u), and one adverb used also once. Thus, emotions of fear and anxiety were verbalized through the nouns *беспокойство* ‘worry’, *обеспокоенность* ‘anxiety’, *опасение* ‘apprehension’ (2 w/u), *паника* ‘panic’, and *страх* ‘fear’ (2 w/u).

Беспокойство *охватило финансовые рынки* (Vedomosti, December 20th, 2018).

“…Это предмет моей ***обеспокоенности****, потому что официально мы этого не увидим”, – рассказывает директор Института социального анализа и прогнозирования РАНХиГС* (Kommersant, May 13th, 2017).

"Пока нет признаков сокращения добычи нефти, продолжается рост ***опасений*** *касательно замедления спроса в мире", – объясняет аналитик БКС Кирилл Таченников* (Vedomosti, December 20th, 2018).

Высокие ставки и дорогой доллар уже давят на американскую экономику, к этому добавляются ***опасения*** *инвесторов по поводу замедления экономики в Китае – снижение цены нефти закономерно, заключает он* (Vedomosti, December 20th, 2018).

Что же касается ситуации в США, то, уверен аналитик "Алор Брокер" Алексей Антонов, попытки управлять рынками "в ручном режиме" крайне рискованны: если это не удается, рынки посещает еще более масштабная ***паника****, чем если бы этот звонок Мнучина главам инвестбанков просто не состоялся* (Expert, 2018).

Он (StephenJen, CEO, Eurizon SLJ Capital) *положительно оценивает перспективы фунта, считая его перепроданным из-за* ***страха*** *жесткого Brexit* (Vedomosti, December 20th, 2018).

Инвесторов это ***пугает****, но некоторые считают такие* ***страхи*** *контриндикатором*(Vedomosti, December 20th, 2018).

The study of syntagmatic relations of the nouns from the examples above indicates that worry is compared to some disease – it can grasp financial markets as illnesses grasp people. One of the directors of a Moscow higher education institution feels anxiety due to a complex reason: mortgage dependency of families who use maternity capital for mortgage in most cases and then are unable to pay it off, moreover, this fact is not officially documented still.

It is worth mentioning that the noun *опасение* 'apprehension' was both times used in the same article '*Баррель Brent стал дешевле $55*' (Brent barrel price is less than $55) in the plural form, which is typical for the Russian language as this word is countable in Russian. The reasons for apprehension are global demand deceleration (*замедление спроса в мире*) and economy slowdown in China (*замедление экономики в Китае*). Investors are the ones who experience this emotion.

The word *паника* 'panic' was identified in the article '*Обвал перед Рождеством*' (Crash before Christmas) within a set expression *паника посещает* 'panic visits'. The degree of this emotion can be higher (*более масштабная*) if the US authorities try to manage financial markets 'manually' (в ручном режиме). The journalist personifies financial markets by suggesting that they can experience panic.

The article '*Великобритания и Евросоюз стали готовиться к жесткому Brexit*' (Great Britain and EU are getting ready for hard Brexit) introduces fear of hard Brexit as a hypothetical reason for the pound's probably positive future due to its reselling. The second appearance of the noun *страх* 'fear' is in the plural form in the same article commenting the title, the fears are considered as counter-indicators. In this sentence, we can also see the verb *пугать* 'frighten' from the cluster 'Fear, anxiety, impatience': the idea mentioned in the title of the article frightens investors.

«Всех ***пугают*** *две вещи: рост сланцевой добычи в США и замедление темпов роста потребления нефти в мире», – считает аналитик «Атона» Александр Корнилов* (Vedomosti, December 20th, 2018).

In the example, we can see that the journalist uses the opinion of a financial analyst who generalizes and describes the issue as a global one by implementing the pronoun *всех* 'everyone' in the plural form. Everyone is afraid of two things, i.e. fracking growth in the USA and decrease of oil consumption in the world, which are interconnected.

Earlier, the author of this article refers to another analyst who tries to follow the main cause-and-effect relationship between the oil price fall and traders' fears. Trade wars (*торговые войны*) and interest rate increase (*рост процентных ставок*) leading to economy slowdown (замедление экономики) are the factors that cause fear.

Нефть падает главным образом потому, что спекулянты ***боятся*** *замедления мировой экономики – из-за торговых войн и роста процентных ставок, считает аналитик Raiffeisenbank Андрей Полищук* (Vedomosti, December 20th, 2018).

Quoting an ING analyst, the author of the article '*Великобритания и Евросоюз стали готовиться к жесткому Brexit*' (Great Britain and EU are getting ready for hard Brexit) predicts hard times for retail due to consumers' fears for their jobs in case Brexit happens without agreeing with the EU. We should pay attention to the fact that the verb form identified in the sentence *опасаясь* 'being apprehensive' is a so-called transgressive verb form typical for Russian. The same author uses such a verb form of this word in another sentence within the article describing the opinion of some Brexit supporters with the help of the allusion to La La Land. The EU is compared to human beings with the feeling of apprehension; the main reason is some hypothetical problems caused by Brexit.

Рождественский период будет непростым для розницы: потребители уже осторожничают, а могут занервничать еще больше, ***опасаясь*** *за свои рабочие места в случае Brexit без договоренности с ЕС, пишет аналитик ING Джеймс Смит* (Vedomosti, December 20th, 2018).

По словам европейских дипломатов (их мнения приводит Financial Times), некоторые сторонники Brexit по-прежнему «живут в «Ла-ла Ленде», полагая, что ЕС, ***опасаясь*** *проблем, пойдет Британии навстречу в спорных вопросах* (Vedomosti, December 20th, 2018).

The analysis of syntagmatic relations of the adjectives of this group of emotions shows us that in the Russian linguistic worldview an image or a situation may be described as anxious (*тревожный*), while results are horrible (*ужасный*).

Картина очень ***тревожная****. Мы надеемся, что системообразующие компании с трудом, но переживут новый год, громких падений быть не должно» – говорит заместитель исполнительного директора Ассоциации эксплуатантов воздушного транспорта (АЭВТ) Борис Шокуров* (Expert, 2018).

И хотя по итогам девяти месяцев работы авиакомпания уже рапортовала о прибыли 22,5 млрд рублей, ситуация все равно выглядит очень ***тревожной***(Expert, 2018).

Но обучив модель на всем входящем потоке заявок, при первом тесте мы получили ***ужасные*** *результаты: получилось, что каждый новый клиент сравнивался с более чем 30 тысячами, имеющимися в базе* (Expert, 2018).

The case of using the Russian adverb *настороженно* 'cautiously', which specifies the verb *относиться* 'treat' describes the attitude of an average contemporary Russian consumer towards communicating personal data via the Internet.

Как отмечают эксперты отрасли, российский потребитель, осознавший все преимущества онлайн-передачи и получения денежных средств, менее ***настороженно*** *относится к передаче в банк информации о себе посредством интернет, признает права и обязанности, вытекающие из удаленного общения, понимает суть входящих и исходящих денежных потоков, возникающих вне личных договоренностей клиента и банка* (Expert, 2018).

The second top verbally represented group of emotions is 'Delight, joy, cheer, contentment, tranquility' (5 lexical units with one-word usage each), consisting of 2 nouns (*счастье* 'happiness', удовольствие 'pleasure'), 1 verb (*наслаждаться* 'to enjoy'), and 2 adjectives (*довольный* 'pleased', *рад* 'happy').

The syntagmatic surrounding of the names of these positive emotions identifies their relation to financial and economic terms. Hence, a number of railcars were deducted from the balance with pleasure, some people prefer to enjoy their life between crises.

Они быстро приходили в негодность и с ***удовольствием*** *списывались с баланса как источник ненужной головной боли* (Kommersant, May 13th, 2017).

А между кризисами я ***наслаждаюсь*** *жизнью* (Vedomosti, December 21st, 2018).

The three clusters of emotions, i.e. 'Love, tenderness, liking, affection, gratitude', 'Suffering, regret, embarrassment, shame', and 'Insult, disappointment, discontent', were represented by 4 lexical units each.

All three usages of the verb *любить* 'to love' were identified in the article 'На что обратить внимание инвесторам в наступающем году' (Facts for investors to pay attention to next year).

Некоторые СМИ ***любят*** *сравнивать ВВП разных стран и динамику его роста* (Vedomosti, December 24, 2018).

Дальше по убывающей: Бразилия, Мексика, Турция, а для тех, кто ***любит*** *погорячее, – Юго-Восточная Азия или Южная Африка. Для инвесторов,* ***любящих*** *риск и умеющих с ним работать, очень привлекательным выглядит рынок российских акций* (Vedomosti, December 24, 2018).

As the context shows, mass media love comparing GDP of different countries and its dynamics. Here, the verb is the part of a complex predicate with the infinitive *сравнивать* 'to compare'. Investors may love hotter (*погорячее*) countries, or risk (*риск*).

The verb *любоваться* 'to admire' is used to describe the emotions of a person-consumer who has just bought some exclusive, vintage product, i.e. a Soviet railcar. Here, his quote uses the reflexive verb *понравиться* 'to be liked', which is formed by means of adding the prefix to the original нравиться 'to like'.

Мне она своей оригинальностью ***понравилась****! –* ***любуется*** *Александр своим приобретением, стоя возле одной из последних сохранившихся узкоколейных советских автомотрис* (Kommersant, May 13th, 2017).

The group 'Suffering, regret, embarrassment, shame' is verbalized through 2 verbs (обвинять 'to blame' and пострадать 'to suffer' (4 w/u)), one adjective (виноватый 'guilty' (2w/u)), and one adverb (мучительно 'agonizingly').

Being the most frequently used Russian lexical unit in our word list, the verb пострадать 'to suffer' needs to be analyzed thoroughly.

Единственная проблема заключается в том, что коммерческая ценность бывших участков первой линии от этой переоценки ценностей заметно ***пострадала*** (Kommersant, May 13th, 2017).

Так как мы придерживаемся позиции, что система безопасности должна иметь баланс между надежностью и удобством пользования сервисом, то перед нами встала задача, как закрыть 3 процента фродерских заявок, чтобы при этом не ***пострадали*** *97 процентов честных клиентов* (Expert, 2018).

При этом больше всего ***пострадали*** *внутренние направления – здесь убытки увеличились в 7 раз и превысили 34 млрд рублей*(Expert, 2018).

Экономика еврозоны, ***пострадавшая*** *от торговых войн с Америкой, по-прежнему близка к стагнации, и сигналов оживления пока нет* (Vedomosti, December 24, 2018).

The examples demonstrate various grammatical forms and contextual syntagmatic relations with the words from the financial area. Hence, commercial value may suffer; honest clients should not suffer; Eurozone economy suffers from trade wars with the USA.

It is worth mentioning that the group 'Compassion, sympathy' was not verbally represented in the articles under investigation.

Conclusion

The study performed shows active usage of emotional terms in the texts of contemporary Russian economic and financial mass media. Review of up-to-date literature on the problem proves relativity of this paper. The alphabet and frequency word list of the names of emotions, which were identified in the texts under investigation, as well as their consequent breakdown into ten clusters allowed us to perform a comprehensive analysis of the Russian emotive language.

It was identified and once again proved, following the most authoritative global scholars, that verbs dominate quantitatively both in the number of lexemes and in word usages. This fact makes predicates the main lexical and grammatical means of expressing emotions in the written language.

The analysis of the data obtained through creating the word list and authors' classification indicated the dominance of the so-called negative emotions in the contemporary Russian linguistic worldview. The following study of the clusters helped us to witness a wider image of verbal representation of emotions in Russian. Thus, it is obvious, that among the main stylistic devices used by the authors of journalist articles to describe feelings and emotions are similes, allusions to the items of pop culture, as well as personification of financial and economic phenomena.

The evidence proves that emotional language is interconnected with financial and economic terms. Further and more detailed investigations may cover lexicographic aspects, including even the composition of a dictionary of economic and emotive set phrases.

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The Influence of Social Justice Crisis on Social Health and Spiritual Security of Young Students (a Case Study of the South of Russia)

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Abstract

This paper deals with the consideration of social justice crisis as an intrinsic factor of influence on social health and spiritual security of young Russian students, since social justice crisis is poses a threat to spiritual security of Russia. Within the scope of this paper, social health of young people implies a sense of social justice, a state of security of the vital interests of a young person from hazards and threats. The paper is based on the results of authors empirical studies. The sociological research of this phenomenon becomes especially topical due to the fact that it makes it possible to enter in the inner world of young people, which is closed to statistics, psychological, pedagogical and economical methods, hence, to comprehend the perception of social justice by young students, to comprehend axiological dispositions and expectations, to promptly notice anomie disorders among young people, as well as social illness.

Keywords: social health, young students, spiritual security, national security, social justice, social justice crisis, threats to security of Russia.

Introduction

The sociological research of social health of young Russian students which has begun in the Russian social and humanitarian science in the late XX – early XXI centuries, has become particularly topical at the present stage of development of society. The interest in the phenomenon of social health of young people, originally conditioned by global social transformations taking place in Russia (Cockerham, 2000), many of which significantly impaired the social standing of young citizens, became aggravated due to painful blows to their physical, mental, and social well-being. It is the the rising generations of young Russian students, the state of their physical, mental and social health are the main guarantor of security of the society. Therefore, the strategic task of state youth policy in the sphere of social health service in the context of provision of national security consists in formation, preservation and improvement of social health of young people (Vaskov et al., 2018).

In modern risk society, the right of young people for spiritual security is exposed to threats on the part mass media and the Internet which consistently disseminate information about the total social and economic crisis in the country, about the crisis of social justice and trust to social structures and institutions.

Axiological anomie has been rapidly proliferating in Russian society; moral values gradually give way to material values, and young citizens of new Russia realize that Russia suffered heavy spiritual losses as a result of democratic transformations, which were rather poorly compensated when compared with the scale of the ruins that Russian culture and spirituality as an identifying marker of Russian civilization, as pursuance of social health, good, beauty, truth and justice (Khachetsukov, 2007), have turned into. There was an urgent need to overcome the total immunodeficiency of social health and spiritual and moral principles, revival of social justice, equality, solodarity, unity of the split Russian society which cannot be achieved without common goals, spiritual and moral values, as well as without improvement and preservation of social health of people and provision of spiritual security (Tastan & Davoudi, 2018; Ajallooeian et al, 2015).

It should be noted that spiritual security is one of the most topical issues of our time, one of the most significant issues for a personality, family, and social health of Russian society. D.V. Zerkalov (2012), emphasizes that spiritual security is a system of relations between the subjects of public activities of daily living, which provides favorable conditions for the creation of spiritual life and healthy social and moral development. Moral values often act as sources of social health of society. Spirituality is the basis for almost all things that are related to personality, to its self-fulfillment, as well as mental and social health. The role of spiritual sphere in the formation of social health of society has been recognized by many experts who deal with the issues of social and mental health of a person, social groups and society as a whole (Vodenko et al., 2016; Shakbanova et al., 2016; Chiang & Tzou, 2018).

Social health of young students is determinated by many factors of social and personal nature: state of health of young people, quality of its integration into social life, degree of satisfaction with social benefits, level of trust, perception of social justice etc. In addition, we can observe the direct relation of social health of young people with social justice and spiritual security of the Russians (Vereshchagina, Gafiatulina & Samygin, 2015). Globalization that can be observed in Russian society, appears as a certain controversial process that includes new perspectives and opportunities as well as risks, challenges and threats to spiritual security of Russia. Under the influence of sociocultural contradictions, global problems arise which are associated with the system of "person and society" and are directly associated with the problems of the provision of social and spiritual security and the formation of socially healthy personality (Gafiatulina et al., 2017; Kabayeva et al, 2018).

Materials and Methods

So, what is a social health of young Russian students within the scope of this paper? In many studies, social health of Russian young students is treated as an integrative category, presenting the level of adaption of a personality in the social enviroment, the degree of its social activity and the level of spirituality, harmony of relationship between different social groups and other people, regulation of behavior adequate to the current norms and universal human values of society (Tsikaliuk, 2010), as well as a certain level of development, formedness and perfection of forms and methods of interaction of a young person with external environment; a certain degree of psychosocial and spiritual development of a personality which allows to successfully implement this interaction (Vedernikova, Byrdina & Povorzniuk, 2015; Kolpina, 2017; Tambunan, 2018).

By social health of young Russian people, we imply a peculiar kind of indicator of social attitude, that cannot be reduced only to the level of material wealth, self-awareness as justly rich or unjustly poor, but is a generalized characteristic of the satisfaction or dissatisfaction of a young person with their social standing in society in all senses (Gafiatulina, 2009), as well as the sense of protection and security of their development. Socially health, safe development and functioning of the younger generation of Russians implies ways of implementation of individual opportunities, personal and group interests of young people, preventing or eliminating the possible negative impact on society and its structures. The activities of daily living of a young person will be deemed to be socially healthy and spiritually secure, unless there is any damage, threat, harm and undesirable dynamics on the part of external effects in the development of various social phenomena and processes (in particular, such as social trust and social justice). This corresponds to the three fundamental elements of national and spiritual security: interests, threats, protection. In response to internal and external threats to the vital interests of security subjects and objects, the system of national security protection produces counter measures of sociocultural, health, education, sociopolitical, economic, spiritual and social nature, responses with a certain policy in the sphere of national security (Vereshchagina et al., 2015).

Hence, within the scope of this paper, social health of young people implies a sense of social justice, a state of security of the vital interests of a young person from a set of hazards and threats of various type and degree. In other words, social health of young students is mainly manifested as an assessment and experience of justice, protection and security by a young personality. In turn, it becomes clear that national security, social stability and sustainable favorable development of Russia and the younger generations of

Russians is mainly determined by the state of their social health, trends of efficient innovative development, cumulative increase in social capital (trust, solidarity, justice etc.).

However, reality favors the increase in social capital by no means. The main globalization trends consist in the exacerbation of social justice crisis and aggravation of social inequality (economical, sociocultural, educational, health etc.), as well as marginalization of young students and increased risks in the sphere of its social health as the most vulnerable population group (Gafiatulina et al., 2017). The prospects for solving these problems are largely associated with the problem of social justice crisis.

Results

So, what is the role of percepetion of social justice crisis in matters associated with the formation of social health of the younger generation and provision of its spiritual security?

The principle of social justice is to give the most competent and active young people an opportunity to fulfil themselves in the society which is necessary for personality development and formation of social health. The concept of social health in its most commonly encountered semantic meanings is interpreted as equality, which means that for all groups of young people, including students, equal rights and opportunities should be created. This is because the pursuance of truth and social justice – according to E. Fromm (2011), – is an inherent distinctive feature of the nature of a person. That said, the concept of "justice" itself can be diverse by its scope of application: social justice, justice in interpersonal relationships, justice in foreign relations, justice in terms of access to social benefits, civil justice, ethnic and racial justice.

The fact that in the modern context justice cannot be considered from the perspective of economics, politics or management only is quite obvious. First of all, such a definition acquires sociocultural, spiritual and worldview nuances. Thus, T.V. Shipunova (2005), points out that social justice is not just an equality of young people but rather a measure of common good (social adequacy) of laws and regulatory directions establishing and based on agreement supporting such order of daily living activities of various groups and communities which would contribute to survival and development of the society, and would provide the state of spiritual security and socially healthy living (Shipunova, 2005).

We can talk about social justice when certain relations acquire public form, public significance, as it regulates the relations of various social groups, personality and society, thereby contributing to the formation and maintenance of social health and spiritual security of these social groups and society.

As many authors have noted, the outlines of social justice still remain in the context of emotive empiric sensations reflecting a particular level of social health of a personality. Hence, today, in the era of global changes, every young person gains the right for their own personal and individual perception of social justice.

We define social justice as a measure of concordance of due and reward which implies that every young person should be given an equal and fair opportunity to fully realize their potential in terms of social health. And, when we speculate in a more practical sense, no one should be placed in adverse conditions for the fulfilment of this potential, if they can be avoided. The term "injustice" refers to differences related to social health, which are not only preventable, but are also considered unfounded and unfair.

When we assessed social health of young students, we were guided by the self-evaluation of manifestations of social justice in the realization of essential needs, which, in turn, are derived from the system of social benefits and their distribution in the society.

Consequently, the more young people feel the lack of social benefits, the lower is the level of their social health and the sense of their spiritual security.

So, how do young students treat social justice through the prism of their social health?

In order to determine the level of social health of young people, we used a questionnaire (written questionnaire) which was conducted among respondents with the use of a special sampling method. According to the results of our questionnaire which was conducted in November and December of 2017 among young students in four regions of the South of Russia (Rostov Region, Adygea, Dagestan Republic and Chechen Republic), the following rank breakdowns were obtained in response to question: "Which manifestations of social justice are the most important and significant for you?". They are presented in Bar Graph No. 1.

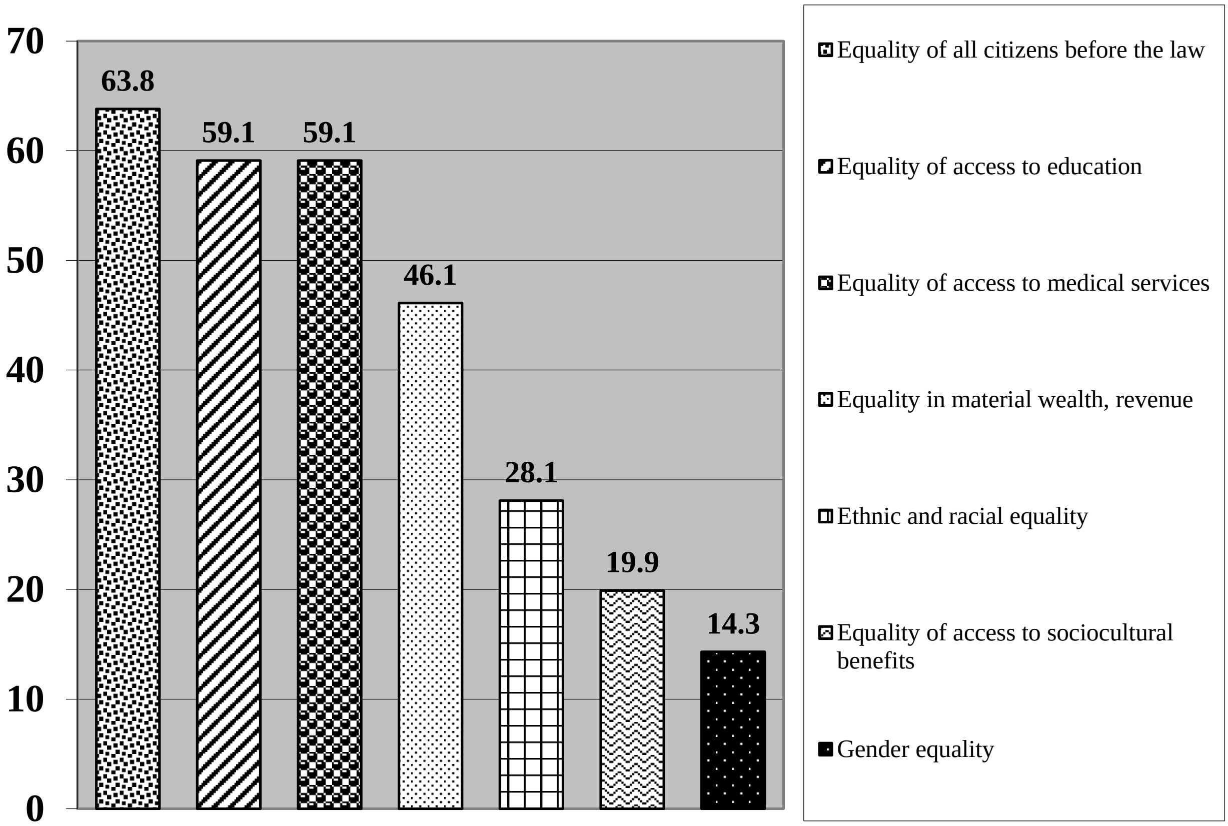

Figure 1. The most important and significant manifestations of social justice

The breakdown of answers to the question ***"Which manifestations of social justice are the most important and significant for you?"*** *(the answers are presented in per cent of the total number of respondents)*

As can be seen from the Bar Graph, according to all respondents, the dominating indicators in the definition of social justice are as follows:

– first rank position: 63.8% of respondents chose "equality of all before the law";

– second rank position is shared by two indicators: 59.1% – "equality of access to education" and "equality of access to medical services";

– third rank position: 46.1% of young respondents chose "equality in material wealth, revenue".

Looking at this breakdown, it is hardly surprising that more than half of young respondents gave the first two ranks to position of "equality of all before the law", "equality of access to education" and "equality of access to medical services". This is because young students are hoping to improve their social standing in the future, the assessment of the perception of social justice belongs to the main public life spheres: legal, educational and medical. The social and economic standing and equal opportunities in terms of access to education and health service – the main factors determining the achievements of young students, hence, the state of its social health and subsequent line of life.

In addition, it should be noted that the factor of national and racial equality is equally important for every third respondent (28.1%), where it should be noted that sociological research was conducted in a multicultural space. Chechen Republic, which is a single-ethnic formation, is the only exception. It is commonly known that the signs of zenophobia and nationalistic trends in modern Russian society leading to intolerance in mass consciousness and crowd behavior could be observed at the national level (Gryshai et al., 2018), which is indicative of social illness and threats to spiritual security of young people and poses a direct and visible threat to national security of Russia. The presense of such positions in the attitudes is apparently promoted by a fairly complex sociopolitical situation of instability and riskogenics in the Russian Federation, the loss of principles of international education, as well as international communication which existed in the socialist period of culture and contributed to the formation of the sense of security and protection, hence, the formation of high level of social health. At the same time, it should be noted that there are quite intrinsic factors that fuel destructive forms of manifestation of ethnic component (ethnofavoritism, ethnodomination, ethnocentrism), driven by the activities of the national elite, as well as strengthening of faith-based component, the threat of religious extremism and terrorism, which eventually give rise to the negative perception of a representative of another ethnos or another race. It is worthy of note that manifestation of ethnocentric attitudes is typical for young people living in big metropolitan cities under the conditions of increasingly aggravating and expanding migration (Deaux et al., 1995), which consequently results in the change in spiritual and sociocultural space.

In addition to the above, every fourth respondent is concerned about the problem of equal access to sociocultural benefits, which holds some validity as well. Thus, young people living in large administrative formations, do not feel any lack of necessary knowledge or entertainment (cinema, therater, schools of various vocational-oriented education), then, as is known, such problems are available in populated areas located far from the center; moreover, they only get worse over time.

In addition, every seventh young respondent is concerned about gender equality, and this problem is probably very pressing in the republics with people of Islamic faith.

If we look at the results of our research broken down by sub-arrays (Rostov Region, Dagestan, Adygea, and Chechen Republic), we can notice certain distinctions which are indicative of the trends of aggravation of social inequality of young people by regions.

Thus, if the key factor of manifestation of social justice in modern Russian society is "equality of all before the law" for the entire array of respondents, young students in Dagestan have shifted it to the second position, giving way to "equality of access to education" (62.7%); the respondents from Chechen Republic ranked the last factor second (59.7%), while the respondents from Adygea (59.1%) and Rostov Region (56.4%) ranked it third.

Therefore, "equality of access to medical services" – 62.6% and 59.3% is prioritized by young students of the Rostov Region and Adygea, whereas its significance is a little bit lower for the citizens of the Chechen Republic (57.3%) and Dagestan (56.9%). Hence, the absence of the factor of equality of access to medical services for young people in the Rostov Region and Adygea intensify the sense of lack of social benefits, thus reducing the level of its social health and spiritual security.

Moreover, the manifestation of social justice consists and "ethnic and racial equality" for every third respondent in Dagestan and Adygea, and for every fourth respondent in Rostov Region and Chechen Republic. The gender-based status and gender equality are of more concern to young students in the Rostov Region (17.1%), Adygea (15.9%), Dagestan (13.6%); it is of the least concern among respondents from the Chechen Republic (8.1%). And this is despite the fact that we are witnessing the strengthening of national (ethnic) identity, and accordingly, traditional culture, which has deeply rooted traditions of harmonious interaction and interrelation of genders (Shakbanova et al., 2018).

Further in our research, the respondents were requested to specify the factors of social injustice. When answering the question: "Which manifestations of social justice are not observed in modern Russian society?" the following rank breakdowns were obtained. They are presented in Figure 2.

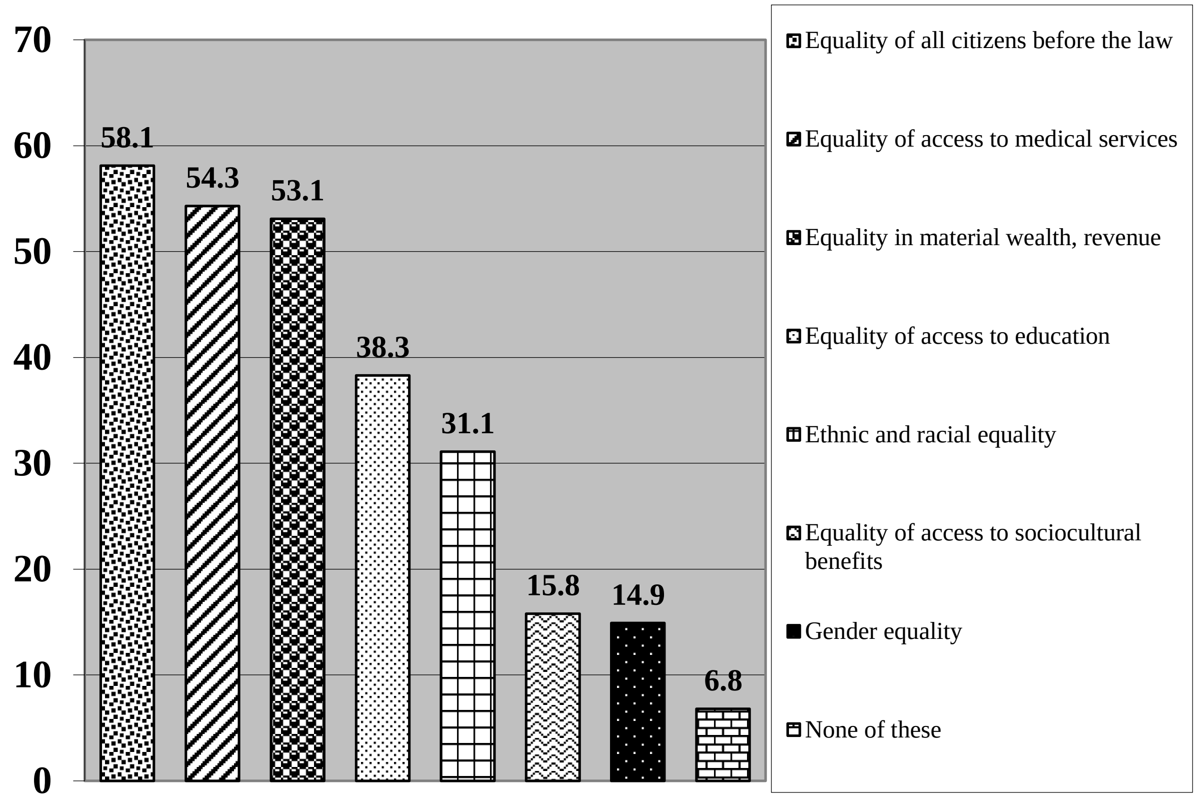

Figure 2. The manifestations of social justice in modern Russian society

The breakdown of answers to the question ***"Which manifestations of social justice are not observed in modern Russian society?"*** *(the answers are presented in per cent of the total number of respondents).*

Hence, figure 2 shows us that two factors ranked first throughout the entire array of young respondents: "equality of material wealth" and "equality of access to medical services" (48.8%). The factor of equality "of all citizens before the law" (46.5%) ranked second. The factor of ethnic and racial inequality (34.9%) ranked third.

Therefore, we can state that young students остро ощущает various manifestations of social injustice in modern Russian society, which poses a direct threat to its social health and spiritual security.

Discussion

Social justice is a category which characterizes the measure of equality and inequality in terms of position of various groups and individuals, objectively determinated by the level of material, social and spiritual maturity, as well as the state of physical, social and mental health. According to V.E. Makarov (2011), correlating young people with their behavioral strategies of living, social justice determines "in what and how people should appear as equal to each other, and in what and how they can and should differ from each other". Moreover, such a comparative position particularly applies to modern young people. However, it must be borne in mind that perfect equality among young people can be a source of social injustice, conflicts, as well as a threat to public and spiritual security. It is reasonable that the problem of social inequality acquires particularly social and historical ring, is tied to national specificity of Russian society and various groups and communities. We must not forget that new forms of social differentiation of population at large, especially its younger portion, arise in the controversial and complex process of global transformations, significantly impacting social health and sense of spiritual security of young people.

In his research on sociocultural factors of Russian stagnation and modernization, N.I. Lapin (2013), makes a pessimistic forecast with regard to the growing threats and challenges to security of Russia, and is indicative of a pressing need to build a fair society with equal opportunities for every person.

The sense of social injustice expresses the "breakdown of public relations" and is a clear sign of social tension and instability in relations, security threat, and social illness. It follows as a logical consequence that the sense of justice (injustice) impacts on the formation of a particular social health among young people, effectively forming prerequisites for a particular level of social health.

Conclusions

In general, according to our empirical studies, the trends of the growing social justice crisis in Russian society, undermining social health of young people, are defined by the following factors:

– social deprivation, limitation of access to material, social and spiritual resources, that are so necessary to meet the basic needs of young people for the provision of spiritual security and the formation of socially healthy personality;

– significant changes in the system of employment of modern young students and awareness of difficulties related to their potential employment (78.3% of respondents are concerned about employment difficulties in the future, thus they rate them as insecure);

– social anomie and a sense of insecurity which consists in virtually total destruction of one system of rules, norms and values, and vagueness and immaturity of other axiological and normative system;

– a decrease in the level and quality of life of the overwhelming part of young students, as well as the mode of life which changed for the worse are perceived as a threat to personal security and are characterized by a sense of lack of protection of rights of a person.

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Integration of Health-Saving Technologies in the Process of Educational and Professional Socialization of the Russian Student-Age Population

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Abstract

This article describes the possibilities of social technologies in the practice of health saving within the educational and professional socialization of the Russian student-age population in view of the conditions of social uncertainty of the Russian society. The educational process should be organized according to the principle of pedagogical health-saving technology – i.e., it should be an ordered set of actions, operations, and procedures that ensure achievement of the forecasted result in the changing conditions of the educational and socializing process. The authors also offer the proprietary health-saving technology, based on the factors of the educational and professional socialization of student-age population, which has the person-oriented direction.

Keywords: health-saving technologies, health-saving educational andprofessional socialization, student-age population, conditions of social uncertainty, factor technologies,
person-oriented direction.

Introduction

In the modern socio-economic conditions of global changes and the change of the paradigms of public values, the state of physical, moral, and social health of the youth attracts special attention of the specialists of various spheres of science, medicine, and education (Beregovaya & Radomskaya, 2017; Almasi & Khorasgani, 2018), who develop new health-saving technologies. It is obvious that effective professional activities could be conducted only by the specialists who are physically, morally, and socially healthy and who can see and understand a rather wide specter of manifestations of the social and professional reality, perceiving the world in its integrity (Vodenko et al., 2016; Kousmartseva, 2016, 2017; Tastan et al., 2018; Murasheva et al, 2018).

The sphere of professional education and professional socialization becomes of top-priority, and its contents are a factor of economic and social progress; it should be oriented at provision of self-realization of a person and creation of conditions for a person's development in the personal and professional spheres (Gafiatulina et al., 2017).

Health of student-age population, its physical, moral, and social development, and the processes of socialization and adaptation in the educational and professional sphere are determined by the conditions of its social life in the modern Russian society, in which transformation processes has acquired a permanent character – which adds uncertainty and instability to all spheres of life activities, including the sphere of professional and educational socialization of the Russian student-age population (Shakhbanova et al., 2016).

In the conditions of transition to the intensive type of development of economy, health acquires the role of inseparable factor of professional growth. Aggravation of health and increase of the processes of marginality and self-destruction of a large part of student-age population are a logical consequence of bad self-preserving behavior against the background of intellectual pressure.

Health-saving professional socialization (hereinafter - HSPS) of student-age population at this stage of development of the Russian society should be studied in the context of the tendency of growth of socio-political tension among the population (Vaskov et al., 2018) and formation of the space of social uncertainty as a real space of implementation of life practices, strategies, and plans of student-age population.

The federal program of development and modernization of education sees one of the main goals as the necessity for preserving and strengthening of health of student-age population, development of health-saving technologies, and formation of the value of health and healthy way of life in the educational and socializing process.

Materials and Methods

The problem of health-saving technologies has been studied in the socio-pedagogical practice for quite a long time, but this is not enough for mastering and establishment of the corresponding value orientation with student-age population. Unfortunately, in most cases socio-pedagogical practice is oriented at saving the health of young population as an independent goal, and it should be considered in the context of educational and professional socialization and formation of settings for healthy living as personal components in view of the modern conditions of social uncertainty.

The process of solving the task of health saving and integration of health-saving technologies in the process of educational and professional socialization of the Russian student-age population is peculiar for diversity of the directions of development (social, ecological, psychological, biological, etc.). The conclusion of the modern researchers that health is formed under the influence of a lot of internal and external factors causes no doubts. Therefore, it is not only a medical & biological but also a socio-psychological category. The Russian higher school requires a comprehensive concept of health-saving education, aimed at health-saving professional socialization with application of the social technologies.

Social technology, being a phenomenon of social practice, is a complex of methods that ensure achievement of favorable conditions of life of youth (in this context, favorable conditions of their educational and professional socialization). The emergence of social technologies of health saving is connected to the need for quick and large-scale "multiplying" of new types of activities, ideas, and projects in the sphere of social healthcare (Patrushev, 1998). Usage of its certain types determines the effectiveness of social management of the process of educational and professional socialization of student-age population.

We treat health-saving professional socialization as a targeted and well-coordinated formation of value attitude to health by all agents of socialization. The purpose of HSPS is personality of young specialist, who has resilience to bad habits and forms of behavior and who has settings for healthy life and is oriented at the system of values in which the value of health occupies one of the most important positions (Vereshchagina et al., 2015).

Speaking of the process of HSPS, it should be emphasized that this process cannot be studied unilaterally, only as student-age population's acquiring social norms and values as to health. The process of health-saving professional socialization should be treated as a bilateral process, which includes also active reproduction of social relations by a young person. Positive socialization, being a continuous and bilateral process of interaction between a young individual and society, should allow the society to preserve stability, translation, and development of culture, and the individual – to acquire the culture, social norms and roles, and qualities that are required for inclusion into the society. Bilateral social exchange as a result of health-saving professional socialization takes place through the following processes: interiorization – student-age population's acquiring social experience; exteriorization – implementation of new elements into social life. A young person does not just acquire social experience of health-saving behavior, he transforms it into own values, setting, and orientations. Social activity of student-age population in the sphere of health saving is one of the main qualities of educational and professional socialization.

Real and educational and professional socialization of student-age population and receive life experience form under the influence of two main factors: professional and socio-psychological. Thus, we distinguish socio-psychological and professional adaptation (socialization). The former envisages acquisition and development of own style of behavior, as well as young person's joining the group and adaptation to various socio-economic conditions; the latter socialization envisages acquisition of the character, contents, conditions, and organization of the educational process and development of skills of independence in the educational activities (Mendoza Velazco & Rivero Padrón, 2019).

The society of risk and uncertainty as a social reality sets completely different technologies, models, forms, and landmarks of professional socialization, social formation, and development of student-age population, which is orienting at the present day and its priorities and values (Zubok, 2007; Zubok & Chuprov, 2008). Developments in the sphere of changes in the sector of social development of youth from the positions of social uncertainty and risk level in the Russian realia belong to Russian sociologists V.I. Chuprov and Y.A. Zubok (2004). Uncertainty in a wide sense is unclear and unrealized processes and phenomena in society, blurry ideas of the environment, evasive statements or behavior of individuals and groups of people, and absence of clear connection between social phenomena and their consequences (Chuprov & Zubok, 2004). The notion "uncertainty" is used for studying the transitional and marginal states, and the youth usually are in these states. According to V.I. Filonenko and A.P. Lepin (2013), "student as an object of socialization influence occupies an intermediary position between children and adults, having the specifics and features of the former and the latter".

Within this article, we study social uncertainty as the state of impossibility of adequate reflection, in which student-age population finds itself, connected to its internal disorganization as to own health: practices of its formation, preservation, and strengthening due to increasing instability of social reality.

Social uncertainty is also connected to infinity of social connections, their manifestations, characteristics, and measurements. It is closely connected to the category of choice. The choice in the aspect of self-preserving or self-destructive behavior of youth as to own health is no exception. Therefore, we have a task of formation of correct choice in favor of social health saving of student-age population, as a lot of social phenomena and processes are perceived with the help of various empirical methods, with modeling methods being no exception.

Social technologies in the sphere of health saving of student-age population could be viewed as a totality of operations and procedures of social interaction on the path of obtaining the optimal social result (improvement of health, improvement of living conditions, etc.). Social technologies are the most important element of the management mechanism (Ivanov, 1996).

Development and implementation of health-saving technologies in the process of educational and professional socialization require certain conditions: personnel provision, license for conducting health-saving and educational activities, and presence of the corresponding medical and social department.

Results

We treat health-saving technology of professional socialization of student-age population (hereinafter - HSTPSSAP) as a conceptual tool that is oriented primarily at management of the modeled process of health saving. The function of prediction serves the goals of health management.

HSTPSSAP has to meet certain requirements; it should be an objective correspondence to the modeled object of educational and socialized practice; it should be interpreted in the terms of health-saving pedagogics. The essential level of HSTPSSAP is formation and acquisition of the professional system of values in view of the situation of uncertainty and risks in society, certain behavior, social activity, initiative, and orientation at healthy living.

Among the technologies developed for understanding and forecasting behavior that is connected to health-saving educational and professional socialization we want to consider two foreign technologies: the technology of formation of precaution and the technology of health beliefs.

The first technology HSPS is the model of formation of precaution; it was offered by N. Weinstein and later improved by him and P. Sandman (Weinstein & Sandman, 2002). In this technology, it is offered to distinguish seven stages in the process by which the youth adapt precaution, this changing the behavior that threatens health.

The first stage is absence of realization of the problems with physical (somatic), moral, and social health with a person. Receipt of information from socialization agents regarding this problem corresponds to realization of the problem, but the youth is not involved in any behavior (second stage). The third stage correlated with the moment of decision making, when a young person receives the opportunities (i.e., choice in favor of self-preserving or self-destructive behavior) – not to adapt the precaution (the fourth stage) – then this process ends, or adapt the precaution – (the fifth stage). The sixth stage – execution of the specific health-saving behavior, the seventh stage corresponds to supporting new behavior in time. It should be noted that the advantage of this technology is post-stage character of change in the youth environment of behavior that is concerned with health. It should be emphasized that this technology opens a possibility for developing the preventive programs in the HSPS process, which take into account distribution of young people among various stages and offer the corresponding information for the student-age population, contrary to the companies that work with everyone.

The second technology is the technology of health beliefs is especially interesting, as it is considered to be the basis for developing preventing and health-saving professional and educational programs with primarily socialization direction (e.g., concerning sexually transmitted diseases (Salovey, Rothman & Rodin, 1998). The main provision of this technology is that behavior of a young person, concerning his health, is forecasted based on the formed beliefs regarding the threat to health and the corresponding behavior. Treatment of the threat to health should make young people perform certain actions, and beliefs of certain behavior determine the plan of these actions. The probability of the fact that the young person takes a preventive action depends on the following factors: firstly, whether he, socializing professionally, realizes that the negative condition could be avoided; secondly, whether he has positive expectations for execution of a certain self-preserving behavior; thirdly, he is confident that he can perform the necessary actions.

The formula that reflects this technology has the following form:

Action = (perceived seriousness of disease (threat to health) X perceived vulnerability as to the disease) X (perceived barriers – perceived advantages) (Salovey, Rothman & Rodin, 1998).

Empirical studies showed that preventive (health-saving) behavior is connected to perceived barriers on the path of the action, advantages from the action, and vulnerability to threatening situation, but are not connected to seriousness of the threat (Salovey, Rothman & Rodin, 1998).

It should be noted that this technology is referred to by the methodology of research performed by the World Health Organization, knowledge – attitudes – beliefs – behavior (World Health Organization, 2008).

However, despite the attractiveness of this technology, there's also one limitation which consists in the fact that this HSPS does not allow solving one of the main problems in the environment of student-age population, namely – predicting transition from beliefs to health-saving behavior. For example, the youth may have good knowledge of AIDS, but this information is not connected to their sexual behavior, which shows the absence of direct and rational connection between knowledge and behavior (Gafiatulina, 2009).

We suggest expanding this technology for its applicability to the Russian social conditions. The new model has the following blocks: "awareness of student-age population", "need for heath", and "medical and preventive activity". The medical and preventive activity of the student-age population is the activity in the sphere of protection of health. This activity depends on the general level of development, education, socio-psychological settings, life conditions, etc. (Figure 1).

The indicator of awareness in the sphere of health is especially important in evaluation of conscious self-preserving (or self-destructive) attitude to health (Gafiatulina, 2009). The object of awareness is knowledge of the student-age population of bad habits and their damage to health and risk factors; knowledge of a certain set of data of one's body, past diseases, etc. The level of youth's realization of behavior regarding health could be evaluated only with information on the level of awareness.

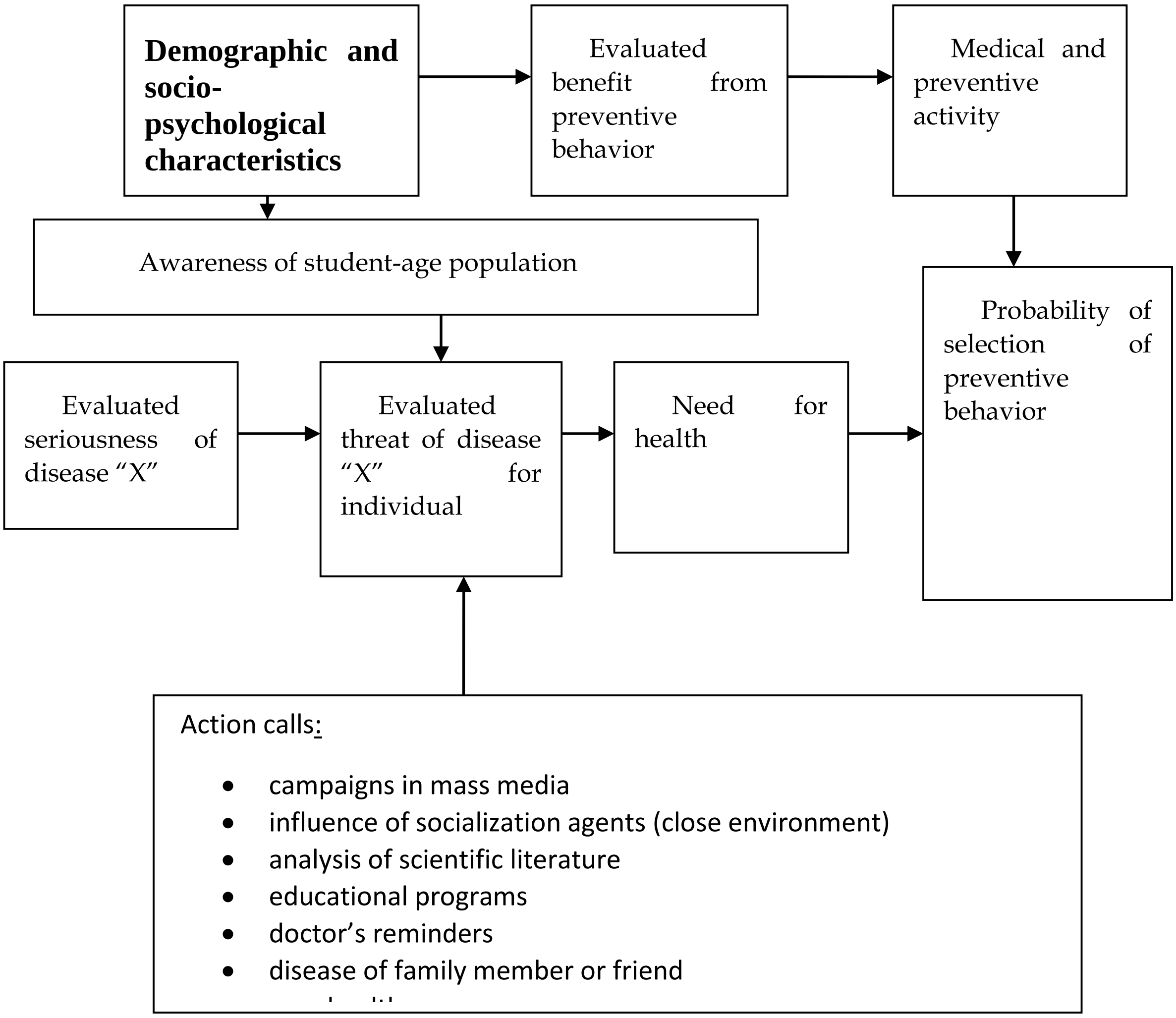

Figure 1. Factor technology HSPS

Medical and preventive activity and the need for preserving health, together with evaluation of the level of awareness of the student-age population, allow forecasting the probability of selection of preventive behavior. The block of factors that are shown as "action calls" (for the purpose of actualization of health), should include, apart from campaigns in mass media, analysis of scientific literature and educational programs. In view of the influence of the close social environment in the youth's selection of the strategy, it is necessary to include and assess the role of all subjects that influence the decisions on observation of recommendations for preservation of health or their refusal.

We think that HSTPSSAP, with person-oriented direction, envisages social development and socialization of student-age population, which is treated as a comprehensive process of qualitative changes of its essential characteristics, aimed at successful educational and professional socialization and self-implementation of a young personality.

We also developed a new person-oriented model of HSTPSSAP (Figure 2).

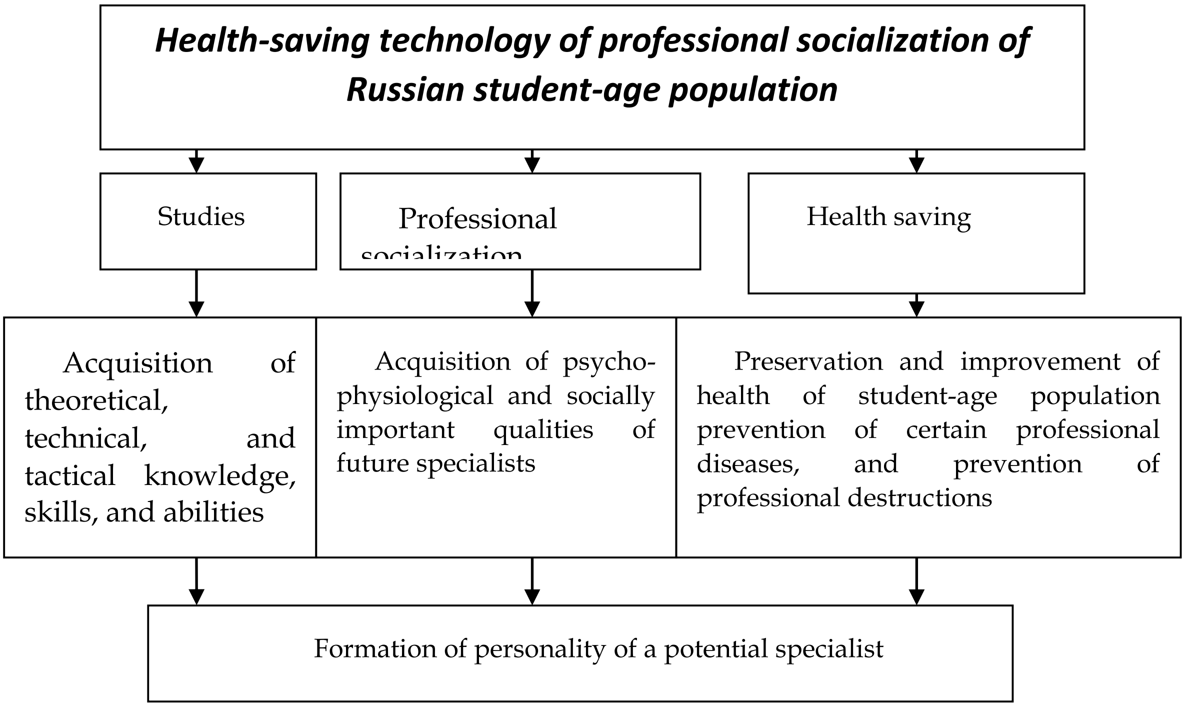

Figure 2. The person-oriented model of HSTPSSAP

In this model the blocks studies, professional socialization, and health saving are the tasks oriented at supporting the educational process.

HSTPSSAP is based on activity, problem, rapid, and situational approaches. Therefore, these social technologies create the conditions for manifestation of activity and independence from the student-age population. This activity is presented at three levels: reproduction activity, activity of interpretation, and creative activity. Students are the subjects of own study and study of health saving on particular. This is the main purpose of person-oriented and health-saving education.

Discussion

Higher education becomes an inseparable part of the Russian economy. It should be "convertible", ensuring socio-professional mobility and competitiveness of young specialists. This requires modernization of higher professional education and adoption of the innovational concept of professional development of students, leads to necessity for scientific modeling of the educational process and development of new pedagogical technologies that integrate study, upbringing, and development of a taught person and the student-age population (Vinogradova et al., 2018; Bahremand, 2015).

Educational process should be organized by the principle of pedagogical health-saving technology – i.e., present an ordered totality of actions, operations, and procedures that ensure the achievement of forecasted result in the changing conditions of the educational and socialization process.

Technology (model) is a totality of means and ways of receipt and processing, an analog of a certain fragment of natural or social reality, a sample of human culture and conceptual & theoretical pre-education. According to V.P. Svechkarev (2010), based on the practice of the technological and model approach, the most important are "the tasks of analysis and forecasting of development of the processes in the humanitarian sphere. Such tasks are connected to the forecast of achievement of long-term goals by adaptation to the changes of the external environment. The tasks are complex and require consideration of a large number of factors, interests, threats, and consequences" (Svechkarev, 2010).

E.B. Olkhovskaya (2007) treats the sports and game educational technology, aimed at health saving of student-age population, as a pedagogical technology based on integration of a sport game (physical culture) and educational process, which is a totality of means, methods, and forms of organization of subject-object-subject targeted sports activities of student-age population on self-development of personality, which will ensure guarantee of the forecasted result in the health-saving educational and professional space (Olkhovskaya, 2007).

We think that emphasis in HSTPSSAP should be made on formation of such system and structure of the thinking, practical, and moral activities that will allow future specialists to independently navigate in the increasing flow of educational and scientific information and to adapt and socialize in the changing socio-economic and technological conditions. This approach envisages re-orientation at person-oriented character of HSPS with mandatory usage of the practice-oriented technologies of organization of the educational process. According to A.G. Asmolov (2000), "the most important thing is to avoid education's orientation at solution of typical tasks, which already have answers to the questions, but to say, 'Education must help a young person to live in the world of uncertainty'".

Conclusions

Generalizing the theoretical and practical developments on the problem of implementation of social technologies in the process of health-saving professional socialization, it is possible to conclude that the functions of health-saving technologies of socialization could be united into two groups: preventive and stimulating the protection of health of the student-age population; each function is implemented through usage of various technologies.

Thus, health-saving technologies are not of only the professional and educational direction, developing competences and meta-professional qualities of future specialists, but also perform health-saving functions of socialization in university's educational space. All this stimulates successful professional development of the Russian student-age population.

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Archaization in Social Institutional Practices of Emerging Massive Society

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Abstract

The article analyzes the social mechanism of regress to archaization under the influence of processes occurring in mass society. It emphasizes the role of sustainable social practices that have emerged in such areas of society as politics, public administration, education, the army. Archaization is a natural reaction to the elimination of the political sphere, militarism, education reform, and the current type of administrative and political elite. The paper deals with the problems associated with the manifestations of archaization in social practices in terms of mass society's challenges, the circumstances of archaization development in the practices of power and organizational and managerial relations, trends and forms of archaization manifestation in educational practices.

Keywords: social practices, education, archaization, corruption, hazing, conservatism.

Introduction

The author's reflexive emphasis in this study is mainly focused on the intersection of the problems of finding out the heuristic possibilities of *archaization* concept and the characteristics of this social phenomenon manifestation in modern Russian society. In the socio-philosophical context, one of the most significant consequences of socio-cultural changes is the rapid change in the state of society under the influence of internal and external factors. *A person revises the foundations, traditions and values* within the space of socio-cultural changes. In addition, it concerns both norms and methods of communication. Such a change in the subject of socio-philosophical reflection entails the need to consolidate a new public discourse, the construction of adequate theoretical and methodological toolkit that could more adequately reflect the characteristics of change. Thus, the relevance of the socio-philosophical study of archaization in Russian society is determined by the following circumstances. First, it is a weak theoretical and methodological development and empirical study of various manifestations, trends, levels and forms of archaization in society. Secondly, the importance of this topic is in understanding the social practice of social development and socio-cultural transformation of Russia. Thirdly, there is an urgent need to determine *the status of the current Russian realities* in the context of socio-cultural changes at the levels of social practices and mass consciousness *in social and philosophical thought.*

The aim of the study is to analyze the manifestations of archaization in the social practices of the emerging mass society.

The study objectives: to consider the archaization of social practices in the context of challenges of mass society; to reveal the manifestations of archaization in the practices of power and organizational and managerial relations.

Materials and Methods

The theoretical and methodological basis of this study are the theoretical attitudes and ideas set out in the works of researchers devoted to the study of various aspects of the phenomenon of archaization in society, as well as general scientific methods of social cognition – analysis and synthesis, induction and deduction, abstraction and typing. We used the principles of studying social phenomena in the framework of classical and post-non-classical scientific paradigms. In order to identify the socio–cultural foundations of the content, levels and modes of archaization in modern Russian society, the author relies on theoretical approaches to understanding society as a space of socio-cultural transformation in the coordinates of modernization and de-modernization. Among them: a) socio-cultural approach; b) the concept of *challenge of modernity*; c) the theory of *de-modernization* and *feudalization*; d) the concept of *man-mass* and mass society.

Results

In the situation of increasing archaization in modern Russian society, social practices primarily experience its influence, acting as a kind of resource in the difficult conditions of the transition period.

Archaization appeals to the basics of sociocultural experience of society and has a well-defined *object* of treatment.

No wonder A. Ryabov (2008) proceeds from the fact that in this existence *rudiments of the past* appear. In an environment where business is widely dependent on the state and authorities, officials consider positions that allow them to extract rent as reliable ways to generate high incomes. It is necessary to refer to the archaic and coming from the ruling elite frank propaganda of anti-egalitarianism, class, corporatism, which contradicts the social dynamics of modern society.

Archaization of social practices in the context of the challenge of modernity has undergone a noticeable evolution in Russian society.

In the 1990s, after the collapse of the Soviet state, social chaos and some *primitive jungle* reigned. As in the natural jungle, in the social jungle the process of adaptation and natural selection of the best individuals, depending on their functional affiliation began.

Nevertheless, in the first decade of the twenty-first century, the situation began to change. The current conditions began to contribute to the manifestation of certain trends in public attitudes, which acted as sources of archaization. Accordingly, it is in the first decade of the twenty-first century that the ruling elites consciously and purposefully begin to act in the direction of archaization in order to stop the changes. All this collectively had an impact on the practices of social and cultural interaction and the existence of life.

Technologies of political influence are activated– that is, a set of rules, procedures, methods of influence on the political process, which provided a specific actor with optimal and effective implementation of his/her goals and objectives.

In fact: the number of prisoners per capita in Russia is much higher than the post-Stalin level (with, as far as one can judge, the practical cessation of the fight against crime); Brezhnev gerontocracy looks competitive and self – renewing environment against the background of the current one, and corrupt party economic nomenclature is a crowd of disinterested, sincerely concerned ones about the welfare of the people (Shakhbanova et al., 2018).

The Soviet bureaucrats, who graduated from the locomotive College against the background of the current ones with Harvard diplomas, give the impression of deep intellectuals, and the scattering of money for manic ambitious programs against the background of modern *investments, innovations, infrastructure*, Olympiads and Championships, not to mention the infusion of money into the military-industrial complex, seems to be a long-term and over-rational investment. The fact is that the result of the described marvelous process was the return to everyday life of the most monstrous, the ugliest features of Soviet life, which professional Democrats with General relief declared long ago *eradicated*.

As a result, social practices as a set of traditional cultural ways of working, skills of dealing with people, following the rule, behavior that has a ritual nature and is based on collective ideas, expectations and standards are increasingly affected by the archaic component.

A number of researchers trace this to the practices of hazing in the Russian army. The modern author S.A. Korolev (2009) proceeds from the fact that hazing is Amateur and illegitimate analogues of corporal punishment, illegal, criminal practices and techniques of suppression of the weaker by the stronger. Another author A.Yu. Solnyshkov (2008) writes that in the army there are illegal social practices that distort informal relations between military-short-termers, significantly reduce the effectiveness of management interaction in military units. They have a negative impact on the prestige of military service, a destructive impact on the physical, psychological and social condition of soldiers and are difficult to social correction. In official documents, such practices are usually referred to as *non-statutory relations* and their unofficial name is *hazing* (Solnyshkov, 2008).

The penitentiary system has a *crippling effect on the human psyche*, which causes the growth of *asocial minded population*. "We have a cumbersome, expensive, allowing the constant reproduction of crime system of execution of criminal penalties, carrying systemic risks to the security of the country."

The Minister formulated the essence succinctly and clearly: we live in a Gulag and Royal penal servitude. Instead of correcting criminals, we turn them into repeat offenders, instead of returning normal people to society, we produce lumpens. Moreover, as in Russia, almost every or was imprisoned, or he has someone from relatives and friends who was imprisoned, it turns out that the tsarist-Stalinist penal system cripples the whole country. We in fact live in the gangster state. Where the criminal is a romantic hero, where the most popular songs are about thieves, where stealing is honorable, and killing a person is a common thing.

Archaization is manifested in the practices of forced (slave) labor. Speaking about the forms and types of forced labor, usually talk about physical violence or the threat of violence (including sexual); about the restriction of freedom of workers' movement; about the seizure and retention of documents; about debt bondage (debt for credit); about psychological violence: blackmail, etc.; about the retention of wages until the end of work; about the manipulation of the employee, etc.

Experts recorded the spread of particularly cynical forms of forced labor. All this takes place in the context of such new phenomena for Russia as illegal migration, the growth of asocial elements and marginalized groups (prostitutes, homeless people, street children, the poor, the unemployed, the sick, alcoholics), the spread of criminal practices of manipulating people, over-exploitation (Kovalev et al., 2016).

Thus, the archaization of social practices in the context of the challenges of mass society is largely because in Russia the consequences of globalization are layered on the processes of the collapse of the previous systems of social order. The new social reality, experiencing the manifestations of archaization, is characterized by crisis trends and characteristics, which is manifested in the deformation of the system of values, the crisis of identity, destructive adaptation strategies, social apathy, and alienation of the masses from the processes of social regulation.

The current social and political conditions contributed to the manifestation of certain trends in public opinion and in public attitudes, acting as sources of archaization, which was associated with the destruction of the existing cultural layers and the immersion of consciousness in the archaic layers of culture and archetypes of the collective unconscious. A larger-scale traditionalization of society began and an appeal to the largely *fictional* past, a return to the archaic, primitive, mythologized mass representations. At the same time, the ruling elites consciously and purposefully begin to act in the direction of archaization in order to stop the changes threatening their omnipotence (Lubsky, Kolesnikova & Lubsky, 2016).

The *Chekists* as the "fundamental principles" of the modern regime have their own corporate mythology. It says, among other things, that the Communist party, headed by its Secretary General, betrayed the Soviet Union. *Chekists* were not allowed to save the country because of a bunch of *traitors*. The mythologization of the image of Andropov is connected with this postulate. No wonder in the *chekist* environment, Vladimir Putin positions himself as the *second Andropov*. Now Russia is the *right* version of the USSR. Historical justice has been restored. Power is in good hands. The enemy will not pass. So due to the inertia of social processes and for a number of other reasons, a number of features of the Soviet model in an extremely deteriorated form was able to revive. The Soviet project had ended, but de-Sovietization of society and elites did not happen. Still, trying to copy the Soviet model with some modifications to solve the modern problems facing the country is as unrealistic as making a violin out of a balalaika (Lubsky, Kolesnikova & Lubsky, 2016).

The phenomenon of corruption is also associated with archaization.

Researchers from the Institute of sociology of the Russian Academy of Sciences believe that in the long-term approach the problem of combating corruption is inseparable from the struggle for the democratic organization of state power, which is perceived as the most *honest* form of it. Reducing corruption is one of the main conditions for the progressive and harmonious development of society in the world today.

Accordingly, archaism begin to influence and organizational relationships.

Mostly, the bureaucratic reality involves all the inhabitants of the state, who ever had to write any statement or just visit some institution or office to put the seal.

During the election campaign in the spring of 2012, Vladimir Putin in one of his program articles *Democracy and the quality of the state*, published in the newspaper *Kommersant*, rightly drew attention to the fact that "we need a new state consciousness, in the center of which – the creation in Russia of the best, most competitive conditions for life, creativity and entrepreneurship. In this logic, the activity of the entire state apparatus should be built... to Break the link *power – property*. The borders of the state and the limits of its interference in economic life should be clearly established" (Kovalev et al., 2016).

Indeed, a return to normalcy requires decentralization of governance, where each level and territory has its own autonomy and is capable of carrying out its own clearly defined tasks (Vodenko et al., 2018).

Now federalism and separation of powers exist only on paper. The three branches of government are practically fused together. Local, regional and regional-Federal authorities are working on the implementation of signals that come from the Federal center. As in the former Soviet Union, not the government implements the will of the people, and the people have to execute commands coming from the top.

Such phenomena, giving rise to a large scale of corruption in a variety of forms and manifestations, reminiscent of common in Russia XV-XVI centuries of *feeding* practice, when managers were sent to lead the local territories without paying their salaries for service, based on the fact that they will get the necessary funds as a result of extortion (Frolova et al., 2015).

The inspections carried out in 11 Federal ministries and departments revealed more than 47 thousand violations of the legislation on state and municipal service. According to their results, more than 600 criminal cases were initiated; almost 2700 officials were brought to disciplinary and administrative responsibility (Gorshkov & Trofimova, 2016).

At the same time, the volume of the corruption market was comparable with the Federal budget and was estimated at more than $ 240 billion. According to polls of All-Russian center for public opinion research, every third Russian demands death penalty introduction for corruption and economic crimes. Almost 40 percent of respondents are in favor of radical cleaning and reduction of the state apparatus. The same number of respondents consider it possible to make the confiscation of property of both corrupt officials and their family members a norm (Chernous et al., 2015; Hassan et al., 2019).

The rapidly changing social and political environment affects all institutions of society, primarily education. Educational practice as an integral historical socio-cultural organization of knowledge, thinking and activity, ensuring the reproduction of a certain social reality, is experiencing contradictory influences and challenges of our time.

Modernity as a concept is correlated with the problem situation in which society finds itself due to the collapse of the system of higher attitudes and values that previously legitimized its social orders, providing meaningfulness of the General *world picture* among the members of this community and being perceived by them as the highest and objective reality (represented mythologically, religiously, in the form of universal moral *laws of nature* or otherwise).

The challenges facing Russian education are multifaceted. Thus, the authors of the analytical report "*Modern challenges to the school and the system of socialization*" distinguish the following.

First - the crisis of childhood, which is expressed in the blurring of the boundaries between childhood and adulthood, and this process, can be described as *the disappearance of childhood* and as *the disappearance of adulthood.* Childhood disappears, as the modern media and communicative environment violates the system of filters and boundaries between the child and the adult world, destroys an unambiguous hierarchy in which knowledge, competence and experience were sent from the adult world to the world of childhood.

The reverse process-the infantilization of the adult world-is associated with the speed and density of innovation in modern society. The need to master these innovations and adapt to them actually denies adulthood as a stage of a fully formed personality, giving the adult the role of an eternal disciple (life-long learning, etc.).

Second - the speed of change and the uncertainty of the future. Due to the increasing uncertainty of the future, it is objectively impossible to predict the expected educational results, as true innovations are by definition impossible to predict. Directly teachers lag behind in the pace of development of new technologies and information from students. There is a gap in effective communication between teachers and students.

Third - the erosion of national identity. Globalization leads to the formation of the so – called *hybrid identity*: man's growing and development, the formation of his identity takes place on the material of two types of samples: national (local) and global (for example, world cinema, music). Apparently, the identity turns out to be fragmented (mosaic) in this situation.

Fourth - the increase in the volume of information. The modern information environment, first, the Internet, creates new opportunities and creates new risks for socialization and education. The increase in the volume and types of information flows leads to the spontaneity of protective forms of human behavior, which are not able to process large amounts of information in limited periods. The tendency is formed of simplification and *primitivization*, rejection of complex forms of culture and, above all, – thinking (Bedrik et al., 2016; Nebessayeva et al, 2018).

Against the background of these challenges in Russia, there is a strengthening of conservative, *protective* attitudes of public consciousness in relation to education. Education occupies one of the leading places in the hierarchy of values of Russian citizens, but there are no specific and clear criteria for quality education. Education turns from a functional good into a status one, into a necessary, but at the same time only a status attribute of the biographical trajectory. As a result, there is, for example, unmotivated by labor market demand for higher education.

Any attempt to revise the existing structure and content of education is seen as a limitation of the rights to free education. This challenge is intensified by: the General crisis of citizens' confidence in the government; the formed type of discourse on topical issues of society development (simplified, straightforward, aggressive, ignoring data, substantive arguments); the sectoral factor: the opacity of the education system, information asymmetry – the society has no objective idea of the quality of education, the real opportunities that this quality provides for socialization and professional career, the real content of the proposed reforms of education.

Sociological research conducted by the Institute of sociology of the Russian Academy of Sciences in 2014 in 23 entities of the Russian Federation, including two megacities (Moscow and St. Petersburg), showed that over the past two years in public life participated 23% of respondents with secondary education, 30%- with secondary special and 46% – with higher education. 46% of Russians with secondary education, 59% – with secondary special education and 63% – with higher education took part in political life. Respondents with higher levels of education participated in a wider range of political and social practices (Gorshkov and Trofimova, 2016).

Education, considered as a practice of human development, should be aimed at self-determination and self-actualization of the actor of educational activities to the available socio-cultural practices.

The analysis of primary results of educational reform in the Russian Federation at the end of the XX century – the beginning of the XXI century shows their halves and inconsistency.

There have been no fundamental changes in the system of mass education. Although the unified state examination, specialized training at the senior level of General education, two-level system of higher professional education have become reforms of a systemic nature, the subjects of educational activities usually consider them as superficial changes, and not affecting the essence of school or University life.

The main *clientele* of education is parents and students. Moreover, despite the dissatisfaction with the current *system*, they unconsciously continue to engage in the reproduction of the norms of educational practice that have become habitual.

Discussions

Political scientist V.B. Pastukhov (2006) writes that what is happening in Russia is an echo of world cataclysms. If we focus only on the sphere of spiritual life, we can conclude that the main challenge to humanity is associated with the *mass culture* of the West. Modern mass culture is the underside of the life of post-industrial society; it is a slag that poisons the whole culture. Mass culture has emerged as a culture of unlimited and wasteful consumption (Pastukhov, 2006; Aguilar-de Borja, 2018).

The formation of mass society on the Russian soil took place mainly in the same way as in Western Europe and the United States. However, this process began in Russia later and had some peculiarities.

The modern author R.N. Abramov (2010) comes from the fact that popular culture, as the dominant type of culture is the result of processes of society massivization. Mass society is nothing but a standardized society. The standard embraces not only the spheres of production and management, but also the sphere of leisure and consumption. It is based on technology regardless of its application. The very same existence of the standard is due to the functionality and the technological means and methods by which it is implemented.

According to G.L. Tulchinsky (2007), orientation to work (spiritual, intellectual, physical), tension, care, creation and equivalent exchange is replaced by orientation to gifts, carnivals and the holiday of life organized by someone. Mediocrity, categorically claiming all kinds of benefits of the world appears and is affirmed. As a result, there is a multiplying mass of people who want only one thing - let them be fed, watered and pleasured in every way.

Meanwhile, as Yu.N. Afanasiev (2001) says, in Russia there is a rollback, a steady return somewhere else in before capitalism, to caves. Involuntarily a thought suggests itself: maybe this is the social retribution for willful attempt to overtake everyone, to jump through something that is not experienced, not endured. And therefore may be archaic becomes the norm, filling all the pores of modern life that never was overcome, and, on the contrary, many decades, and even centuries the power trying to get ahead, just drove it into?".

At the same time, as M. Delyagin notes, "hatred of the Soviet civilization in the ruling and owning Russia hangouts phenomenally is one-sided. The consistent eradication of the *cursed scoop* steadily, with an iron hand is carried out in those areas in which its achievements were indisputable and positive – from the social sphere and the education system to defense, technological progress and the maintenance of international peace. In the same spheres in which the Soviet Union was indeed ridiculous and disgusting, the indignation of which caused its collapse, there is not just a tremulous restoration, but also a very sophisticated, energetic and inventive aggravation (Volkov et al., 2017; Bakhshandeh et al, 2015).

Conclusion

Social and political circumstances contribute to the manifestation of social primitivization and simplification in public attitudes, serving as sources of archaization, which is associated with the destruction of the existing cultural layers and the immersion of consciousness in the archaic layers of culture. Social actors in the person of the ruling elites consciously use these intentions to their advantage.

The result is social apathy, disbelief and double thinking. A person loses the original intuition of a positive understanding of sociality, left alone with a loss of sense of meaning and loss of life guidelines, when a person has nothing to relate himself to and nothing to believe in.

Social myth making is closely connected with the manifestations of sacralisation and personification of power in the mass consciousness and value complex. In the space of historically conditioned cultural, religious, national and ethnic traditions there is a complex of values that define a certain idea of power and form an attitude to power as a phenomenon. On the same historical background, the phenomenon of personification of power as a value positions itself.

The drop in educational level, height of ignorance and loss of thrust to knowledge – a clear manifestation of the archaism of the educational practices. We are entering a new educational middle ages. There is a transition to the medieval scheme, but only at a new, *globalist* stage of modern world evolution.

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First-Year Student Attitude to Social Networks

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Abstract

The problem of using social networks by students is becoming more and more urgent, as in recent years' virtual communication is increasingly replacing real social contacts, and this is a problem that is little studied by modern researchers. The purpose of the article is to study the types and features of social networks use by students; to consider the Internet as a new communication space for students to communicate; to explore the hierarchy of students' preferences for social media. The leading methods for the study of this problem are the methods of questioning and testing, allowing to do a qualitative analysis of the characteristics of the leading type of students' environmental focus. The article presents a thorough and detailed analysis of social networks' use as a modern communication space. It is revealed that the virtual identity of students consists of such aspects as awareness of various social networks; authorization and use of social networks; presentation of themselves in social networks. The data obtained in the article can be used in social psychology, pedagogy, practical psychology, age psychology, sociology, as well as for the further theoretical development of this issue.

Keywords: students, social networks, virtual identity, communication.

Introduction

The use of the Internet has gained its status of popularity relatively recently and has become one of the most dynamically developing phenomena of modern society. The main function of the Internet associated with access to information, today ceases to be leading. Ability and convenience of communication are the most important aspect of the Internet community nowadays. In recent years, virtual communication is increasingly replacing real social contacts, and this is a problem that is little studied by modern researchers. Active Internet users are students.

The relevance of the study is due to several aspects (Gubanov & Novikov, 2009; Davydov, 2008; Filippova, 2001; Matsubara & Yoshida, 2018). First, this is due to the wide spread in modern society of such type of Internet communities as online social networks, which in addition to the functions of supporting communication, exchange of views and obtaining information by their members in recent years are increasingly becoming objects and means of information management and the arena of information warfare. In the near future, they will inevitably become an essential tool of information influence, including for manipulating the individual, social groups and society as a whole (Devyatko, Shashkin & Davydov, 2010;

Kremleva, 2005; Shikula, 2006; Tastan et al., 2018; Kasteyeva, 2018; Wyrasti et al., 2019). In the second, the study of virtual identity is new in sociology and social psychology. The attention of researchers is drawn to this issue, since the mid-2000s. In the third, important aspect, emphasizing the importance of the chosen topic is the need to study student virtual identity.

When referring to the Internet space, namely to the Internet communities, as the basis of empirical research, the experience of many researchers was used (Novozhenina, 2004; Luchinkina, 2012; Voiskunsky, 2002; Yazdekhasti et al, 2015). Many authors have devoted their works to the study of the World Wide Web (Kramarenko, 2012; Zhichkina & Lukova, 2000; Petrova, 1998; Goryavski, 2001; Friedman, 1999). In their books, these authors analyze the communication through the Internet, and a large place is given to the study of the ways of such communication (email, forums, chat, etc.)

The prospect of information consumption development is the main characteristic feature of the information society. The Internet, nowadays, is moving into a state of one of the main sources of information, both for an adult and for a child. At the present stage of development, the Internet, based on the technological side "is the largest information network formed by combining more than ten thousand five hundred information networks of various types" (Luchinskaya, 2012; Akchurin, 2000; Belyaeva & Cole, 1991; Cole 1991; Cherdymova, 2011; Goroshko, 2010; Maksimović, Vujović & Perišić, 2016; Kariuki & Mbugua, 2018; Vinogradova et al., 2018).

For students living in Russia, in comparison with the book, magazine journalism, television, the Internet is becoming the main source of information, competing with teachers and peers, as well as replacing parents a little. The main reason for the high level of Internet activity of Russian students is the predominance of a positive view of the Internet as a means of access to information, as well as a communication tool. The vast majority (over 90%) of Russian students perceive the Internet primarily through the prism of positive emotions. The emotional attitude of a positive nature is a key reason that encourages the student, forgetting about fatigue, to spend a huge amount of time on the network: to *surf (from surfing)*; there is a figurative analogy with water sports and *swimming on the waves* of the endless Internet), *chat (from chatting), play games, (from Gaming).*

In recent years, the Internet has ceased to be only a technical means, becoming the arena of public and private life. The Internet is a great opportunity not only for access to the necessary information, but also a tool for communication of people on different continents of our planet. The development of the Internet to the possibility of interaction *man-computer* added the possibility of communication *man-computer-man* (Novozhenina, 2004). In this way of communication people communicate with the help of written speech, which distinguishes it as a specific kind of interpersonal relations. One can select the following forms of communication on the Internet: teleconference, chat, MUDs (role-playing game), ICQ (a program that allows you to communicate with the interlocutor one-on-one, in a dialog box), forum, guestbook and correspondence by e-mail. In his work, "Psychology of man on the Internet" A.I. Luchinkina (2012) defines various forms of communication on the Internet and their features.

E - mail- is an analogue of the well-known system of communication through letters sent in envelopes, characterized in that the letter exists in the form of an electronic message that is sent from the sender's computer to the mail server, and then delivered to the recipient's mailbox. Some features characterize e-mail correspondence: communication is interpersonal or group in nature, as well as communication is always mediated and remotely (in the role of intermediaries are the computer and the postal service). Virtual communication, as a way of interaction, can be a monologue or a dialogue, the form of communication can be written and oral, the style of speech can be both official and business, and any other, up to speaking and the use of profanity.

Social network is a complex network formation that combines the features of forums, network communities and ICQ. The primary aim of establishing these networks is search for friends, schoolmates, classmates, acquaintances, work colleagues, etc. Popular resources facebook.com, vkontakte.ru, myspace.com focused primarily on the restoration and maintenance of communicative social relations between people, including the job search, advertising, dating. Internet blog-texts arranged in chronological order, most often focused on expressing their own opinion about any events of both personal and public nature. Internet blogs can be opened for public viewing, as well as for a certain narrow circle of friends who have the opportunity to comment on each other's posts. There is also an opportunity to observe the similarities of Internet-diaries with thematic forums, but in terms of their structure's features (Verchenov, Efremenko & Tischenko, 2013; Zhichkina & Belinskaya, 2010).

Forums-the organization of information exchange and communication between a large number of interlocutors who are interested in the topic of discussion, which is the reason for visiting by these people of a certain virtual space, to bring it to public discussion. The main difference of this type of Internet communication is that in the organization of Internet forums there are no strict restrictions for the contingent of participants, which can be any users, registered on a particular forum. There is also no time limits for discussion of the topic: the process continues as long as the topic is interesting for the interlocutors (Mikhailov & Mikhailov, 2004; Silaeva, 2004; Voiskunsky & Semenov, 2002; Nosov, 1996; Akchurin, 2000; Krylov, 2012). All forums have unwritten rules: discussion of any topic begins with the author's monologue in the form of an article (review, opinion on any of the many positions of interest), which contains the essence of the problem and reasoned arguments of the author in favor of a particular point of view. Further, all interested persons are involved in the discussion with the author. Thus, the method of interaction can be called either a dialogue or a polylogue, if communication is carried out between several participants who can refer to the author or to each other.

Research Methodology

2.1. The Study Methods

In the study process, the method of questionnaire survey was used. This method is a universal method, as it allows solving the following problems:

Based on the analysis of the subject and the goal, we have formulated a number of tasks:

- To study the awareness of social networks
- To explore the hierarchy of social media preferences
- To describe the respondents' attitudes towards social networks
- To describe the reasons for the positive / negative attitude of students to social networks
- To characterize the virtual identity of students in social networks
- To describe the openness of access to the profile of first-year students in social networks
- To describe the system of relations of anonymity / publicity of respondents in the social network
- To identify the frequency of visits and duration of stay in social networks

The study interviewed first-year students. Data analysis was carried out by using the SPSS 17.0 for Windows software package.

2.2. The Stages of the Study

Stage one - development of initial positions based on theoretical analysis of the literature on the subject of research; development of the General concept of research, including methodological principles and the project of development of the research tool.

Stage two - development of a tool to study the virtual identity of students in social networks. The survey method was used to collect empirical data.

Stage 3-empirical research of students' virtual identity in social networks. A sample was formed, empirical data were collected. Preliminary results were obtained.

Stage 4-analysis and interpretation of the results.

Results

Considering the popularity of social networks, it is worth noting that the high awareness of them is not an indicator of the use of the network. Therefore, among the surveyed students, only 10 % are registered in more than six social networks. The majority of respondents (74 %) are registered in 3-5 networks, and 16% of respondents have a personal page in 1-2 social networks. It should be noted that registration in 3-5 social networks is a high indicator of the activity of using networks.

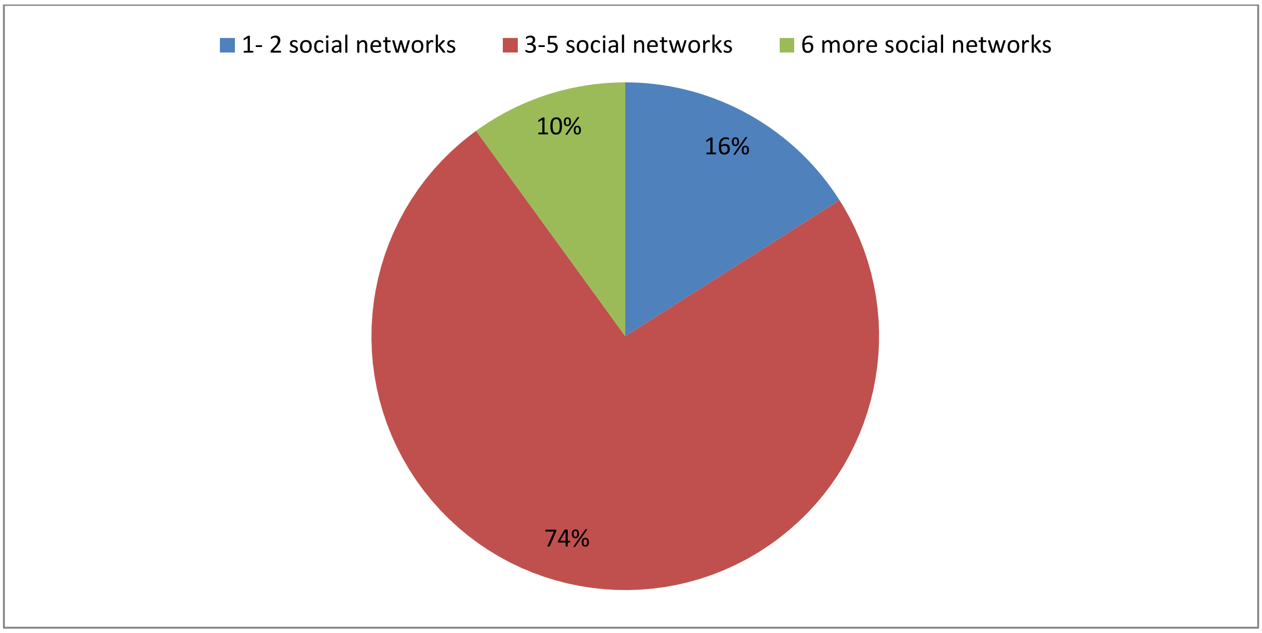

Figure 1. Number of social networks in which students are registered

Analyzing the attitude of first-year students to social networks, the following hierarchy was revealed: in the first place is the social network *Vkontakte* it was noted by 98% of respondents, in the second place *Instagram* network - 38% of respondents, in the third place *Twitter* - 19 %, the last in the hierarchy of preferences is the network *YouTube* - it was noted by 7% of respondents. Any Respondent did not choose the remaining networks.

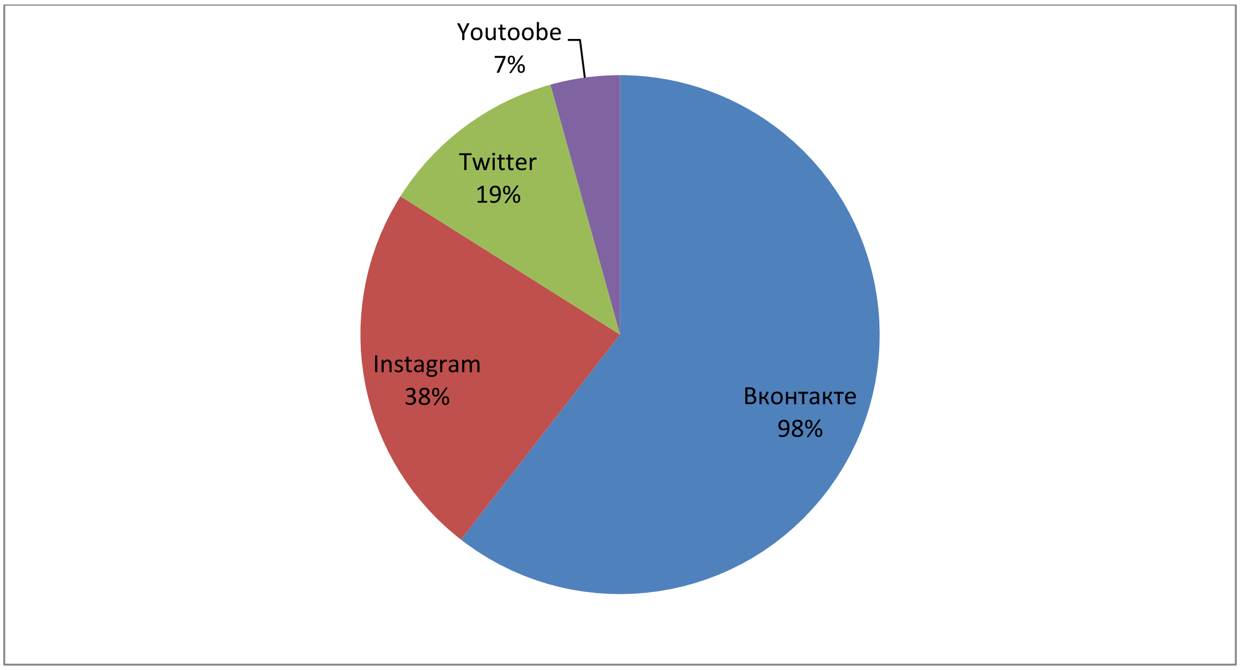

Figure 2. Social networks, which are characterized by a positive attitude

Studying the reasons for the positive attitude to networks, respondents' answers were divided into 2 groups: convenient networks and fashionable networks.

Therefore, students as the most convenient for communication, watching movies/TV series, listening to music, describe *Vkontakte* network. Students also note that in this network there are groups relevant to the study (group, class, school) in which they can exchange information on training activities, jointly preparing for tests, etc. This shows that the social groups become the criterion uniting students. Based on participation/non-participation in such groups, informal virtual social groups are formed.

In turn, most of the respondents described the network Instagram and Twitter as *fashionable, prestigious, cool*. Several respondents indicated that they are registered in these networks only because their idols have accounts in these networks.

When identifying social networks to which students have formed a negative attitude, the following was determined: the most negative attitude of students to the network *Odnoklassniki* 76% and *Moi Mir* 28%. The remaining networks were listed in a statistically small number.

Considering the reasons for the negative attitude to the above-mentioned networks, it should be noted that there is a widespread opinion among students that these networks are designed for a more adult audience. In addition, students find these networks not convenient to use. More than 80% of responses reveal negative attitudes towards networking, the students indicated that the network *Odnoklassniki* and *Moi Mir* - for old people.

We conducted consideration of the virtual identity of students through the study of several features. The first sign was the openness of access to the profile in social networks.

Therefore, among the respondents, 82% of the respondents *Vkontakte* profile has restrictions on access. 72% of the information on the page is open only to *friends and friends of their friends*, and 10% of the information is available *only to friends*. 18% - page is open *for all*. Among the users of social networks *Instagram* and *Twitter* 100% of respondents indicated that access to the profile is fully open. This distribution shows a high degree of openness of access to the profile of students in social networks.

The second sign was the attitude of anonymity / publicity of students in social networks. Consideration of this feature was carried out through the study: the use of real/fictitious name, the use of real photos /pictures.

First, let us look at how students presented themselves in social networks. An interesting result of the study was that 93 % of students in social networks use their real name. Seven % of respondents indicating not their name in the reasons indicated three people (4 %) - "do not want others me to recognize" and 2 people (3%) - "parents do not allow writing my name." Considering the aliases specified by students, it was found that students use the name of the book's hero and the name of their favorite game's hero. Moreover, this distribution is gender-based. Young men noted the name of their favorite game's hero, girls the name of the book's hero respectively.

Despite the high percentage of students providing a real name, the percentage of respondents using a real photo as a profile avatar is much lower. Among the respondents, 60% use a real photo. The remaining 40% of respondents do not use a real photo for two main reasons: "I do not like my photos" (30%) and 8% - "I do not want to be recognized". Speaking about the types of pictures used by students, we note that 25% of respondents on the avatar in social networks use a photo of a famous actor/actress, 10% - a hero of the film, the remaining respondents (5%) - abstract picture".

Discussions

In the relations of the initial age equality, the respondents work out the ways of relationships; pass a special school of social relations.

In their environment, interacting with each other, first-year students learn to reflect on themselves and their peers. Mutual interest, joint comprehension of the surrounding world and each other become self-valuable. Nowadays, the variability of communication between students, both with peers and with other people has increased significantly thanks to the Internet communities. In addition, access to various kinds of information is not just an opportunity; it becomes a way of life. In modern society, the Internet has a significant place in the lives of people, in particular students. Most people associate the Internet with anonymity, ease of access to information, lack of borders and censorship, and security. Nevertheless, the Internet is a reflection of the real world and negative phenomena can be found in its vastness. Students, as a social group, are one of the most active categories of Internet users. As a rule, the main purpose of the user of this social group is communication and virtual contact.

Studying the awareness of first-year students about social networks, it was concluded that they have high level of this phenomenon. 85 % of students know more than six social networks. In identifying the hierarchy of preferences of first-year students in relation to social networks, the following hierarchy was revealed: *Vkontakte* (98 %), *Instagram* (38%), *Twitter* (19 %), *and YouTube* (7%).

Considering the virtual identity of students in social networks, we concluded about the openness of profiles, active use of personal information on personal pages, personal photos. In view of this, we can talk about the presentation of respondents themselves in the network as themselves. *Virtual* identity of students in social networks is equated to *real* identity.

Conclusion

The network has become an intermediary with special properties, and there are *virtual communities* – worlds formed by Internet communication in the network virtual reality. There is a point of view that this Internet space has a certain specificity, due to the psychological and semiotic properties of the Internet as a new culture. Semiotics should be understood as the science of communication systems and signs used in the process of communication.

It is worth noting that there are the following psychological features of Internet culture:

1. The Internet divides the world into one's and other's space, and there are objective prerequisites for the perception of the Internet world and as characterized by openness, independence of the subject and scope for personal growth, and as imposing its own rules, addictive, "sucking the juices of life."

2. The space of the Internet makes it possible to realize the mythological component of the image of the Self: identification with the cultural hero of the Internet – hacker, the implementation of the action of *movement*, *crossing borders*, participation because of the identity of roles within one activity and participation in the *real time.*

3. The Internet stimulates the formation of a *wonderful* picture of the world, performing the function of the periphery in relation to all modern culture, where information about the accidental, new, abnormal, which does not fit into the rigid framework of established ideas, is accumulated.

4. The semiotic space of the Internet, which contains two types of languages, symbolic and iconic, is a medium for generating new texts and new meanings.

Now, there is already quite a large and differentiated community of Internet users, in which, along with random visitors, regular users of certain resources, *Internet workers* stands out and a group of people who are most appropriate to allocate as *Internet residents*. This group of people who have a high enough motivation to stay Online, in particular, spend significant financial and time resources, as well as demonstrate a high emotional involvement in the problems of the Internet. The authors conducted a study in which they identified the features of the emotional and communicative spheres peculiar to people who tend to turn the Internet environment into a space of open communication. As a result, the researchers identified certain psychological features of Internet communication, through which the Internet environment meets the needs of visitors.

First, it should be noted that the Internet provides a unique opportunity to combine communication and auto-communication: texts sent to another, at the same time become available to both the sender and the receiver.

The second feature of Internet communication is a special passion of *Internet residents* to discussions and disputes, which, first, affects the development of self-consciousness.

Another feature of the communicative process on the Internet – the use of *nick* - is the embodiment of the mediating function of the word. As in the technique of double stimulation of pseudo-gradually filled with subject content, so *nick* is a means of generalization of the texts which are marked by it, and after it over time and for interlocutors, and for the author himself begins to appear its subject relevance.

Internet communications have another property that has been repeatedly noted in the literature - anonymity, impersonality. *The border of the personality is the semiotic border*, in this case the border of the personality - *Internet resident* does not include either the physical Self of the person or his properties as the subject of social relations: both physical and social *face* of the person are hidden in the Internet under the mask of anonymity.

It is worth noting that communication has always been and remains organized on the principles of status and asymmetry of the center-province. In any society, the individual accepts these rules as a given: access to communication is possible only through status (position, title, wealth, and name). However, with the development of the Internet, to some critical level, the situation is changing. The role of status is gradually getting smaller. Ideally, the Internet is transforming a culture where communication is possible through status, into a culture where communication is directly accessible online: everyone is accessible to everyone outside of social status. Moreover, not through some highest status of permissiveness, but through the abolition of status as a principle.

Analysis of the communication in the Internet environment also has a number of features. One of the representatives of the specifics of virtual contact is a psycholinguistic kind of features of Internet communication. There are a number of aspects characteristic of this type of specificity of Internet communications: active invasion (inlay) of terms; the use of transliteration and transcription; the use of word-formation and semantic cripples; playing with English words using grammatical forms and norms of the Russian language; the creation of new words based on foreign.

Emotional saturation of communication: it has a compensatory nature in the conditions of almost complete absence of nonverbal means to convey emotions and describe emotional States. It is achieved both with the help of graphic verbal means (the use of capital letters, repetitions of punctuation marks, emoticons, etc.), and special software graphic means sewn into the software shell, for example, *emoticon* (when a graphic image expressing a certain emotion is added to any text message or replica). At the same time, some users prefer to communicate without physical representation (not in video mode). Thus, in this case, a number of communication barriers caused by such characteristics of communication partners, which are expressed in their appearance loses its value: gender, age, social status, external attractiveness or unattractiveness, as well as communicative competence of the person, or rather, non-verbal part of communicative competence. When communicating in Skype mode (i.e. video calls), the emotional component of communication is present in all its manifestations.

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Infrastructure Bond Market in Russia: Problems and Directions of Development

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Abstract

The effective functioning of the infrastructure is one of the basic conditions for sustainable economic growth, the quality of life of the population, and the strengthening of Russia's defense capability. Rational use of infrastructure bonds will increase the share of private business in the financing of infrastructure projects, increase the investment attractiveness of infrastructure projects. The purpose of the research: to analyze the Russian market of infrastructure bonds aimed at financing or refinancing infrastructure projects in the field of public-private partnerships and concession agreements and to develop recommendations for its further development. In the process of analyzing the Russian infrastructure bond market, limitations were found out that impede the further development of the infrastructure bond market in Russia, and recommendations were made to eliminate the problems of institutional, organizational and economic support for the infrastructure bond market. It is concluded that the infrastructure bond market, as a mechanism for attracting long-term financing in infrastructure projects, is promising for the development and renewal of infrastructure.

Keywords: investments, infrastructure, concession bonds, infrastructure bonds, risks,efficiency.

Introduction

The emergence and development of long-term projects in infrastructure and energy is an indicator of trust to the economy, to its stability. It is known that the growth of investments in infrastructure in the future creates new jobs, stimulates economic growth, helps reduce transport costs and improve the standard of living of the population. The quality and level of infrastructure coverage determines the vector of development of all Russian industries and is one of the main factors for improving competitiveness and integration into the world economy as a whole. At present, the financial market allows attracting large-scale and long-term investments in infrastructure projects.

The rapid development of the domestic corporate bond market in 2017 led to the continuation of the trend of partial replacement of loans with bonds, but the bulk of investment in infrastructure projects is still formed through loans. The current state of the Russian capital market is characterized by: a low level of capitalization of the stock market, a low ratio of the volume of bonded debt to GDP, high entry barriers for medium-sized companies, a weak development of the securitization market and project financing instruments. Under the conditions of limited investment resources for financing infrastructure facilities, when classical forms of financing are not available or not profitable, the question of finding alternative sources of financing becomes relevant. One of these sources is infrastructure bonds. However, it should be noted that. The discussion of interpretations of the concept of “infrastructure bond”, the lack of a unified scientifically based approach to the financing of infrastructure projects through the issuance of infrastructure securities also actualize the problem.

Problem Statement

The search for possible sources and instruments for attracting long-term money to finance Russian infrastructure projects, the demand for and availability of these sources and instruments in the Russian financial market, mechanisms for encouraging long-term investments requires finding new and improving infrastructure financing tools used. The objective of the study is to show that under conditions of limited investment resources for financing infrastructure projects operating under a public-private partnership (PPP) agreement, a concession agreement, the use of infrastructure securities is a flexible tool that allows you to reduce market risk, the risk of inflation.

2.1. Research Questions

The methodology of the study supposes consideration of the following questions:

– find out trends in the development of the modern Russian infrastructure bond market;

– make an analysis of the institutional and organizational-economic problems of the infrastructure bond market and propose measures to overcome them;

– to consider foreign experience in the use of infrastructure bonds from the standpoint of the transformation of "best practices" into the Russian economy;

– develop a model to determine the boundaries of changes in the yield of the infrastructure bond, depending on the preferences of the institutional investor and the effectiveness of the infrastructure project.

The purpose of the study is to find out the main trends of the Russian infrastructure bond market in the context of limited investment resources for financing infrastructure facilities and to make recommendations for its further development.

2.2. Research Methods

The goal was achieved by analysing the analytical and statistical materials of the Central Bank of Russia, the Ministry of Economic Development, the Ministry of Finance of the Russian Federation, Rosstat, the Organization for Economic Cooperation and Development (OECD), the agencies Bloomberg and Rusbusiness-consulting, the Russian and international business press, which contributed to complex and objective conclusions.

Results and Discussion

The world has accumulated significant experience in issuing infrastructure bonds. Issues of such bonds are made in the USA, Australia, South Korea, Canada, Kazakhstan and other countries, where they are represented as municipal bonds and corporate infrastructure bonds. The concept of "infrastructure bond" first appeared in Europe, at the beginning of the 21st century, when European countries, faced the problem of updating and developing social infrastructure. They created mechanisms of supporting and raicing the rating of bonds used to finance infrastructure projects and developed new products for institutional investors. promoting private investment. One of such tools was the "infrastructure bond". In Russia, the necessity in bond financing of infrastructure projects has arisen due to the limited ability to attract both public and private funds. Currently, several definitions of bonds are used to finance infrastructure projects: infrastructure bonds, concession bonds, project bonds, as well as on the initiative of the Central Bank, concession bonds are developed for individuals (Ermolovskaya, Telegina & Golovetsky, 2018)

However, at the legislative level, these terms are not fixed (the draft law "On the specifics of investing in infrastructure using infrastructure bonds" was not adopted). Therefore, infrastructure bonds in Russia are not a separate type of assets, but have a business case without a legal basis. Legislative definition in Russia has only the term "bond" (Federal Law "On the stocks and bonds market").

The class of infrastructure securities in Russia includes concession bonds (bonds) and bonds issued by special project financing companies (further referred to as SPF) to finance infrastructure projects. The main advantage of SPF-bonds is that in case of default the holders of these bonds have more rights than the shareholders. The market has not shown any interest in the soft-currency bonds, so there has not yet been a single issue of these securities. One of the reasons why SPF bonds did not find practical implementation is that market participants could not reach a consensus on whether SPF may be a concessionaire (Larionova et al., 2018)

The concept of "concession bonds" also did not receive a legislative justification, but it was economically justified in 2013 by an order of the Federal Financial Markets Service (FFMS of Russia), as well as in 2017 provisions of the Central Bank of Russia (580-P and 534-P). In the above documents, bonds issued for financing the concession project were allocated to a separate class and received the right to be included in quotation lists of the first and second levels on the Moscow Stock Exchange, and the Central Bank included some issues in its Lombard list.

The issues of concession bonds first appeared in 2010 for transport projects. The minimum volume of issue of concession bonds is fixed at 1 billion rubles, and the maximum at 8.5 billion rubles. Placement of almost all concession bonds, except for two issues, was carried out at face value.

Later issues of concession bonds were, in addition to transport projects (63%), also directed to the social sphere (16%), communal facilities for waste recycling (21%) and others. At the same time, 54% of all funds from the issues of concession bonds were spent on financing infrastructure facilities of the Federal level, 46% on projects at the regional level (Yakunina & Galaktionova, 2017).

Concession bonds are often identified with project infrastructure bonds, which, unlike them, are not separated into an independent class of securities, and the common thing between them is only that the issuer is SPV.

In practice, in order to increase the attractiveness of securities for an investor, an infrastructure bond is called all bonds aimed at financing an infrastructure project. At the same time, if the bonds are not tied to a specific project, the funds raised through their issues can be spent not only on the creation of infrastructure. The peculiarity of such bonds is that they are not issued by SPV, but by the company itself; therefore, they do not have bonuses of concession and other infrastructure types of bonds.

It should be noted that the infrastructure and traditional bonds have a common nature of occurrence and are based on the traditional principles of credit relations (payment, repayment, urgency), which is reflected in their classification.

The main differences between infrastructure bonds and corporate bonds are as follows:

– the issuer of infrastructure bonds is directly a private partner (concessionaire);

– as a rule, a private entity is a specially created project company (SPV or special purpose vehicle), which is engaged in activities related to the project and is not a professional participant in the securities market);

– investments to bondholders are returned by the issuer from the cash flow generated by the project:

– target nature of use;

– long circulation period (circulation period ranges from 10 to 49 years, the average period is 17 years);

– specifics of security (concession bonds can be provided in some cases with direct state guarantees, and holders of securities have a priority when paying off debt to the shareholders of the concession company);

– specific project participants (insurance companies, non-state pension funds);

– predictability of cash receipts depending on the content of the concession agreement and, as a result, low dependence on the state of the securities market;

– setting a floating rate of coupon income, which, as a rule, is tied to the consumer price index, inflation, the key rate of Russia or other indicators.

Infrastructure bonds in practice have proven to be an effective tool for raising funds for the implementation of infrastructure projects in Russia. According to the InfraOne analytical review, the demand for concession bonds exceeds their volume in circulation by almost four times. This amounts to 17-20% of the total amount of funds available for financing the country's infrastructure (in absolute terms - 380-400 billion rubles) (Malinovskaya, Sapko & Brovkina, 2016)

In 2017, the market volume of concession bonds increased almost 9 times, and there are 22 issues of concession bonds in the amount of 75.046 billion rubles. These funds were attracted by 10 issuers to finance 13 projects. In the next two years, pension funds, as the main consumers of concession bonds, can invest in them about 10-15 billion rubles (Lower-Basch, 2014).

In the near future, a significant growth of the concession bonds market is predicted in Russia. However, at present the share of this market remains insignificant and amounts to 2.3% of corporate securities (75 billion rubles) (Bogoviz, Chernukhina & Mezhova, 2018)

A small amount of concession bonds in circulation is explained, on the one hand, by the lack of projects on the market, and on the other hand, by the fact that investment-attractive infrastructure projects are usually immediately structured for loan financing.

Table 1. Plan for entering the market in the years 2018-2020

Nr	Issue	Series Class	Project	Volume, billions of rubles	Maturity, years
1	North-West Concession Company	0,1 0,2	Section of the highway M-11 "Moscow - St. Petersburg", 15-58 km	5 5	20 20
2	"Waste Management"	BO-02	System for recycling and disposal of solid waste in the Murmansk region	1,75	12,5
3	TEC "Kyzyl-Kuragino"	-	Construction of the railway line Kyzyl - Kuragino (410 km) to the Elelegest coal deposit	134,6	15

Participants of the Russian market, in turn, explain such dynamics in the infrastructure bond market by the presence of problems of both institutional and organizational-economic nature, which impede the further development of the infrastructure bond market in Russia.

From an institutional point of view, the following main problems can be identified:

– the lack of legislative consolidation of the term "infrastructure bond";

– the limited goals and scope of the SPV;

– the lack of special conditions for the inclusion of infrastructure bonds in the Lombard List of the Bank (Esty, 2009).

– there are no requirements for disclosing information on the issue of infrastructure bonds during the operation phase of the infrastructure facility;

Organizational - economic problems are:

– lack of a unified standardized procedure for issuing infrastructure bonds;

– high capital intensity and duration of many infrastructure projects, which reduces the interest of a private investor

– imperfection of tax regulation;

– current market conditions (ineffective interest (coupon) rates, liquidity crisis);

– The existing procedure for assigning ratings to concession bonds.

At present, regulators and market participants are addressing the issue of assigning a rating to concession bonds prior to their release. Such a change will allow interested financial institutions to plan in advance the purchase of concession bonds and increase the circle of investors (Maslennikov, Fedotova & Sorokin, 2017)

The key problem of issuing infrastructure bonds is to determine the level of return that is comfortable for both the issuer and the investor. The practice of issuing infrastructure bonds in Russia shows that the yield on concession bonds is determined by the formula "inflation +%". The position of the Central Bank of the Russian Federation on this issue is as follows: the fact of concluding a concession agreement allows the concessionaire to be considered a serious borrower, based on this, the yield on infrastructure bonds should be lower than the average yield on a bank deposit and higher than the average annual inflation rate (Korovin, 2015).

Thus, the specificity of this instrument determines the yield of concession bonds below the yield of corporate bonds and above the yield of government bonds.

Taking into account the inflation rate for the first quarter of 2017, the average yield of concession bonds was about 2%. At the same time, the average yield of project bonds for the same period was 7%.

In 2018 the average coupon rate of the current yield of concession bonds was 9.42%, and the weighted average - 9.46%. With a large spread of interest rates (from 4% to 16.9%), the real profitability of the investor in almost all issues of concession bonds ranges from 2.5 to 4% per annum.

The relatively low profitability of infrastructure bonds contributes to a decrease in the investment attractiveness of the instrument. Given period of circulation of the infrastructure bond and the possible risks of the implementation of the infrastructure project, the institutional investor will prefer to invest in a bank deposit (Hojati et al, 2014).

The question of determining the optimal yield of the bond issue has been studied by many Russian scientists.

Thus, according to A. Ivanter (2017), setting the coupon rate according to the "inflation plus" formula reduces the relationship between the cash flow generated by the concessionaire and payments on bonds. This circumstance increases the risk of default on such securities. According to T.S. Shadiyeva (2016), it is not inflation, but the demand for infrastructure facilities and the solvency of the Russian population that have a significant impact on the profitability of concession bonds. Thus, the percentage of motorists who refuse to use infrastructure facilities due to an increase in tariffs in Russia reaches 40%.

According to the authors, it is possible to model both the lower and upper boundaries of the yield of an infrastructure bond. The existing practice of determining the yield of an infrastructure bond is supposed to be used as the lower limit. In this case, the lower limit of the yield of the infrastructure bond is defined either as "inflation +" or as "CPI (Consumer Price Index) +."

It is recommended to use the indicator of the internal rate of return (IRR) as the upper limit of the yield of an infrastructure bond.

This approach will allow us to more accurately predict the yield of a concession bond depending on the performance indicators of the infrastructure project and can be used by institutional investors in managing a portfolio of securities and determining portfolio returns.

The proposed method involves the phased modeling of infrastructure bond yields.

At the first stage, the effectiveness of the infrastructure project (NPV project) is determined. When evaluating an infrastructure project financed exclusively from the budget, it is advisable to use the discount rate calculated by the formula as the discount rate:

$$r = r(f) \pm r(k) + r(c) + k \qquad (1)$$

Where:

r is the discount rate for infrastructure projects;

r (f) is the risk-free rate determined by the median yield for the corresponding period;

r (k) is the corrective rate, i.e. interest rate oriented behaviour of euro paper on the time horizon after the median;

r (c) is the country risk rate;

k is a corrective annual coefficient depending on the level of inflation in the country.

As a risk-free return, it is advisable to use the yield on government bonds RUS-30 (Russia-2030)

When calculating the discount rate for PPP projects, instead of the RUS-30 index indicator, as a risk-free return, the indicator of the annual bonds of infrastructure bonds is used. The calculation of this indicator is difficult, because insufficient statistics has been accumulated for an analytical substantiation of the rate in the inter-annual interval; therefore, in order to unify the calculation of the discount rate for an infrastructure project operating under the PPP and concession agreement, it is recommended to use the weighted average cost of capital (hereinafter WACC) (Ahmed & Aziz, 2018).

As a WACC, it is proposed to use the declared return on infrastructure bonds. When calculating flows from operating and investment activities, it is recommended to use the scenario approach.

If the profitability of the infrastructure project is greater than or equal to the average profitability of the bank deposit for the current period, then the lower limit of the profitability of the infrastructure bond is subject to adjustment and is set at the level of the average profitability of the deposit. Upon reaching this mark, it is implied that the yield of the infrastructure bond is set at an optimal level (Authers, 2015).

What are the advantages of the proposed calculation approach:

– the investment attractiveness of concession bonds increases, since the yield calculated by this method is higher than the yield of government debt securities;

– a relationship is established between the performance indicators of a specific infrastructure project and the yield of infrastructure bonds issued for its implementation;

– there is an incentive to reduce the capital intensity of the infrastructure project;

– the lower limit of the yield of the infrastructure bond will provide investors with a minimum income (taking inflation into account) even with an unfavorable option of implementing the infrastructure facility.

In order to develop the Russian market of infrastructure bonds, it is advisable to study and adopt the accumulated positive foreign experience. Abroad infrastructure bonds are issued at the stage of operation of the infrastructure facility, when the project independently generates a stable cash flow, which is the source of payments. This is what determines the high reliability of infrastructure bonds and, as a result, their attractiveness to conservative investors. Conservative investors do not accept the risks associated with the rising cost of construction. In Russia, project companies are forced to finance the construction phase of infrastructure projects at their own expense, including through the issuance of infrastructure bonds. Increasing the risk for an institutional investor affects the growth of interest income on infrastructure bonds (Shubaeva & Kharchenko, 2016; Metsämuuronen, 2018).

The analysis of foreign practice shows that in the development of the infrastructure bond market a significant role is assigned to state regulation.

Abroad, the state stimulates the development of the infrastructure bond market with various forms of state support for issues, namely:

– issues monetary subsidies (the state transfers a sum of money for the project implementation);

– guarantees payment (the state accepts the obligations of the buyer in relation to a private person in the absence of market demand for a service or product);

– guarantees revenue (the state guarantees the minimum income of the project being implemented);

– guarantees the repayment of the debt (the state guarantees the payment of money to creditors (bondholders) in the event of an issuer default;

– guarantees the estimated cost of construction (the state protects the private investor from the potential excess of the cost of the project at the stage of its construction).

Russia also uses forms of state support for issues similar to those in the world, for example, guaranteed payment and a guarantee of revenue. However, for purposes of assessing risks and the quality of debt service, it is advisable to take into account other forms of security for obligations on bonds as well as state and municipal guarantees.

In order to unify the methodology for project evaluation, it is considered expedient to apply the European Union's experience in supporting project bonds 2020. Adapting the European experience will help maintain the rating of the infrastructure bond issued by the concessionaire at a constant level (for the duration of the loan or the guarantee period) (Joseph, 2013; Fathi & Dastoori, 2014).

Conclusions and Recommendations

In conditions of the budget deficit, sanctioning of the Russian economy from Western countries, legislative tightening of infrastructure projects (introduction of Basel III standard), limited stock market for finance infrastructure projects, infrastructure bonds as a tool for attracting long-term financing is promising for the development and renewal of infrastructure.

Opportunities for structuring loans, choosing a source of redemption of bonds, determining key terms of issue, developing a mechanism for distributing income and project risks allow the use of infrastructure bonds to finance any infrastructure project.

Analysis of existing issues of infrastructure bonds showed that the infrastructure bond market in Russia is not sufficiently developed.

The infrastructure bond market is characterized by a disproportionate fundraising for federal and regional projects.

An analysis of the institutional and organizational-economic support of the infrastructure bond market has made it possible to identify a number of limitations that impede the further development of the infrastructure bond market in Russia.

An analysis of foreign experience in using infrastructure bonds shows that those countries (Chile, Peru, Brazil) achieved the greatest development in financing infrastructure facilities using infrastructure bonds in which pension systems were reformed at the end of the 20th century and restrictions on investing pension funds in infrastructure were lifted.

The existing model for determining the yield of infrastructure bonds, depending on the rate of inflation, the consumer price index does not meet the expectations of an institutional investor.
A number of articles of Federal Law No. 39-ФЗ "On the On the stocks and bonds market" dated April 22, 1996, instructions of the Central Bank of the Russian Federation, regarding the inclusion of infrastructure bonds in the Lombard List of the Bank of Russia, establishing a uniform procedure for information disclosure by issuers of infrastructure bonds require further improvement.
It is advisable to create a specialized platform on the MICEX where infrastructure bonds will circulate, which will help create an institutionalized market for infrastructure bonds, as well as facilitate the process of investment in infrastructure projects by insurance companies and pension funds.
For the further development of the infrastructure bond market, there is an objective need to approve a uniform methodology for issuing infrastructure bonds for both financing and refinancing infrastructure projects, which will simplify and make the process of issuing infrastructure bonds more "transparent".
To remove economic constraints, it is necessary to consider reducing tax payments for concessionaires issuing infrastructure bonds. The use of the TIF mechanism in Russia (the mechanism for encouraging investment in infrastructure due to the increase in the tax base from operating the infrastructure facility) will allow the public side to more effectively finance infrastructure facilities and may become a promising direction for the development of state object private partnerships.

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Confrontation Between Traditional Islam in Russia and Islamic Trends Abroad is Inevitable

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Abstract

The article examines the conditions under which Russian Islam was formed, with its tolerance of the secular state power structures and its tolerance of the world perception and way of life of other ethnic groups and peoples. It demonstrates that the ideology of hostility, intolerance and militancy with regard to dissent characteristic of many trends of Islam outside Russia force them to be in permanent confrontation with all the other trends in Islam, including the Islam traditional for Russia. This contradiction inevitably destabilizes the political and socio-economic situation in the country. For example, Wahhabism which arose as the religious trend spearheading the national-liberation movement of some Arab tribes against Turkish rule, contradicts in its forms, methods of self-assertion and activity, the fundamental principles of tolerance of other faiths which Russian Islam has traditionally followed. For Russian Islam traces its origin to the early Muslims, the followers of the Prophet Muhammad and the Prophet Himself and is clearly set forth in the Koran and Hadith.

Keywords: Monotheism, traditional Islam, religious tolerance, Koran, Hadith, Torah, the New Testament, foreign Islam trends.

Introduction

Statement of the Problem

The problem of religious existence of modern mankind is undoubtedly one of the most urgent for all states on all the continents. Hardly a day passes without the mass media bringing alarming reports from all corners of the earth about terrorist attacks or detention of religious extremists and terrorists. We have shown in many of our previous works that humanity has in its development entered a fundamentally new era when many ethnic groups and peoples, losing their religious perception of the world under the pressure of scientific and technological progress adopt scientific cognition of the world and life activities based on this perception. Predictably, two civilizational mentalities within the same ethnic entities clash just like at the beginning of the first millennium and up until today ethnic entities and peoples who have matured to adopt monotheism have been switching from the pagan perception of the world (polytheism) to monotheism (Oganesyan, 2018; Oganesyan, 2015).

Powerful integration and migration processes which have spread their influence to all the ethnic entities and peoples in the world community have dragged into the maelstrom of worldview passions and clashes many countries including Russia which has over millennia been inhabited by ethnic entities of different mental civilizational levels.

It has to be stressed that we identify three stages of mental civilizational development of humankind: paganism, monotheism and the scientific perception of the world which the world's countries and peoples started to adopt beginning from the epochs of Enlightenment and Reformation in Europe (Oganesyan, 2018; Oganesyan, 2015; Mollaei et al, 2014).

The Goal of the Study

The purport of this article is to show that Islam as traditionally preached by ethnic entities in Russia has nothing in common with the "foreign Islamic trends" in terms of the forms and methods of its existence, its activity and interaction with the secular state as well as with other religions and beliefs existing in the country. Therefore traditional Russian Islam comes under serious pressure on the part of "foreign" Islamic trends which became widespread in the country during the period of disintegration of the Soviet Union, the pressure sometimes taking the form of physical elimination of the spiritual leaders of Muslims who espouse peaceful coexistence with other religions and religious trends traditional for our country (Ameen et al., 2018; saif & Abbas, 2018).

Research Methods

The article uses methods that are traditional for humanities studies. In particular, gathering and analysis of specialized literature on the theme. Gathering and analysis of historical sources on the topic of study. Analysis of statistical data on the number of Muslim religious organizations in the Russian Empire and the USSR. Comparative analysis of monotheistic Scriptures such as the Torah, the New Testament and the Koran which the Koran considers to be the three Messages from the One God to humanity.

Research Issues

The Islam traditional for Russia is known to be the Islam that most fully corresponds to the teaching of the Koran (2008) and the Sunna. The Islam which in terms of its peaceful nature, mercy and particular religious tolerance was characteristic of the early Muslims who were contemporaries of the great Prophet and Messenger of the One God, Muhammad, the Islam that was adopted by the ethnic entities of the Russian state from its followers.

However, it is no secret that each of the trends in Islam that arose earlier and exist today considers itself to be the "purest", most correct and righteous both in terms of interpretation of specific tenets of faith and the rituals of worshiping the Almighty. The reader at all familiar with the history of the existence of religions knows that Islam is no exception in that respect. No monotheistic religion in its historical development has avoided being splintered into many conflicting trends. This is characteristic for Judaism and Christianity. Unlike monotheism, paganism, for example, which has a rigorous family and tribal basis, has immutable norms and rules and customs of worshiping gods passed on from generation to generation in accordance with a strictly established procedure (Oganesyan, 2018; Oganesyan, 2015; Zare & Rajaeepur, 2013).

It is also known that many Muslims in Russia believe, not without reason, that they are following traditional Islam that was preached by Muhammad (Khaidarov, 2010).

There are of course other points of view which claim that all trends in Islam have the right to exist, like in other world religions. For it is only the Almighty who can decide which religious trend is true and which is false. They support their claims by citing the Koran and the Prophet's Hadith.

Thus the Koran writes: "Indeed, those who have divided their religion and become sects – you (Oh, Muhammad!) are not (associated) with them in anything. Their affair is only left to Allah, then He will inform them about what they used to do. Whoever comes… with a good deed will have ten times the like thereof [to his credit] and whoever comes with an evil deed will not be recompensed except the like thereof; and they will not be wronged" (Surah 6:159-160) (The Koran, 2008).

In an often-quoted passage the Prophet Muhammad warned his followers that if "the Jews divided themselves into 71 trends and Christians in 72, my community will be divided into 73 trends." However, he also warned Muslims that all of them would be "in fire except one." When his followers asked him who will be spared fire, the Messenger of Allah replied: "I and my followers" (Hadith on the Muslim community dividing into 73 trends, 2010).

Thus in the minds of the Muslim umma (community) of Russia, and of the whole post-Soviet space the traditional path is thought to be the one followed by the Prophet Muhammad and his co-religionists, that is, the path of "Tradition and Concord." (Khaidarov, 2010)

It is the accepted view that the time of actualization of the concept of traditional Islam in our country did not coincide with the start of the breakup of the Soviet Union by chance when the previously "totally atheistic" population of the country began to revert en masse to religious consciousness (Khaidarov, 2010).

Without going into an analysis of the religious situation in the post-Soviet space during the period of the disintegration of the Soviet Union, let us note that in 1991-1992 the former union republics saw not only an avalanche-like dissociation of religious organizations, notably Muslim councils (Trans-Caucasus Muslim Councils — Wikipedia, 2019) but also the emergence of new religious organizations. They belonged to various trends not only in Islam, but also in Christianity and in paganism because a flood of "spiritual teachers and mentors" of various persuasions inundated the country. Christian, Islamic, Judaist and Vedic pagan missionaries began to preach views that are alien to our ethnic entities but also flooded the country with religious literature, including overtly extremist literature.

While Christian and pagan missionaries preferred to work with flocks inside Russia creating religious seminaries and schools in specially acquired or rented buildings, the leading Islamic universities of the world also flung open their doors for young men and women who decided to preach Islam. Examples are the International Islamic University in Malaysia, Al-Azhar University in Cairo, Imam Saud University in El-Riyadh, Medina Islamic University in Saudi Arabia, International Islamic University of Islamabad and so on.

It is no secret that the organization of the teaching process in Islamic universities in the Middle East was superior to that of theological establishments in the Soviet Union. It had become fashionable and prestigious to acquire a theological education abroad. All the more so since as a rule it was free or was provided at a symbolic cost (due to financial support of foreign foundations and sponsors).

However, when they returned home the graduates of foreign theological education establishments typically began to preach not the Islam that was traditionally preached in Russia, with its tolerance of the authorities, other religions and denominations, but an openly radical Islam hostile and aggressive with regard to any other perception of the world.

This is not accidental because Islam in many countries of the world (this needs to be stressed) was formed and existed in conditions that were totally different from those in the Russian Empire and later in the Soviet Union.

The Russian Empire, which considered it self to be an Orthodox power nevertheless did not permit itself to meddle in the religious affairs of the numerous peoples inhabiting the Empire in its vast spaces and in their traditions and customs.

Let us cite but one eloquent example. The need to consolidate political power in the hands of the sovereign forced Peter I to introduce state control over the Orthodox Church which was considered to be the ideological and intellectual bulwark of the Russian Empire. Thus in 1721 Peter I established a Spiritual College later renamed the Holy Governing Synod) under his own patronage. Two years later (in 1773) the Synod issued a decree proclaiming religious tolerance and religious peace in the state: it was called "On the Tolerance of All Religions and on Forbidding All Archbishops to Be Engaged in Affairs Concerning Other Faiths and the Building of Prayer Houses According to Their Laws Leaving it to Secular Administrtions" (Decree of the Synod on Tolerance of All Religions – Russian, 2019).

Under the Decree, Muslims and Buddhists, among others, were not only granted total freedom to build mosques and datsans, but also to set up religious schools. Moreover, the Muslim mullahs and the Buddhist lamas were paid out of the State Treasury allowances that were often bigger than those allocated to Orthodox clergy.

All the other autocrats of the Russian Empire followed Peter the Great's religious policy. It is not by chance that in 1788 a Muslim community of the European Russia and Siberia was established, called the Orenburg Muhammadan Spiritual Assembly with its center in Ufa. The statute of the Assembly approved in 1789, combined the principle of appointed mufti and the principle of election of three Sharia judges (*kaziys*) from amongst ulema in the Kazan Gubernia. This made it possible to harmoniously combine the interests of imperial power and the Muslim umma (Khabutdinov, 2010).

The Tavrichansky Muhammadan Council was set up in Simpheropol in 1831 and spiritual Councils of the Sunnis and Shiites of Transcaucasia were established in Tiflis in 1872 (Khabutdinov, 2010).

It is very important that all the religious "councils" were based on the principles of non-interference of secular authorities in the internal affairs of religious organizations and of allowing them to act in accordance with their religious convictions (Khabutdinov, 2010).

The Muslim umma in Russia, given non-interference in its internal religious affairs, in the relations with the representatives of Christian and Judaist communities was guided by the prescription of the Koran to treat them as equals and not to be in conflict with them so as not to provoke enmity and hostility toward and hatred of itself. "And do not argue with the People of the Scripture except in a way that is best, except for those who commit injustice among them, and say 'We believe in that which has been revealed to us and revealed to you. And our God and your God is one; and we are Muslims [in submission] to Him." (Surah 29: 46) (The Koran, 2008)

Incidentally, the Koran demanded a more tolerant attitude to pagans than did the Torah and the New Testament: "If it had been Allah's plan, they would not have taken false gods; but we made you not one to watch over their doings, nor are you over them to dispose of their affairs. Do not revile those whom they invoke other than Allah because they will revile Allah in ignorance out of spite" (Surah 6:108) (The Koran, 2008).

Thus, over the centuries a type of Islam was formed in the Russian Empire which, first, had the loyalty of the country's secular authorities. Second, the Muslim umma was itself loyal to the state. Third, the Muslim umma was tolerant of all the other religions. Fourth, other religious communities were tolerant of the country's Muslim umma.

Of course, I am referring to official relationships among religions in the country. As for the actual attitude to other religions within each religious community, it was often negative.

Nevertheless, the Muslim communities of the Russian Empire, unlike the overwhelming majority of Muslims outside Russia, did not seek to uphold their religious identity and state sovereignty through bloody clashes with the "close and distant" ethnic entities and peoples, state regimes and countries. All the religions in the Russian Empire, including the Shiites and the Sunnis, coexisted peacefully under its powerful protection and patronage.

Beginning from 1917 the Soviet government separated all religious organizations from the state. However, it did not forbid people to conduct their religious observances (History of the Constitutions of the USSR and RSFSR, 2019).

For example, the 1925 Constitution of the RSFSR recognized citizens' rights to freedom of anti-religious propaganda and religious preaching. The RSFSR Constitution of 1929 proclaimed that "all citizens have freedom of religious worship and freedom of anti-religious propaganda" (History of the Constitutions of the USSR and RSFSR, 2019) That provision was sealed in the USSR Constitution of 1936 and later in the USSR Constitution of 1977 (History of the Constitutions of the USSR and RSFSR, 2019).

Moreover, Article 52 of the USSR Constitution of 1977 and Article 50 of the RSFSR Constitution of 1978 granted the citizens the right "to preach any religion or not to preach any religion" (History of the Constitutions of the USSR and RSFSR, 2019).

Under Article 28 of the current Constitution of the Russian Federation (2019), like many other Constitutions of the vast majority of the world's countries, every citizen is "guaranteed freedom of conscience, freedom of religion, including the right to preach individually or together with others any religion or not to preach any religion, to freely choose, follow and spread religious and other convictions and act in accordance therewith" (Constitution, 2019).

Clearly, unlike the truly merciful and tolerant "traditional Islam" that took shape in the boundless spaces of the Russian Empire and then in the Soviet Union, Soviet citizens who studied at religious educational establishments abroad, were exposed to a very different kind of Islam.

Many Middle East countries where Islam is prevalent, after Muhammad's prophetic mission, were constantly faced with complicated tasks, first, connected not only with internal political conditions (for example, feudal and clan quarrels). And second, with external threats from other states.

Fierce confrontation, bloody wars over state, economic and religious issues were permanent features of the countries of the Middle East and South East Asia. Understandably and logically, each of the opposing sides invoked not only the spiritual mentors of their people, but tried to find vulnerable spots in the interpretation of faith by their opponents. The search for the tiniest flaws in interpretations of various religious tenets and in the rituals of worship willingly or unwillingly created a new trend in Islam and made it intolerant of and aggressive toward all the other religious trends considered to be "infidels" and "impure." Besides, because monotheistic religions, owing to their historic mission, claimed universal recognition and world influence from the start, each ruler deemed it his sacred duty to spread it all over the world. All the more so because the Koran, like the New Testament in its time, prescribed believers to spread the faith in the One God among all the peoples of the world (Matthew 28:19-20) (The Bible, 1995).

The answer to the question why monotheism claimed world dominance and sought to conquer the whole world lies in the historic mission of monotheism (Oganesyan, 2015; Oganesyan, 2018).

It is well known that the One God, unlike the "home" gods of the pagans, first appeared to the sons of Israel and then through Jesus Christ and Muhammad to all the other peoples of the world as the one and only God who created not only the Earth and Man, but the whole Universe. He presented himself as the sole ruler and sole Law giver, the Supreme and Ultimate Judge of all the earthly and extraterrestrial worlds Who determined and bequeathed through his prophets and messengers and norms and rules of life as well as the concepts of good and evil, sin and righteousness. He presented himself as an impartial, immutable and eternal God of all people and all nations on Earth not perceived by any human senses. It was He, according to the Torah, the New Testament and the Koran, who showed all the peoples the strategic path of their development on Earth and the inevitable transition to a life "in Heaven close to their Creator" (Oganesyan, 2015; Oganesyan, 2018).

Let us recall the words of the Torah addressed to the sons of Israel: "I am the one, and there is no God like Me! I cause death and grant life. I strike but I heal and no one can rescue from my hand (Devarim 32, Haazinu, 39) (The Torah, 1993).

We may recall the instruction of Jesus Christ to His apostles and disciples before His Ascension: "Go therefore and make disciples of all nations, baptizing them in the name of the Father, and of the Son, and of the Holy Ghost teaching them to observe all" (Matthew, 28:19-20) (The Bible, 1996).

It would be appropriate to recall the words of the first (opening) Surah of the Koran: "In the name of Allah, the Entirely Merciful, the Especially Merciful. All praise is due to Allah, Lord of the Worlds. The Entirely Merciful, the Especially Merciful, sovereign of the Day of Recompense. It is You we worship and You we ask for help. Guide us to the straight path, the path of those upon whom You have bestowed favor, not of those who have evoked [Your] anger or of those who are astray (Surah 1: 1-7) (The Koran, 2008).

Hence it is natural that, first, the bulk of our country's population which is still at the mental stage of monotheism, rejects the values that are alien to its civilizational level, the so-called Western values. Second, "foreign" Islam with its call for building a state of social justice based on Divine Commandments, laws, and principles is finding zealous apologists and adherents in our country which is being corroded from within by appalling social inequalities, corruption, embezzlement and total moral degradation.

The character of the kind of Islam that is alien to the peoples of Russia is apparent in the emergence of Wahhabism in Central Arabia and its subsequent spread to various corners of the modern world, including the post-Soviet space (Wahhabism, 2019).

Wahhabism (2019), which sprang up in the 18th century, set as its main goal the liberation of the Arab tribes of Central Arabia from the Turkish rule, i.e. it envisaged a liberation war from its inception. Because the Ottoman Empire which had enslaved numerous Arab tribes had Islam as its official religion, the ideologist of the national-liberation movement, Muhammad al-Wahhab, a clergyman, found a simple and understandable slogan that would unite the majority of Arabs in the struggle against the Ottoman caliphate, the slogan of "cleansing" Islam of Turkish accretions and a "return" to the order of the times of the Prophet (Wahhabism, 2019).

Al-Wahhab, in calling for a merciless struggle against Turkish rule and for driving the Turks from the original Arab lands, called them apostates. That is why the followers of Muhammad Al-Wahhab declared the Islam preached by the oppressing Turks to be wrong and ungodly (Wahhabism, 2019).

While showing, in accordance with the Koran, tolerance with regard to the "People of the Scripture" (Jews and Christians) the Wahhabites urged the need to toughen the requirements to the Muslims. Over time, predictably, a situation arose when the Wahhabites found themselves waging jihad against all the Muslims who did not share their religious views.

Thus, for example, in 1785 the Wahhabites attacked the tribes under the jurisdiction of Mecca. They besieged the city of Al-Taif, and then, after entering it, slaughtered almost all its people. And yet the city that now lay in ruins was inhabited by the people who considered themselves to be Muslims. The city was looted and its priceless religious books were burnt.

In 1800 the Wahhabites besieged Mecca blocking all the approaches to the city sacred for every Muslim. Hunger raged in the city. Masses of Muslims were dying at the hands of the Wahhabites. That same year the Wahhabites seized another holy city of the Muslims, Medina, where the room containing the grave of the Prophet Muhammad was looted. During the seven years of the city's occupation the Wahhabites stole all the decorations at Kaaba and destroyed the domes over the graves. They forbade repetition of the praise of the Prophet (salavats) after azan (the call to prayer) considering it to be a departure from true Islam. Muhammad ibn Abd-ul-Wahhab personally gave an order to execute the muezzin who read the praise to the Prophet (Wahhabism, 2019).

In early 19th century Wahhabism began to spread in India, not by chance, because jihad was declared on the English colonial authorities.

In 1830 the Wahhabites occupied Peshawar and created an Islamic state there. The ideas of Wahhabism became popular in Indonesia where its adherents on the island of Sumatra fought the Dutch colonialists.

The ideas of Wahhabism exerted a great impact on anti-colonial movements in Libya, Sudan and other countries (Wahhabism, 2019).

One need hardly seek to prove that in terms of the goals and tasks Wahhabism initially set for itself, and most importantly, in terms of the forms and methods it used to solve the task of liberating Arabs and then other peoples from foreign rule, it has nothing in common with the Islam that is traditional for Russia. Having said that, one cannot but agree with some of its ideas on the fundamental principles of monotheism.

Findings of the Study

Thus it was not love of peace, mercy and tolerance preached by the Koran and Hadith but a permanent state of confrontation and irreconcilable struggle against "oppressors" that shaped the aggressive and expansionist form of Islam characteristic not only of Wahhabism but of many other trends of Islam that are "foreign" to Russia.

In our opinion, it is impossible and unrealistic to set the task of changing the ideological essence of Wahhabism as well as other currents of "foreign Islam" through "preaching". It is necessary to adhere to the behest given in the Koran (2008) to the Prophet Muhammad, and through Him to all the believers: "There shall be no compulsion in (acceptance of) the religion the right course has become clear from the wrong. So who ever disbelieves in Taghut and believes in Allah has grasped the most worthy handhold with no break in it. And Allah is hearing and knowing" (Surah 2:256) (The Koran, 2008).

Preventing and counteracting religious extremism and terrorism in our country is another matter. On the one hand, measures need to be taken envisaged under the RF laws to stop the activities of extremist and terrorist organizations. In particular, to thwart their intention to overthrow the state system and legitimately elected power and to build a theocratic state. The legal system and law enforcement bodies should be uncompromising and merciless towards those who violate law and order in the country.

On the other hand, it is necessary to conduct massive educational activities in order to explain the destructive anti-Islamic essence of religious extremism and terrorism and, especially important, using the Koran, Torah and New Testament to demonstrate to religious people the inevitability of humankind's transition from canonical (religious) law to secular law. And accordingly, the need to live by the Constitution and the laws of the RF.

To this end, it is necessary, first, to provide a scientific basis for training a qualified cadre of clerics inside Russia who promote the essential worldview of Islam which is ultimately tolerant. Second, to create and publish in large quantities printed literature and audio-visual materials, including electronic information, on the shared worldview of the Torah, the New Testament and the Koran and on their intransient cultural value, remembering the words of Jesus Christ: "For truly I tell you, until Heaven and Earth disappear, not an iota, not a dot, will pass from the Law until all is accomplished" (Matthew 5:18) (The Bible, 1995).

Naturally, all the materials created must have a style and form of presentation that appeal to the broad public and not only to the people who consider themselves to be religious, including Muslims. Fourth, the country's media should take part in explaining the worldview of the Islam that is traditional for Russia.

Conclusions

Thus, in answering the question in the title of this article, we can safely say that confrontation between the Islam traditional for Russia, with the tolerance characteristic of the Koran and the Prophet's Hadith, and all other forms of Islam is inevitable. However, considering the constitutional norm on "freedom of conscience and religion" there can be no ban in the country under law on preaching various trends in Islam. Therefore, proceeding from the Koran and the Hadith of the Prophet it is necessary to develop ideological and educational means to counter the trends in Islam which claim to be solely right. Considering the massive integration and migration processes that have swept the whole world, the experience of Russia's religious existence may be useful to all the other countries.

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Lessons of Migration Processes: From the Culture to the Security

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Abstract

The presented study is devoted to the impact of migration processes on the institutional spheres of society. The article reasonably highlights the socio-cultural problems of penetration, stratification, rejection, isolation, which lead to modern migration processes. As research methods, the authors used the methodology of system-legal analysis of social phenomena, as well as historical-legal, formal legal and analytical methods. The article considers 2 types of cultures: culture of individualism and culture of collectivism, shows the pros and cons of each of them. It is the conflict of cultures that underlies interstate problems, because people always try to preserve their roots and their identity even after changing their place of residence. The article deals with a variety of objectives of migration policy, which are implemented taking into account the needs of the labor market, the economic situation in the country and attitudes in the society. The practical significance of the study is confirmed by its high scientific value, proved by natural differences in institutional trends under the influence of migration processes on the example of Germany, USA, Russia and other countries.

Keywords: migration processes, globalization, institutional trends, conflict of cultures, migration policy.

Introduction

The rapid migration processes in Europe, America and the middle East in recent decades have attracted attention to the problems in various countries, not only the inhabitants of these countries, but also politicians and lawyers, sociologists and political scientists, cultural scientists and psychologists.

The world migration process (and this is proved by the figures in the Figure 1 (United Nations, Department of Economic and Social Affairs, Population Division, 2017), affecting in one way or another the institutional changes, penetrates into all spheres of life of states: from politics, law and economics to education and culture. How do migration processes influence the institutional trends of public relations?

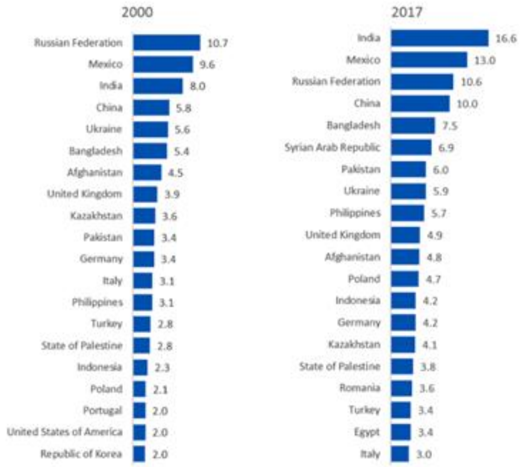

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Figure 1. Migration statistics: 20 largest countries or territories of origin of international migrants, 2000 and 2017, million

Literature Review

In the modern palette of economic theories, despite the emergence of most of them at the beginning of the last century, a special place is occupied by the socio-institutional concept. The growth of industry, stimulated scientists to understand the radically changing economic conditions and related relations.

At the beginning of the twentieth century, the prevailing historical school in Germany (Weber, 2018), with its multi-aspect approach to analysis, including socio-economic relations, was an intellectual stimulus for multivariate analysis of the economy. Widely understanding 'institutum', T.B. Veblen (1899), J.R. Commons (2012) and others considered the economy as a system where relations between economic entities evolved under the influence of economic and non-economic factors.

More than a hundred years ago, an analysis of economic and non-economic factors made it possible to formulate such shortcomings of capitalism as the violence of monopolies, the costs of free market forces, the growing militarization of the economy, certain vices of the "consumer society" (such as lack of spirituality, etc.). Reflecting on the problems of a hundred years ago and comparing them with the present day, it seems that the socio-economic relations in the world either stand still or were frozen, and people froze ... they are so relevant today (Mendes & Silva, 2018; Al Mashady et al, 2018).

However ... Conceptual ideas of the institutional-sociological direction prove the constant change of the economy, market space, causing a natural transition from one economic model to another. The idea of development along the ascending line to the highest moral and ethical goal sounded encouraging — as a prediction of overcoming the contradiction of business objectives and human needs (Tabatabaei et al, 2014).

Today there is a bipolar picture of the problem of transformation, institutional trends. On the one hand, scientific and technical progress, digitalization of society, including economic relations, equalizes participants of social relations, overcoming social contradictions, rising to a new level of "conflict-free social evolution of society" (the theory of convergence was born: R. Aron (2015), Y. Tinbergen (2006)). On the other hand, global migration processes have a significant impact on socio-economic transformations, complicating social contradictions, creating a conflict environment.

Results

The first migration processes were caused by the resettlement of people to free lands around the world. Mass migration in the 16th – 19th centuries was of a bilateral nature: on the one hand, Europeans rushed to America, South Africa and Australia, mastering vacant spaces. On the other hand, America was settled by black slaves brought from Africa. At the end of the Second World War, migratory "rivers" flowed from developing countries into countries with developed economies.

There are many reasons for migration: we will leave them to political scientists, sociologists and other scientists, because the focus of our attention is institutional changes, trends due to migration processes.

Today, migration processes have led to sociocultural problems of penetration, layering, rejection, isolation, and a number of others - i.e. to such bipolar tendencies due to, above all, the type of culture of peoples entering into a relationship. Cross-cultural studies of different countries and nations helped to correlate the peculiarities of their cultures, economic development and legal systems with the identified behavioral patterns of their representatives, since culture is the history of a people, their beliefs, traditions, habits and values. These differences, established by nature and transmitted in our genes, and resulting from the educational process, identify us in a group, shaping world outlook, values and priorities at the new stage of the generational development.

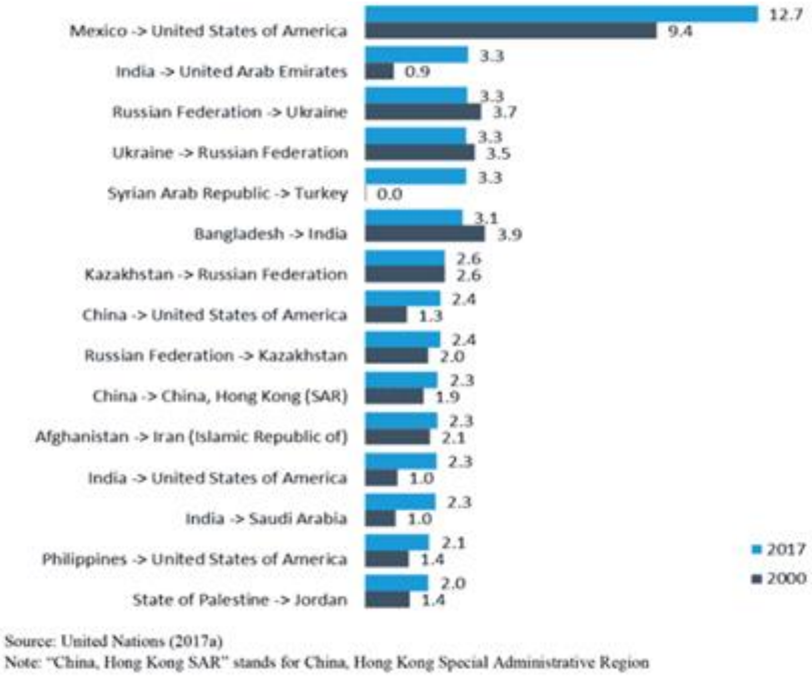

Figure 2. Fifteen largest populations of international migrants from a single country or area of origin living in a single country or area of destination, 2000 and 2017 (in millions)

Researchers traditionally distinguish the cultures of collectivism (for example, South Italy, Korea, Portugal, Japan, China, most countries of Asia, Africa and Latin America) and individualism (USA, Australia, Great Britain, Canada, Sweden, Belgium, Denmark, France, etc.) - These are fundamentally different basic values, attitudes, rules of conduct.

Amongst the advantages of individualism multiculturalism, democracy and the emphasis on the rights of the individual are to be marked. One person is punished in accordance with the law and only for his misdeeds. Same time the individualism is accompanied by loneliness and family conflicts, divorces and alienation, juvenile delinquency and early pregnancy, drugs and suicide, psychosomatic disorders and murders. Moral authorities are absent, and everything rests on the laws. Studies have shown that high value and the expectation of wealth negatively correlate with success and well-being, when money is the main motive of a person’s behavior. It turned out that behavioral violations and crimes are higher among the materialists. Also, a high level of distress is associated with a high desire for power, with a desire to control, suppress others (Figure 2) (United Nations, Department of Economic and Social Affairs, Population Division, 2017).

The essence of the culture of individualism, as it is known, is the focus of people on the resolution of conflict by legal means. Such a society requires a greater number of lawyers and courts than in collectivist cultures, where the conflict is resolved informally, with the use of intermediaries - reputable relatives or acquaintances.

On the one hand the traditional collectivist cultures usually has a lower crime rate, which is related to the type of socialization - taking care of children, encouraging interdependence and avoiding problems related to crime, alcoholism and drug addiction. On the other hand, authoritarianism and pressure on the individual in collectivist cultures are higher - children are often forced to choose not what they like, but what their parents like. Under collectivist culture on a community scale, there is a greater likelihood of autocratic regimes, in which persecution of dissidents is frequent and there is great competition among individual groups for power (Bagreeva, 2013).

Thorston Sellin, having published the work "The Conflict of Cultures and Crime" (Sellin, 1938) in 1938, proving the criminal nature of this phenomenon, has drawn attention to a wider range of problems.

The essence of the conflict of cultures lies in different attitudes to life, habits, stereotypes of thinking and behavior, when different values underlie differences and the other life ideals do not cause respect, compassion and sympathy, and often upholding one's own ideals causes persistent rejection leading to conflicts.

Over the past century, we have repeatedly stated not only intrastate, but also intergovernmental problems, which were based on the conflict of cultures.

Modern scholars (American sociologist A. Cohen (1955) and others) also point to institutional sociocultural tendencies that are driven by migration. "The clash of cultures was not an easy task. It is extremely difficult for people to abandon their culture and adapt to another, a new one. The clash of cultures usually leads to conflicts and opposition. People want to preserve their roots and their identity even after they changed their place of residence". The judgment expressed by R. Kapuscinski (2008) is based on the analysis of migration processes and gives the development of the idea of socio-psychological institutionalism (Veblen, 1899) as one of the directions of the theoretical economics.

In turn, the locals assert their identity as well. Thus in Hamburg (Germany), an advertisement for the kindergarten Kita Rabenhorst appeared, where one of the advantages of the institution was called "a small number of children from migrant families". The public outraged such a statement and the brochure was rewritten. After that, in the advertising of this kindergarten, among such advantages as the location in a prestigious district, the predominance of children from wealthy families, the following phrase appeared: "Our kindergarten is open for all girls and boys; it does not matter low and high, strong and weak, sick and healthy, well-fed and thin ones - regardless of whether they are of German origin or from migrant families." This example of tolerance is rather the exception.

The experience of foreign countries is not the same: positive, such as in Australia, where highly qualified specialists are invited to live; and negative - Germany, southern Italy and other European countries, where the uncontrolled flow of migrants created all sorts of problems for the local population. Every State today develops a migration policy taking into account the needs of its labor market, the economic situation in the country and attitudes in society.

Economically developed Germany, having shown unprecedented humanism, populism and democracy, today suffers from a huge number of migrants. The distribution of illegal immigrants was one of the main reasons for the recent domestic political crisis in the Federal Republic of Germany. In addition, interstate problems also arose: German Chancellor A. Merkel and Hungarian Prime Minister V. Orban could not agree on the migration policy: his country refused to accept back refugees even registered in that country (Gazeta.ru, 2018; Safdari et al, 2013).

Institutional trend of influence on migration processes in Germany through the issuance of laws and court rulings implements social and legal institutionalism (Commons, 2012), proclaiming legal relations as the basis for economic development. Also, the courts of Germany in January-May 2018 decided to deport 24 thousand migrants. However, the police were able to execute the sentences only for 11 thousand migrants (less than 50%!): the influence of court decisions is not as significant as the Germans would like.

Of course, each country itself, taking into account the recommendations of international law, formulates its position with respect to migrants. For example, Estonia, in which the number of Ukrainians who received a permit for short-term work and a temporary residence permit in 2018, has doubled compared with the previous 2017, (and ten times when compared with 2014), considered it possible for itself. However, the basis of this decision of the Estonians was to rely on EU economic assistance.

It should be recognized that there are countries that hold a different position and do not support The Global Compact for Safe, Orderly and Regular Migration — GCM, approved by the international conference in Marrakech (Morocco) in December 2018. The United States withdrew from the discussion of the pact at the end of 2017. Australia, the Netherlands, Austria, Bulgaria, Hungary, the Czech Republic, Poland, the Dominican Republic, Chile, Latvia, Slovakia, Estonia and Italy either refused to take part in the conference or ruled out signing the agreement.

The states, above all, decide on the need for additional labor resources, understanding that the majority of migrants are middle-aged men, who very often have only primary education, possessing just basic skills of professional activity. However, receiving low-skilled and low-paid work, men transport their families, as a rule, with unemployed wives and a large number of children. In turn, the solution of the emerging complex of socio-economic and socio-cultural problems becomes the task of social services of each state.

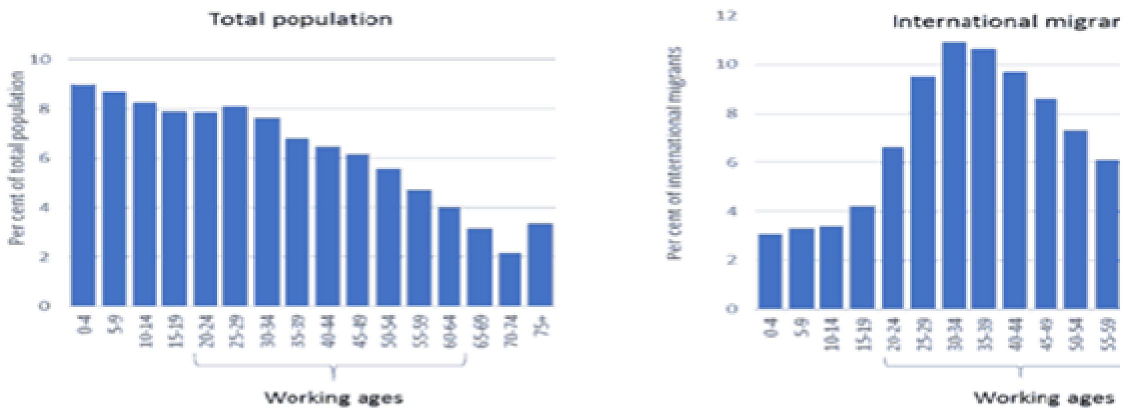

Figure 3. Age distribution of the total population and of international migrants worldwide

It should be understood that migration policy often creates conditions even for serious inter-state tensions, which are often based on the conflict of cultures, setting in motion the institutional foundations of states.

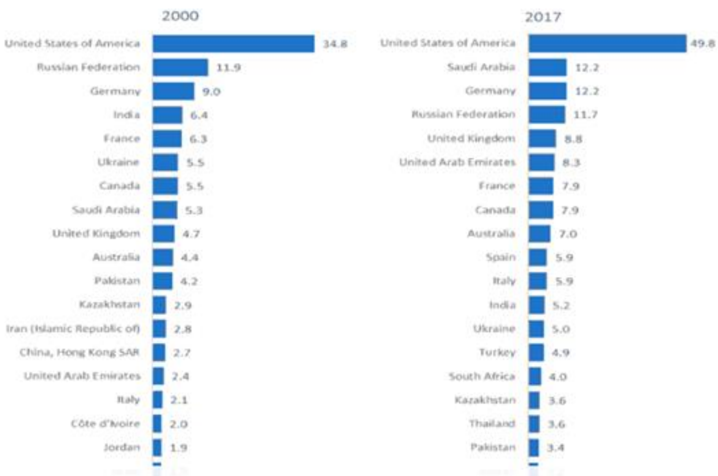

Figure 4. Migration statistics: 20 countries where most international migrants live, million

Conclusions

Thus, migration processes cause not only domestic institutional changes, but also lead to international conflicts, since the goals and objectives of the migration policies of states are different. Each state, weighing all the pros and cons of the influx of migrants, takes certain measures, including legislative acts that ensure institutional changes.

The policy of the Russian Federation in the field of migration processes, first of all, is based on the principles and norms of international law in the field of protection of the rights of migrants, the inadmissibility of their discrimination on the basis of race, gender, nationality, origin, etc.

The concept of social and legal institutionalism (Commons, 2012), whose followers proclaimed legal relations as the basis for economic development, formed the basis of the Russian position on migration processes.

Modern Russia conducts a balanced migration policy, analyzing the need for labor resources without disturbing the sociocultural balance of nations and nationalities, both in regions and throughout the country as a whole. As can be seen from the Figure, the percentage of migrants in Russia practically does not change, which allows the country to experience an evolutionary transformation, mutual influence and synthesis of two basic cultures. We are witnessing the birth of a different type of culture based essentially on the balance of values of an individualistic and collectivist culture. In our opinion, it is this balance, enshrined in the legislation that creates conditions for the economic stability of the state.

The country's leadership constantly pays considerable attention to creating and strengthening the legal framework for the regulation of migration in the Russian Federation. It consists of: the Constitution of the Russian Federation, the Federal Law "On Forced Settlers" N 4530-1 of February 19, 1993 (as amended on December 27, 2017), the Federal Law "On Refugees" N 4528-1 of February 19, 1993 (as amended on December 27, 2017), Federal Law “On Citizenship of the Russian Federation” N62 of May 31, 2002 (as amended on December 27, 2017), Decree of the Government of the Russian Federation of May 23, 1998 N 484 “On the Amount of One-Time Cash Benefit and the Procedure for its Payment to a Person who received a certificate of consideration of the application for recognition of a refugee "and other regulations. In addition, in R The Federal Law “On the procedure for departure from the Russian Federation and entry into the Russian Federation” dated August 15, 1996 N 114-ФЗ (as amended on October 11, 2018) and the Federal Law “On the legal status of foreign citizens in the Russian Federation” dated July 25, 2002 (as amended on December 27, 2018).

These laws have been amended to change the rules of entry, grounds for deportation, the situation of migrant workers. Probably, the situation on the Russian border in the Far East of the country will require Russia to revise its attitude to the visa regime, to pursue a protectionist migration policy that would be in the interests of domestic policy and security of Russia as a whole.

After analyzing all the pros and cons, Russian President V.V. Putin at the VI World Congress of Compatriots said that he had signed a new concept of state migration policy, which would simplify the acquisition of Russian citizenship for compatriots.

Modern institutional tendencies of states largely depend, firstly, on migration policy and, secondly, on ways of solving the problems of migrants, and the economic effect of institutional transformations is caused not only by choosing one or another direction of theoretical economics, but by overcoming and transforming the conflict of cultures into a socio-cultural state stability.

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Problems And Prospects of Using Vr - Technologies in the Process of Forming Students' Professional Competencies

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Abstract

Over the past two decades, fundamental changes have occurred in the process of the formation of students' professional competencies, which is due to the development of new educational technologies. However, the issues of application of these technologies, in particular VR-technologies, within the framework of psychological, pedagogical and technical-ergonomic aspects remain debatable, which makes the study relevant. The purpose of this study is to determine the prospects for the use of VR - technologies in the process of formation of students' professional competencies, as well as problems hindering their application. In the process of studying this problem, such research methods as the study and synthesis of training experience in higher educational institutions, training in the framework of corporate training, statistical methods of analysis, and the method of expert assessments were used. The study by the authors of the article on the best foreign and domestic practices allowed highlighting the advantages of VR technologies in the formation of professional qualifications at the level of individual companies (corporate training system) in the process of forming professional competencies of students. The authors of the article gave an assessment of the B2B market of the virtual reality technology market. The article describes the problems that hinder the more intensive use of modern technologies for the formation of students' professional competencies. Based on the conducted research, the actual directions of improving the use of VR technologies in education are formulated. The article may be of interest to practicing teachers, employers, students and for all who are interested in using VR - technologies for the formation of professional competencies of students, as well as in the training process in the framework of corporate training.

Keywords: VR technologies, competencies, training, students, professional qualifications.

Introduction

ABI's research showed that companies that implement VR training programs save up to 80% of training time (The global AR / VR market in 2018 will increase to $ 18 billion, 2017). In addition, the efficiency of training increases, as students learn more quickly and acquire the necessary production skills more easily.

Virtual reality (VR) technology is based on the use of computer graphics, which create virtual scenes and elements that the user will manipulate using input devices so that they can be seen, heard, touched, and even smelled using output devices, and the user may feel highly immersive when interacting. Using a well-designed and built virtual reality system, users feel completely involved in this action. In virtual reality, the shown environment is completely virtual, which is opposite to the real world, and between them there is an augmented reality and augmented virtuality (Ivanova, 2018; Kenan, 2018).

Thanks to the properties, we will dry out the inherent VR technologies and, above all, the possibility of obtaining practically real work experience in a harmless virtual environment, these technologies can become an ideal tool for training and developing professional competencies of students and employees of various enterprises. Currently, VR technologies are widely used in many areas, such as military, aerospace, aviation, surgical, and others (Zhang, 2017). In Russia, there are also a number of studies on the features of the use of VR technology in the formation of professional competencies of students from various industrial universities (Korneva, 2016; Vyaltsev et al., 2017; Mankhi, 2018).

Recently, a lot of research has been carried out on the possibilities of using VR technologies in teaching and development of students, as well as in the system of corporate training. Many researchers (Burdea & Coiffet, 2003; Foreman & Corallo, 2014) write that virtual reality will lead to a paradigm shift in education and training, but there is little empirical evidence about its educational value.

G. Makransky, T.S. Terkildsen and R.E. Mayer (2019) conducted a study whose main objectives were to determine the implications of adding immersive virtual reality to virtual learning simulations, as well as a study on whether the principles of multimedia learning apply to immersive virtual reality.

A study of student opinions by M. Shanahan (2016) shows that virtual radiographic simulation plays an important role in the development of technical and cognitive skills.

According to A.Z. Sampaio et al. (2019), virtual reality technology can be used as an addition to three-dimensional (3D) modeling, which ultimately will lead to improved communication in the field of vocational training as well as in education or professional practice. The introduction of CAD and VR methods is useful already in school to prepare students to use these technologies as the most important basis for their development at a later stage of their professional practice.

The results of the study by G. Makransky and G Petersen (2019) showed that there are two main ways in which desktop VRs lead to an increase in the amount of learning after a VR lesson: an affective path that runs through the functions of VR, presence, intrinsic motivation and self-efficacy; and the cognitive pathway that went through VR functions, usability, cognitive advantages and self-efficacy. It is concluded that learners can benefit from desktop VR simulations that emphasize effective VR functions and a high level of usability.

In addition, the use of VR-technologies makes it possible to increase the efficiency of teaching students who have any health restrictions, including disabled children. In the Russian Federation, the Ministry of Science and Higher Education believes that in every educational room (in lecture halls, classrooms for practical classes, training workshops, library, etc.) it is necessary to provide for the possibility of equipping 1–2 places for disabled students for each type of violation health - musculoskeletal, hearing and vision (Bayat et al, 2014). However, it is not always possible to equip a workplace in the laboratory for disabled students, as well as to ensure the safe execution of tasks. According to A.S. Akhlimanova, D.A. Kuznetsova and O.M. Vakhrusheva (2017), in such cases, the organization of learning with the help of VR technology can give a particularly high effect. The use of VR technologies in the process of teaching students with disabilities at minimal cost will contribute to improving the educational process, as well as the adaptation of people with disabilities to the educational process and to the environment.

Methodological Framework

In the process of studying the problems and prospects of using VR - technologies in the process of forming professional competencies of students, such research methods as the study and synthesis of experience in training personnel in higher educational institutions, statistical methods of analysis, the method of expert assessments were used.

The study of the problems and prospects of using VR - technologies in the process of forming students' professional competencies was performed using the following information sources:

– research results of consulting firms and recruitment agencies;
– materials of scientific conferences;
– scientific publications on the problems of using VR - technologies in education, etc.

The use of theoretical and empirical research methods, statistical analysis methods and expert evaluations of employers allowed the authors to highlight the advantages of VR technologies in the formation of professional qualifications at the level of individual companies (corporate training system) in the process of forming students' professional competencies and to justify the direction of improving the use of VR technologies in education.

Results and Discussions

3.1. The Essence of VR - Technology and the Direction of their Application in the Process of Forming Professional Competencies of Students

The first attempts to create interactive devices that allow interacting with the simulated reality or complementing reality with information imposed were made at the beginning of the 20th century, the concept of mixed reality itself (“the continuum of reality-virtuality), whose elements are AR and VR in the modern view, is quite young (24 years), as well as the market of the technologies of virtual and augmented reality. And although the notions and concepts of virtual and augmented reality have not undergone radical changes over the past 30 years, but virtual and augmented reality technologies have gone through a significant evolutionary path in terms of improving devices and software and content, and have already experienced several growth spikes.

According to L.V. Kurzaeva et al. (2017) today the following directions for the development of product markets based on the use of virtual reality technology are identified. The first is connected with the study of virtual and augmented reality technologies as a new direction in the information technology industry, the fundamentals of creating virtual and augmented reality applications (VR, AR). The second direction is pedagogical design of teaching aids based on technologies of virtual and augmented reality. The third is the definition and experimental verification of the organizational and pedagogical conditions for the effective use of such teaching aids in the educational process.

Summarizing the results of existing studies of Russian authors in the field of application of VR-technologies in education (Sobolev & Kiseleva, 2014; Kornilov & Popov, 2018; Danilenko & Yarusheva, 2018; Emam & Shajari, 2013), it can be concluded that the formation of the professional competencies of students involves not only the study of the theoretical aspects of these or those activities, that is, the acquisition of new knowledge, but also the formation of certain skills in specific areas of professional activity.

3.2. Evaluation of the B2B Market of the Virtual Reality Technology Market

In 2017, Snap company representatives reported that nearly 70 million users spend an average of three minutes per day with AR objects. Large technology companies like Apple and Google, Snap, Facebook, Niantic Labs, Adobe and startups like Blue Vision Labs help developers and content creators produce better products based on the use of VR technology. The most popular products were based on the use of smart glasses, various 3D tools and SDKs. (The Venture Reality Fund released a report on the global landscape of augmented reality, 2018)

According to Augmented Reality, the market for virtual reality technology could grow from 5.2 billion dollars in 2017 to 34.1 billion dollars in 2023. The forecasts of GoldmanSachs are less optimistic - its forecast is $ 28 billion in 2020. According to experts, by 2021 mobile devices of augmented and virtual reality (approximately 75% and 16%) will be most popular, the remaining share will be approximately equally divided between wearable devices of virtual and augmented reality (After mixed year, mobile AR to drive $ 108 billion VR) / AR market by 2021, 2017)). At the same time, the share of software in the B2C segment will be 54%, and in the B2B segment - 46% (The Real Deal with Virtual and Augmented Reality, 2016). The main market drivers in Russia are virtual reality technology for mobile devices and the development of content for viewing video format 360 ° and undemanding in terms of technical characteristics.

In Russia, the consumer market for devices, software and content for virtual reality by the end of 2016 was estimated at $ 21.7 million, the B2B solutions market was $ 6.2 million. The structure of the Russian B2B virtual reality market by project areas is represented by figure 1.

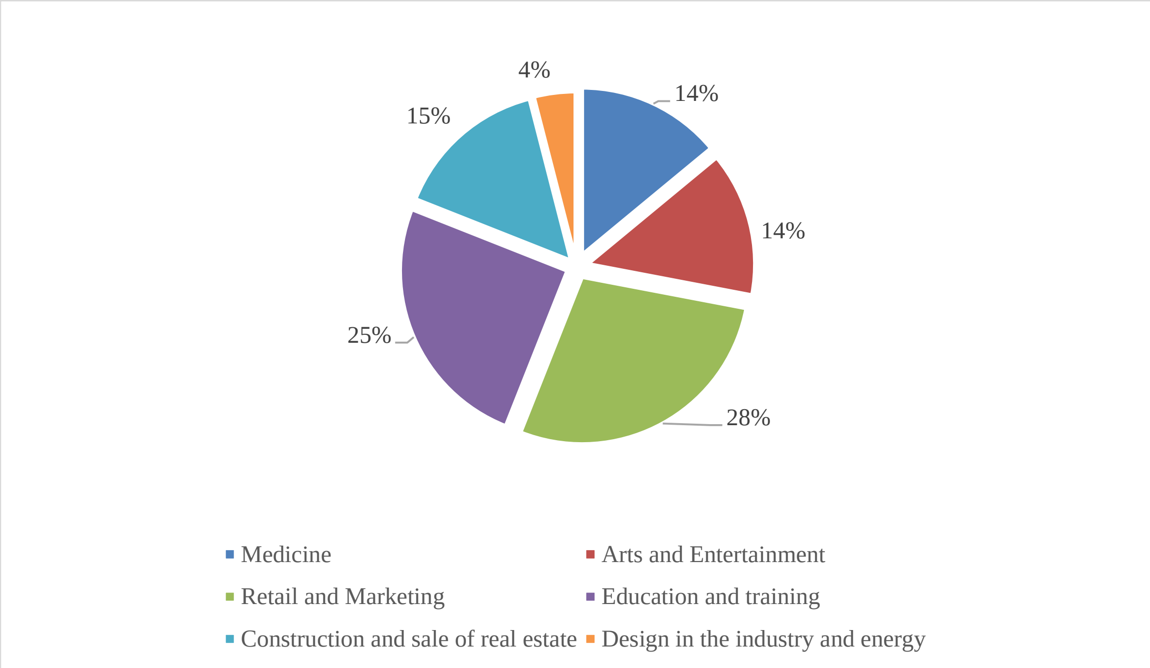

Figure 1. The structure of the Russian B2B market of virtual reality technologies by project areas (at the end of 2017)

Evaluation of the dynamics of the user base of the main virtual reality platforms in Russia from 2016 to 2018 shows a significant increase - by 70% in 2017, and by 55% in 2018 compared with the levels of the corresponding previous year (Figure 2).

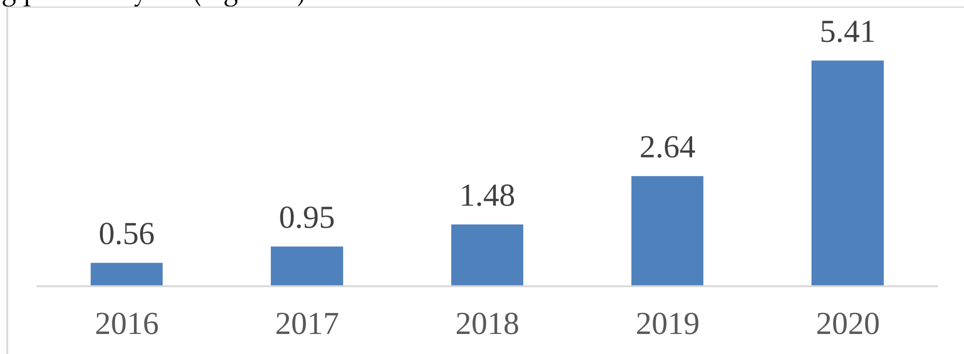

Figure 2. Dynamics of the user base of the main platforms of virtual reality in Russia, million dollars.

An assessment of the market development prospects as of the beginning of 2019 shows that the market is developing intensively, new products and technologies are emerging, although not everything is so clear. So, according to Greg Sullivan, director of communications for Microsoft Mixed Reality, the entire VR industry has experienced both growth euphoria and decline with disappointment. The technology, according to a Microsoft representative, has great prospects, but now its potential is not realized (Microsoft: VR did not meet expectations, 2019).

Microsoft Mixed Reality introduced the immersive VR headsets as consumer devices, and they generally failed to meet the high expectations that were placed on them. Figure 3 shows the different variants of such a headset.

Figure 3. Microsoft Mixed Reality VR Glasses

Virtual reality glasses and helmets have become increasingly mass-produced since 2015. Modern virtual reality systems (VIVE) are significantly different from the first samples. The latest advances in the study of the brain-computer interface (BCI) (Figure 4) have become increasingly used.

Figure 4. Classic VIVE, refined by Neurable, which can additionally capture brain signals (Mike Ambinder from Valve will talk about neural interfaces at GDC, 2019)

Presented in Fig. 4 virtual reality helmet additionally uses eye tracking technology and other indicators. Already in the short term, VR helmets could be improved using neuro interfaces.

3.3. Problems and Prospects of Using vr - Technology in the Process of Forming Students' Professional Competencies

As it is shown in Fig. 1, at the end of 2017, 25% of the entire Russian B2B market of virtual reality technologies is occupied by products developed for the education and training system. However, the issues of applying these technologies in education within the framework of psychological, pedagogical and technical-ergonomic aspects remain debatable. This is due to the following reasons:

– incorrect assessment and lack of understanding of the possibilities of using virtual reality in education. Currently, there is not enough objective and comprehensive research into the possibilities of using virtual reality technologies in education. There is a steady prejudice on the part of teachers that this technology is intended exclusively for games and other entertainment;

– misconception about the ergonomic characteristics of modern hardware, virtual and augmented reality. In particular, there are many publications in which it is argued that virtual reality glasses have a bad effect on vision, contribute to the rapid fatigue and fatigue of users of glasses (Lobodenko & Batyreva, 2017);

– lack of an extensive scientific and methodological basis for designing, implementing and using teaching aids using virtual reality, resulting in caution and mistrust of the teaching community to these technologies, and as a result - low efficiency of their use in the educational process.

At the same time, the use of VR-technologies in education has several advantages over traditional methods (Danilenko & Yarusheva, 2018):

– Visual representation - three-dimensional graphics allows visualization of certain phenomena or situations. For example, the use of VR in the energy sector makes it possible to consider a specific object and split it to a molecular level.

– Safety - managing air transport in critical conditions, modeling surgical or space operations allows working out a specific situation without risking your life.

– Focus - thanks to the technology of 360 degrees and full presence, VR allows focusing on a specific action without the influence of external sources that can affect the learning process.

– Novelty - this technology because of its relevance and futuristic helps to increase the level of involvement in the process.

– Saving resources - although the use of VR-technology is quite expensive at the present time, nevertheless, large companies still decided to implement this tool, while saving a huge amount of time and a number of other resources.

In addition, there are a number of advantages of VR-technologies in the formation of professional qualifications at the level of individual companies (corporate training system):

– reducing the time of training and instruction with an increase in their effectiveness, due to visibility and interactivity of information, greater involvement in the educational process;

– reduction of expenses for consumables, development of methodological support and other training materials;

– reducing the cost of teachers and business coaches while increasing the number of students;

– the ability to simulate different production situations, with the same “input conditions”, which contributes to the development of soft-skills, including behavior in non-standard situations.

Conclusion

The authors of the article have repeatedly investigated the use of modern technologies for the formation of students' professional competencies (Yumatov et al., 2017), as well as in the training process in the framework of corporate training (Mironova et al., 2017; Rodinova et al., 2017).

As part of this study, an assessment of the VR technology market and the applicability of these technologies in universities and the corporate training system was made.

According to the results of the study, it was concluded that there are a number of problems that hinder even more intensive development of this market:

– inconvenient in practical use of equipment for the application of VR technology, as part of this equipment involves the use of cumbersome or inconvenient headsets;

– low quality and limited range of content used in educational programs using VR technologies;

– high cost of equipment, and above all, helmets, glasses;

– high cost and problems with the compatibility of specialized software with the requirements of a particular business, the adaptation of foreign developments for the national economy;

– undeveloped privacy and cybersecurity issues;

– the impossibility of achieving the effect of full immersion and used of platforms.

Thus, one of the most relevant areas for improving the use of VR technologies in education is to improve the design and mobility of virtual reality devices without compromising the technical characteristics of devices. In addition, it is very important that developers of devices based on VR technologies carry out explanatory work with the teaching staff, managers and employees of corporate training centers.

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State Policy in the Sphere of Development of Scientific and Innovational Activities of the Youth in Russian Higher Education

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Abstract

The presents analysis of the research practices that offer methodological foundations for studying the problems and perspectives of state regulation in the sphere of formation of scientific and innovational potential of the youth. It is concluded that there is a clear dependence between students' involvement in scientific activities and the emerging transformation of value orientations of future young scholars. Dynamics of the research showed stable significance of such values as freedom of creativity, competence, social significance of professional activities against the background of reduction of the values of career perspective, conditions and material components of labor, prestige in society, and group solidarity in a work group. Research and analysis of specifics of reproduction of potential of the youth as the main resource of development of innovational economy of the country allowed for the conclusion that formation of scientific and innovational potential of the youth requires systemic, well-planned, and effective state regulation.

Keywords: state policy, scientific and innovational activities, youth, science, education.

Introduction

In the completely new socio-economic and geopolitical conditions of functioning of the modern Russian society, the role of science as a strategic resource of innovational development of a country grows. Functioning of science is closely interconnected to the real market economy and is a part of society's innovational economy, which determines its progress.

In the recent decade, the Russian science has been associated with destructive processes and has been undergoing the period of systemic transformation of the institutional structure. Political, socio-economic, and administrative reforms, economic decline, destruction of production, and ethnopolitical conflicts caused a comprehensive and deep crisis of the Russian science. The modern model of the Russian science could be called transitional and, thus, ineffective. Among many problems of the Russian science, discussed by the expert society, one of the main problems is urgent deficit of young scholars. A negative tendency has been observed recently during hiring of graduates of universities by the organizations that deal with R&D. Since 2005, the share of graduates in the number of hired persons has been decreasing (from 27.4 % in 2005 to 18.4 % in 2015); the share of graduates that deal with R&D decreased from 2.8 % in 2005 to 2 % in 2015 (Indicators of science, 2018). According to the statistical data, average age of a researcher is 47 (Indicators of science, 2018)

Absence of responsible and pragmatic state policy led to destructive processes in the scientific society, decline of prestige of science, and reduction of the level and quality of life of the scientific community, which stimulated mass emigration of scholars: they leave the sphere of science in favor of a more profitable sphere or try to find a job abroad.

Together with administrative transformations of the scientific community, the socio-cultural transformation of the unique scientific ethos – totality of the normative rules of behavior that dominates over the whole scientific community – takes place (Merton, 2006). It is the institutional environment for formation of professional ethos of young scholars in the process of professional socialization.

Professional socialization is a multi-level process aimed at person's mastering special knowledge, socio-professional abilities and skills, values, and norms for achieving high professionalism as the basis for effectiveness of professional activities and oriented at development of innovational, adaptation, and integrative qualities of an individual that are necessary for his effective inclusion into the professional and labor society.

Successful process of professional socialization of young scholars is the main factor of strengthening of scientific personnel in the sphere of science and education. This process envisages successful inclusion into a profession and formation of a sense of professional identity and allows the subject of social activities to master professional skills, abilities, and models of behavior. The criterion of the result of professional socialization is correspondence of professional training of a young specialist to the requirements that are set by the specifics of scientific activities (Tastan et al., 2018).

The transformation processes that take place in the Russian society make a young scholar change his social trajectory and adapt to the market circumstances, refusing from the norms and values peculiar for the socio-cultural code, which leads to the loss of the reproduction mechanism in the scientific sphere

Research Methodology

Due to constant socio-cultural transformation of scientific ethos as a totality of normative rules of behavior that dominate over the whole scientific community, which is the institutional environment for formation of professional ethos of young scholars in the process of professional socialization, we used the theory of science's ethos of R.K. Merton (2006) as the main methodological principle.

The Russian and foreign research environment pays close attention to the problems of reproduction and specifics of professional socialization of scientific personnel. Thus, P. Bourdieu (2001) analyzed the theory of human capital and presents professional capital as a complex of abilities and skills of a person, which are used within implementation of the professional activities for obtaining income.

In this article, the authors use the foreign theoretical and methodological approaches to studying professional socialization, which are adapted to studying the scientific and innovational activities of the youth. Thus, the functionalist approach is based on sociology of French positivism (Wentworth, 1980; Hoy and Rees, 1977 etc.) and treats professional socialization as a structural component of a wider social context (Wentworth, 1980; Hoy & Rees, 1977). The interpretation approach is based on the German idealist tradition in the humanitarian and sociological thought (Lacey, 1985) and focuses on the subjective aspect of the process of socialization (Lacey, 1985). This approach is based on anti-positivism, nominalism, and voluntarism, which forms the understanding of professional socialization. The critical approach is based on the theoretical concept of Marxism and the Frankfurt School (Bolster, 1983; Wexler, 1987) and connects the change of the processes and the mechanism of professional socialization to the changes of the general social process (Bolster, 1983; Wexler, 1987).

This research is based on the ideas of such Russian authors as M.K. Gorshkov and F.E. Sheregi (2010), Y.A. Zubok, T.K. Rostovskaya and N.L. Smakotina (2016), who developed the theoretical and methodological approaches to studying youth as a socio-demographic group. Most researchers define youth as a special socio-demographic group, distinguished on the basis of age and socio-cultural characteristics: uncertainty of status in society, social marginality, etc. The youth that are involved in the sphere of science are one of the specific socio-professional groups, with specific features and qualities. On the one hand, it has the features and characteristics of the youth on the whole, and, on the other hand, it is included into the professional scientific community of scholars that is important in the knowledge society. It is necessary to note mismatch of the status elements – primarily, level of income and education – which is caused by the insufficient level of transfer of the cultural and educational capital into the economic capital. As a result, half of young people have the growing feeling of social marginality, which is expressed in dissatisfaction with social position, lack of confidence in future, insufficient identification with the scientific community, psychological discomfort, etc. A peculiarity of the socio-professional group of young scholars is significant dependence of its social position on the state policy in the sphere of science. That's why reduction of the social status of the Russian scholars influences the reproduction of this professional group on the whole.

The problems of professional socialization are studied in this article in the conditions of the scientific and educational environment of a technical university, and the start of formation of professional competences of a young scholar takes place in the period of studying in a university. Technical universities, as a platform for the scientific and educational integration, have the applied and practice-oriented character and follow the modern tendency of competition, developing inter-disciplinary and inter-professional ties that are oriented at increasing the socio-adaptive and research culture of graduates. Focusing on human resources, university – as a special social organization – has to form such culture in which ability for scientific and innovational activities is a special value (Vodenko, Tikhonovskova & Ivanchenko, 2015; Vodenko et al., 2016; Vodenko et al., 2017).

The basis of scientific research of formation and reproduction of scientific and innovational potential of the youth is the complex of sources of empirical information, which includes the results of sociological research, performed by the authors in 2011 - 2017 via personal questionnaire survey of undergraduates and young scholars of the leading technical universities of South Russia. Representativeness of the performed research procedures is ensured by means of implementation of multi-level quota selection. The selection was calculated for two groups: 1st group – undergraduates of technical universities (total selection - 2,627 respondents); 2nd group – young scholars (total selection - 358 respondents). The main purpose of the research was to study the motivating factors of scientific activities and to determine the level of prestige of the profession of a scholar, career orientation of undergraduates at scientific and innovational activities, and the problem of state regulation in the sphere of formation of scientific and innovational potential of the youth.

Results

Transformation of internal goals and motives of young people, predetermined by adoption of the market model of behavior and growing commercialization of science, influences the attitude of undergraduates towards science and innovational activities.

Thus problem is especially important in the conditions of development of modern higher education. The system of modern higher education is integrated in subjective space of socio-economic relations, which present the set of its stakeholders. There's a necessity for new approaches to managing higher education on the basis of regulation of interaction between its stakeholders and, accordingly, development of scientific substantiation of the theories and principles of managing socio-labor relations and scientific and innovational activities.

Undergraduates and postgraduates are not a closed self-developing system, so understanding and systemic analysis of the processes that take place in the youth community are conducted in direct causal connection with social changes in the Russian community and with state measures that are taken within the modern youth policy. Based on this, a complex analysis of socio-economic factors that influence the formation of career perspectives of college students in the sphere of science is performed; quantitative and qualitative indicators of statistical (objective) and estimate (subjective) data are studied (Vodenko & Ivanchenko, 2013).

Organization of research work in university is the main platform in training of future scientific personnel. Organization of the research work in university determines formation of research competences with undergraduates and their acquaintance with peculiarities and specifics of the scientific community. However, undergraduates' treatment of science is peculiar for the pragmatic emphasis: for most of them science is not a mandatory condition of professional education, but science, including student conferences and forums, contains the resource of career growth and allows strengthening the motivation for achievements.

Scientific work attracts 47.2% of the respondents, creative character of work and possibility of self-implementation attract 40% of the respondents, and the possibility of studying that which is interesting attracts 26.2 % of the respondents. 34.8 % of the respondents want to be involved with science upon graduation (answers "yes" and "rather yes than no"). Low prestige of scientific activities is indirectly confirmed by the fact that the share of those inclined for scientific work constitutes 6-8 %, but only 0.5% of graduates do devote themselves to science. It should be noted that the "yes" and "no" answers prevail. 33% of the respondents are ready to choose a scientific career (Table 1).

Table 1. Readiness of undergraduates of technical universities to be involved with research activities (% of the respondents).

Variants of answer / Respondents	Yes	Rather yes than no	No	Rather no than yes
Bachelors	12.5	12.3	23.4	33.6
Masters	25.7	28.1	27.4	17.4
General for the selection	15.3	19.5	24.2	30.2

Analysis of the scientific and innovational environment of a higher educational establishment allows evaluating the form of organization and complexities of implementing scientific and innovational activities in a university. Very often, university environment is a place of "acquaintance" of students with the scientific & innovational and technological creativity. Thus, answering the question "What was the start of your technological creativity?", students say that it started in the university environment and give a specific event: 27.7% of the respondents started with participation in a conference, forum, etc.; 24.1% of the respondents were influenced by the lecturers; 20.2% of the respondents were attracted to the work in a laboratory. It should be noted that 10% of the respondents said that they were always interested in scientific and innovational activities.

Organization of scientific and innovational activities of students was evaluated with analysis of difficulties faced by the respondents in the process of scientific and innovational work. Analysis of difficulties was performed at the stage of scientific research and at the stage of promotion of results and innovations, as scientific and innovational activities envisage scientific inventions and promotion of the obtained innovations (their commercialization). The first place belongs to the financial component at the stages of research and implementation (46.5% and 47.2%, accordingly); also, undergraduates note the deficit of scientific communication (38.3%) and regional closeness (27.9% and 23.4%) (Table 2).

Table 2. Difficulties faced by the students in the process of scientific and innovational activities in a university.

Difficulties	At the stage of scientific research	At the stage of promotion of result and innovations
Absence of financing (investments)	46.5	47.2
Deficit of scientific communication	38.3	37.1
Absence of interest to new ideas in business	28	26.3
Lack of scientific literature	23	20.8
Insufficient knowledge of foreign language	22.9	23.4
Regional closeness	22.9	23.4
Weak material and technical base	22.8	30.5
Personal qualities	20.8	18.6
Difficulties with publication of results	15.9	15.1
Doubts in significance of results	14.6	6.6

Weak scientific management	12.4	12.6
Lack of organization	11.7	6.9
Absence of knowledge in the specialty	7.7	4.5

The problems in scientific and innovational activities consist primarily in absence of proper financing of student science from government structure and from business structures – which, due to different reasons, are not interested in investments into university science. Besides, students distinguish such problem as deficit of scientific communication. Apart from free access to scientific information at the stage of research, the respondents need the opportunity to visit scientific events, at which they would approbate their scientific results, learn the experience of other scholars, and obtain new knowledge. Due to absence of communication, future scholars feel regional closeness (22.9 %). In the course of promotion of results and innovations, an important problem is weak material and technical base of a university (according to 33% of the respondents). Personal qualities and lack of organization are the last positions in the rating of difficulties.

Discussion

The research results show that in the conditions of liberalization of economy, when activities in the scientific sphere are positioned as one of the types of professional activities, which requires high qualification, there's a necessity for smart state policy in the sphere of attraction of scientific personnel. Turning science into a competitive sphere of activities, which includes high professionalism and decent payment for scientific labor, allows a young scholar to implement his moral and ethical system with value priorities and ideas on ideal science and scholar.

The research showed that 47.2% of undergraduates are attracted by scientific activities, and 34.8% are ready to conduct scientific activities. Students' refusal from science is predetermined rather by objective, not subjective, reasons, of which the financial problem is the main one. The material component is very important, especially in case of the young generation. Young people value the possibility of career growth, material well-being, possibility of self-implementation, stability, and social importance. The leading position belongs to the variant "work has to be interesting and well-paid". However, if the respondents are to make a choice, 40% of them choose a boring job with high wages, while 34% are ready to accept interesting job with low wages. Almost all respondents (98.2 %) are ready to continue scientific career if the university's management helps with the accommodation. This problem, which is the most important for young scholars, may lie in the basis of development of the programs of support and motivation of young scholars at all levels. The main directions of state policy that are aimed at development of scientific innovational potential (according to young scholars) are given in Table 3.

Table 3. The main directions of state policy in the sphere of formation and reproduction of scientific and innovational potential of the youth.

Main directions	% of the number of the respondents
Annual competitions for young scholars, financed from the budgets of different levels	69.4
Long-term cooperation between scientific centers in Russia and abroad	58.4
Support for entrepreneurial initiatives of youth: creation of small companies	48.8
Stimulation for additional education, advanced training of young scholars	46.4
Support for innovational and entrepreneurial initiatives of the youth: legal, accounting, information	40.2
Provision with necessary scientific equipment	36.6
Older colleagues' attracting young scholars for research by the grants and economic contracts	31.8
Creation of small innovational companies on the basis of departments	28.3

As to assessment of career perspectives in the scientific sphere, young scholars see their main advantage in science, as compared to older colleagues, the ability for effective adoption of foreign experience and achievements (55.4 %); ability to work intensively (48.1 %); mobility in the scientific environment (46.8 %).

Career growth of young scholars is an important factor in the process of formation of creative and professional qualities and their further adaptation and establishment in the scientific environment. Career growth, according to the respondents, is acquisition of scientific degree (55.6 %) and increase of the number of scientific works (20.2 %) (Table 4).

Table 4. Career growth according to young scholars.

Variant of answer		% of the number of the respondents
	Acquisition of scientific degree	55.6
	Increase of the number of scientific works	20.2

	Career growth	12.2
	Increase of wages	10.2
	Acknowledgement of scientific works in Russia / abroad	1.8

The image of modern science seems to be complex and ambiguous to young scholars. The basic characteristics have the following priorities: making money and commercialization (20%) and technologies (18.4%). At the same time, progress achieved with modern science is emphasized – 19.2%; new characteristics of the world science in the modern society is formed – scientific symposia and conferences, activities of international scientific groups, and creation of a system that can ensure joint creativity of representatives of science from various countries – 15.1%.

Young scholars' image of ideal science does not coincide with its classical images. Thus, its cognitive characteristics, which are the basic ideas of the respondents on ideal science, are absent. Active negativism appears due to one of the specific features of the world science – commercialization – which is doubtful and imposed from outside for the respondents.

The main reasons of such state of affairs in the Russian science, according to young scholars, lie in decrease of financing (89%), absence of smart and systemic policy of the state (50.8%), which leads to lack of demand for science and scholars (35 %), and "brain drain" (24.9%).

In their turn, respondents pay attention to the role of other factors, e.g., socio-cultural: they note decrease of the quality of education and such factors and lack of skilled specialists, decrease of prestige of scientific work and transformation of values, which leads to change of morality in the scientific environment and thus stimulates the disappearance of such moral type as "unselfish scholar".

Young scholars show understanding of domestic science as the most powerful intellectual component of the world science and as a brain factory for developed Western countries. The scholars also show concerns regarding future possibility for the West to subdue the Russian science and perform influence through provision of orders to Russian scholars or through turning Russian establishments into a platform for development of the Western scientific thought, which achievements will be implemented in Western countries.

The optimistic future of the Russian science, according to young scholars, depends on domestic factors: increase of its prestige (27.9%), financing (73.8%), and state support (17.9%). Only 0.8% of the respondents count on commercialization of science. Domination of the formula "if… then" with the respondents should be noted. According to the, if the state supports and finances science, the Russian science will have a future. 33% of the respondents show optimism in this regard, and 30.2% of the respondents show pessimism regarding the future of the Russian science.

Conclusions

When considering socio-cultural changes of the scientific community, it is necessary to note different dimensions of their manifestations. It is possible to distinguish two directions of the changes. Firstly, differentiation of the scientific community is expressed in differentiation of government structures, which allows speaking of the complex character of this process, which takes place at the individual and institutional levels, which covers separate scholars and scientific institutions. The second direction of socio-structural changes of the modern scientific community is differentiation as to the level of incomes. Low level of wages is the main factor of dissatisfaction with work of most scholars. Also, there is no opportunity to conduct full-scale research, which negatively influences the number of scientific personnel (Vodenko, Tikhonovskova & Ivanchenko, 2015).

The perspective directions of state regulation of formation and reproduction of scientific and innovational potential of the youth include the following:

– integration of applied science with production. Stimulation of this direction will allow increasing innovational potential of universities and developing sectorial science and scientific schools;

- development of the scientific infrastructure of universities;
- development of scientific and production connections of universities;
- development of the system of management in the scientific environment;
- increase of the level of provision with resources and of laboratory and technical equipment;
- increase of the level of financing of young scholars;
- development of the system of social provision and social guarantees for young scholars;
- creation of a positive image of scientific image and profession of scholar in society;
- involvement of academic staff in research activities.

There is a clear dependence between involvement of students in scientific activities and the emerging transformation of value orientations of future young scholars. Dynamics of research showed stable significance of such values and freedom of creativity, competence, social significance of professional activities against the background of reduction of the values of career perspective, conditions and material component of labor, and prestige in society and group solidarity in the work group. Loss of the large share of potential scholars has external character, determined by the economic, organizational, and socio-cultural conditions of research activities in a specific moment of time in the country, establishment, and work group. The measures that could raise the effectiveness of implementation of measures of state policy in the sphere of formation of scientific and innovational potential should include organizational, motivational, material, and social aspects.

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Intercultural Approach as a Prerequisite for Economics Students to Form an Accurate Professional Thesaurus

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Abstract

In modern conditions of global interaction, intimate knowledge of foreign languages by specialists in various fields is a prerequisite for carrying out professional activities not only at the national, but also at the international level. Determining economy as the main development direction of Russia, there is a need foreconomics students to be ready for carrying out professional activities not only in their native, but also in a foreign language. This, in turn, requires an accurate exteriorization of foreign professional (terminological) lexical units, taking into account the characteristics of a partner, a representative of another society, a bearer of other values, norms, concepts, another picture of the world. Owing to the national character, native and foreign professional thesauruses in many cases do not correlate.The article considers the potential of the intercultural approach, which allows economic university students, firstly, to perceive their native professional concepts peculiarities, therefore expand their horizons, realize their unique, nationally determined entity, secondly, to compare a native thesaurus with the foreign one to identify correlating and differentiating features. All this, ultimately, contributes to differentiation of two completely different professional thesauruses and provides conditions for improving the quality of business interaction between representatives of two different communities.

Keywords: thesaurus, professional terminology, concepts, intercultural approach, economics students.

Introduction

Globalization and integration process opens new opportunities, types and forms of communication, the existence of which is impossible without mutual understanding between different cultures (Birova, Vasbieva&Masalimova, 2017). Due to globalization, the result of which is the pervasive interconnection of people from different countries, where language is regarded as a means of communication and integration into global community, foreign languages teaching has become a vital issue for modern non-linguistic universities. The reason for growing concern is concentrated on the particular result ofevery contemporary education, which presupposes that future professionalsshould be able to tackle professional problems not only in Russian (native) language, but also in English.The ability to speak English forprofessional activities performing acquires ever-growing importance within the confines of *economic* university students(Kalugina et al., 2018), because economy was proclaimed the main area for country development. In view of the foregoing, there is a growing need in such teaching, which makes modern economic higher education institutions graduates able to solveprofessional problemsin a foreign language in the way they can do professional activities in their native one. What is more important, present language teaching should be aimed not at a foreign language itself, but at ESP where language is regarded as a tool of tackling professional problems(Kalugina, 2016; Vasbieva&Saenko, 2018).

An integral part of efficient speaking a foreign languageis for lexical aspect, which presupposes specific notions knowledge, various lexical units use and, more importantly,the ability to actualize required lexis, corresponding the communicative situation and thecommunication register. In terms of lexical side of thetarget language, the foregoing makes speech look natural and correspond to the accepted norms of communication.All things mentioned above necessitate a need of personality thesaurus formation, which implies a clear systematization of lexical units, the formation of links between concepts in a mental structure of a future specialist.

On the other hand, a communication between people from different societies impliesa kind of «clash» of two different pictures of the world(Tareva&Tarev, 2018), since the communication is carried out by bearers from two different social societies with their own norms, customs and foundations. Therefore, many concepts (and, accordingly, lexical units) from different pictures of the world do not coincide. Ignoring this peculiarity can lead to the fact that the future specialist will not be able to solve the communicative problem correctly.

This raises the question of how to ensure the learner's ability to understand, realizeand correlateforeign and native concepts to solve communicative tasks in the process of communication with a foreign colleague. The paper examines the difficulties of words learning and exteriorization, the advantages of the *intercultural approach*, which linguodidactic specificity in relation to a non-linguistic university is far from full-fledged scientific understanding and covering and which has a powerful potential for solving the issue of professional thesaurus formation.

Literature review

The problem of economic universities graduates training continues to attract the attention of researchers due to the fact that there are many unresolved issues in this area. One of the urgent problems is the insufficient formation of foreign lexical skills, allowing economic universities graduates to readily operate professionally significant lexical units (terms) in order to solve professional problems within intercultural communication. Today, students of non-linguistic universities are not able to fully use a variety of vocabulary which satisfies the communicative situation conditions and the register of professional communication. As scientists note, in the process of foreign language learning one of the difficulties economic universities students face is lexical units, especially vocational, and the reason for this lies in the insufficient development of modern foreign language teaching technologies (Pavlova, 2013: 48). The result of this is the fact that the students' speech looks unnatural, devoid of lexical variety, suitable flexibility, which does not comply with the accepted norms of communication(Vasilyeva, 2016: 68).

For the lexical side of a foreign language to be sophisticated enough, there is a need for introduction of innovative technologies (Kalugina&Tarasevich, 2018; Kulamikhina et al., 2018; Tastan et al., 2018), meeting the current requirements and allowing the future economist to master the vocational vocabulary and ensure the quality and effectiveness of professional communication. The use of a thesaurus dictionary is one of such new technological solutions. This means allows the learner to form the meaning of words not only with the help of the definition, but also through the correlation of lexical units and their categories. A thesaurus provides systematic memorization of lexemes, forms connections and logical dependencies of concepts in the process of the student's active cognitive activity, who in the future will be able to actualize the acquired knowledge and skills in relevant situations, conditions of communication. Thus, the use of such a dictionary can contribute to future specialists' professional thesaurus formation.

Thesaurus is devoted a lot of research in various fields of scientific knowledge. In linguistics, the thesaurus level of a linguistic personality is distinguished, his/her language abilities and properties at this level are revealed (Karaulov, 2010). A "model of secondary linguistic personality" (Khaleeva, 1995) was developed, in which thesaurus features are given a defining place. Research works by M.E. Korovkina (2015), Yu.S. Fomina (2011) and others allow us to find out the place of the thesaurus level in the structure of individual's intellect, how concepts (the pictures of the world) are formed in the mind of a linguistic personality, what relations between lexemes can be established, andalso they determine principles oflexical unitsselecting.The above-mentioned sources have made an invaluable contribution to the study, since they allowed to determine that there are 3 levels in the structure of an intellect, and the thesaurus is the key phenomenon here. Taking into account the fact that relations between lexical units at the thesaurus level are arranged in an *orderly, strict* hierarchical system, expressed in lexemes, definitions, aphorisms, feathered words, proverbs, sayings(Karaulov, 2010: 52), all scientists agree that at this stage individual's thesaurus reflects, first of all, the structure of the *world*. This level is not as mobile and individual as the second, motivational,this leads to the conclusion that the likelihood of *influence* at thesaurus stage of concept formation is great because the thesaurus initially reflects the consciousness of the society and only then is interpreted through the prism of personal experience. Such studies confirm the *possibility* and necessity of professional thesaurus formation, before the students form correlations in their mind incorrectly.

From the perspective of psycholinguistics, the main object of consideration is the relationship between the internal lexicon and the thesaurus of an individual. The research works by scientists (Akhutina,2014; Zalevskaya, 1999; Aitchison, 2003; Collins & Loftus, 1975; Garman, 1990; Levelt, 1989; Bierwisch, 1965; Fillmore & Atkins, 1992;etc.) help to identify the relationships between lexical units at different levels of human mind, the principles of words search in memory, as well as mechanisms of speech production. All researchers distinguish different types of lexical units' relations, the most common are:

- on the basis of categories of knowledge, uniformity, associative proximity(Zalevskaya, 1999);
- semantic relations(Collins & Loftus, 1975);
- based on the form of the word or semantic associations(Garman, 1990);
- on the basis of syntax, morphology, meaning, phonology or associations relations (Levelt, 1989);
- linguistic and non-linguistic level associations (Bierwisch, 1965);
- associations relations based on already existing in the mind frames (Fillmore & Atkins, 1992).

Despite distinguishingdifferentlexis connections, all researchers agree that all units of mental lexicon are not located separately, but necessarily combined with each other. At the same time, to verbalize the necessary lexeme there is a word search within the framework of semantic networks of lexical units stored in memory and forming concepts. All mentioned above points out the importance of a thesaurus as part of the individual intellect formation, the need to form*accurate* connections in the mental lexicon to ensure the correctrelations in structural hierarchy inmindand, subsequently, to verbalize the necessary information properly.

Serious difficulties are in the way of those who study the process of individual's foreign professional thesaurus formation. When studying this process, scientists are faced with predicaments that are difficult to overcome due to the fact that thesauruses of the native and foreign languages in many aspects do not coincide because of significant discrepancies in the cultural characteristics of different communities. In cognitive linguistics, it is proved that the system of knowledge about the world includes many concepts (fixed representations associated with various objects and phenomena of reality) of different levels of complexity and abstraction, formed in various ways (Shcherbina, 2008: 19). In order for new meanings to appear in the mind of an individual, a *conceptualization* process, which is responsible for the formation of new concepts, conceptual structures, conceptual systems, takes place and *categorization*, which implies comprehension and correlationof new information with existing categories [ibid.]. Modern understanding of categorization proceed starts with the fact that there are "basic" and less significant categories within different existing categories; at the same time, the basic categories of different societies will differ from each other due to discrepancies in the way of people's lives (Rosch, 1978). In other words, representatives of different societies will have different basic and minor categories. In this case, not only the order of systematization of categories may differ. The national specificity can be also shown by the fact that some connotates of a lexical unit will be more important and "brighter" in one culturethan in another one (Sternin, 2016: 51).

It follows from the above that any foreign language lexical unit is perceived by the recipient through the prism of the cultural representations of the native society, which can lead to incorrect memorizing and fixing in the mind of a student distorted information relating to one or another lexical unit. There is a high probability that such a foreign vocabulary will be fixed in the student's mind, the meaning of which will be perceived from the point of view of the native picture of the world, which will lead to an incorrect use of the word in a foreign language professional communicative situation. "A person is not inclined to notice these phenomena and things that are outside his ideas about the world" (Maslova, 2004: 49), and this means that the knowledge included in the native picture of the world is stable, and a person with obvious difficulty fixes new ideas about already established objects and phenomena.

Solution to the problem

The presence of different conceptual structures, the difference of the most significant connotativemeanings of lexical units' indifferent societies' minds reveals the necessity of comparing native and foreign-language thesauruses for a better understanding of the latter. The need for connotates differentiation is connected with the peculiarities of a picture of the world formation. Due to the fact that in the mind of an individual there are already existing concepts, on the basis of which aperson perceives objects and phenomena (through his native picture of the world), the study of a foreign thesaurus restricted to a demonstration ofanother society cultural concepts, does not allow to automatically gain foreign cultural knowledge. In order to avoid a merge of native and foreign professional thesauruses in the student's mind, it is necessary to form a foreign thesaurus in the framework of an intercultural approach. It will allow the future specialist to get integrated knowledge based on a comparison of the native and foreign pictures of the world and, thus, at their crossing and mutual enrichment he will understand his/ her unique (nationally conditioned) entity.

This didactic strategy (intercultural approach) is widely studied in Russian and foreign linguodidactic research works(Khaleeva,1995;Tareva, 2017; Bennett, 2004; Corbett, 2003;Byram, 1997;Kramsch, 2011). The main feature of this approach in reference to teaching lexical side of a foreign language is related to the fact that language in this case becomes a means of professional cultures dialogue and an effective tool forprofessional intentions realization associated with interaction with a representative of another culture, country, or another society (Dikova, 2008: 281). When studying a foreign language and learning the characteristics of someone else's behavior, the student expands his picture of the world, rethinks the characteristics of the native culture through the study of foreign cultural characteristics. At the same time, which is fundamentally important, the pictures of the world (native and foreign) are in an equal position, which allows to *avoid dominant ideas* about objects and phenomena of professional reality, the thesauruses begin to enter into equal relations of a "dialogue" (Tareva, 2017).

The use of the intercultural approach is especially significant for teaching students' professional terminology, since the diversification of the native and foreign conceptual and terminological apparatus,connected with insufficient correlation and differentiation of native and foreign pictures of the world, can be a reason for negative consequences of communication. The intercultural approach helps to eliminate insufficient knowledge gaining, which arises from studying *foreign* lexemes through the prism of the *native* picture of the world, because this approach is based on a comparison of native and foreign thesauruses, differentiation of distinctive cultural features of considered lexical units.

Methods and materials

In linguodidactic system a thesaurus dictionary, built on the principles of the intercultural approach, becomes a means ofteaching lexical side of a foreign language. Such a dictionary is responsible for the substructures of the student's mind and forms the student's professional picture of the world (thesaurus) (Zalevskaya, 1999). The dictionary is organized around a central concept, it (the dictionary) reflects the connections and relations between lexical units, considers cases and stable expressions used within the topic being studied. In other words, a thesaurus dictionary is a verbal product, showing the way lexical units should be organized, stored and interacted in the mind (mental lexicon) of the student. The undoubted advantage of the thesaurus is that the information presented in it is carefully selected, schematic, and visual. The lexis is presented in the form of semantic networks, which, in turn, help to systematize knowledge, establish relations with existing concepts.

From a methodological point of view, the potential of the intercultural approach for the economic universities students' professional thesaurus formation will be carried out by presenting *native and foreign thesaurus dictionaries* to students as a means of forming professional *concepts* in students' minds.

According to A.V. Shchepilova (2005: 140), in order for the student to understand differences in the ways of expressing thoughts in a foreign and native language, the "open comparison" will be the most effective. Moreover, students under the guidance of a teacher should carry out such a comparison. This means that for accurate foreign lexical units learning when applying a thesaurus dictionary built on the principles of the intercultural approach, specially organized thesaurus training is needed. In addition, the best way to achieve accurate understanding is based onthe use of *anexplicit comparison* of native and foreign thesaurus dictionaries.

The thesauruses themselves are not so informative, since their demonstration to the students is not a guarantee that all relations between lexical units will be formed correctly. Economic university students' professional thesaurus formation needs specially organized teaching methods based on a comparison of these two thesaurus dictionaries.

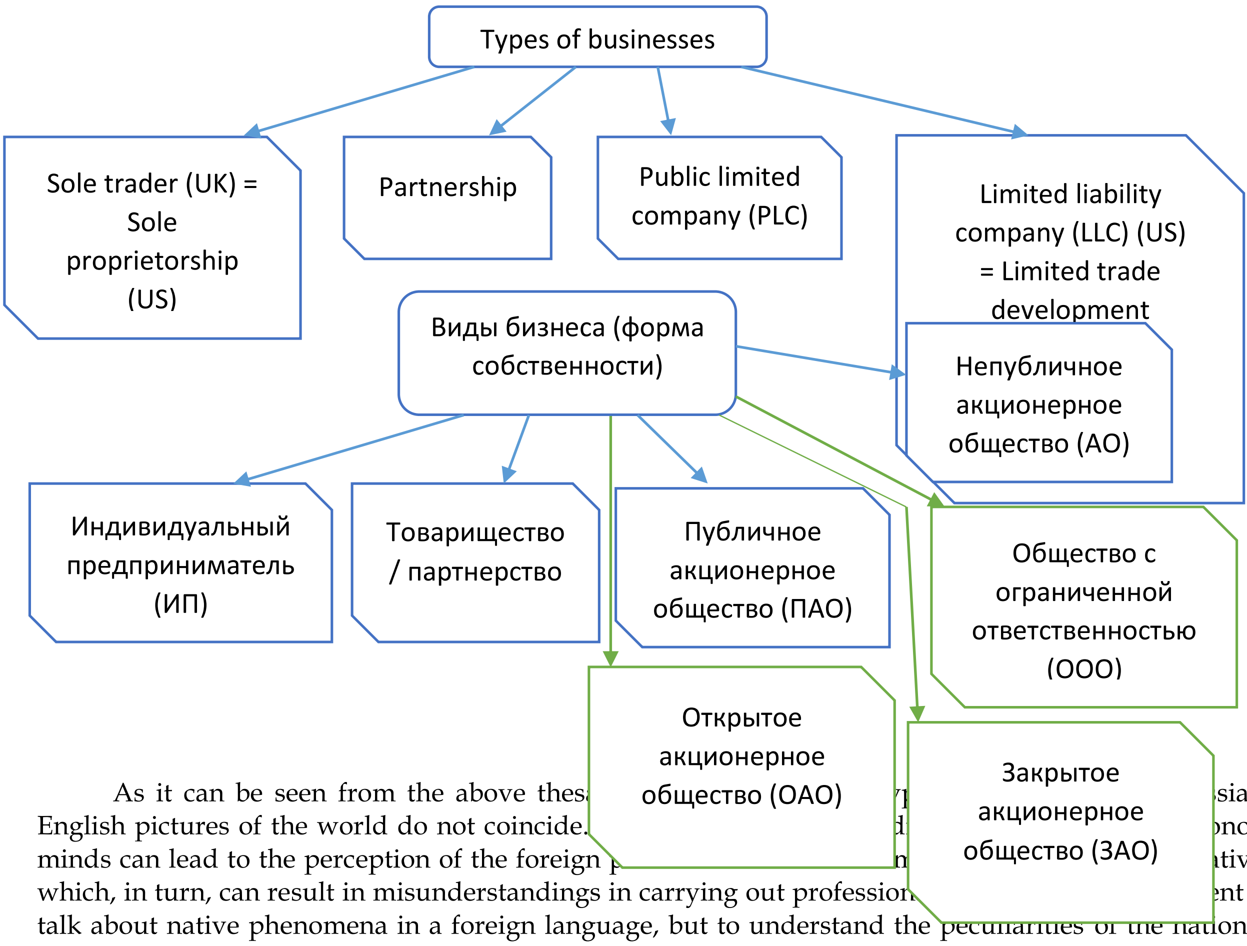
From methodological perspective,in the first stage a teacher should provide the students with a detailed description of the thesauruses.For students to achieve accurate understanding of the studied concepts, the second stage is for thesauruses training, which can be implemented by doing such exercises as gap-fill tasks, native and foreign concepts description, filling in the texts' gaps with information from the thesauruses, power point presentations (with particular examples: companies, products and etc.) preparation and others.

Results and discussion

In a generalized form, a formation of a thesaurus in the framework of the intercultural approach can be demonstrated by considering the classification part with the main topics and subtopics of thesaurus dictionary logical-semantic structures.

A good example demonstrating the need to study lexical units in an economic university in the framework of the intercultural approach is the consideration of proximal space of such a category as "types of businesses". This topic is one of the first / introductory in the foreign language in the professional field class.

Figure 1. The classification part of the thesaurus dictionary based on the intercultural approach in the semantic field of "types of businesses"



As it can be seen from the above thes… sian and English pictures of the world do not coincide. … onomists' minds can lead to the perception of the foreign … tive one, which, in turn, can result in misunderstandings in carrying out profession… ent not to talk about native phenomena in a foreign language, but to understand the peculiarities of the national and foreign identity, there is a need for the intercultural approach to be implemented into the learning process. Vocabulary developing within the intercultural approach, entailing external differentiation and correlation of native and foreign concepts/ thesauruses, helps students to realize their *unique* cultural essence, understand, comprehend, and accept cultural dissimilarities of different linguistic communities for obtaining *integrated* knowledge about the phenomena studied.

Meanwhile, it should not be forgotten that thesauruses themselves are not so informative, therefore there is a necessity to identify the main distinctive features of the native and foreign concepts "Types of businesses". It is generally agreed that the common model of business types is the following:

- a sole trader;
- a partnership(UK)/ a sole proprietorship (US);
- Limited liability company (LLC) (US)/ Limited trade development (Ltd) (UK)/ Private limited company (UK);
- Public limited company.

Equivalents for the first two lexical units are obvious – индивидуальный предприниматель (a sole trader), товарищество/ партнерство (a partnership). As for the last two terminological combinations, their interpretation requires comparing them with the national (Russian) economic specifics. It goes without saying that under the influence of globalization there were transformations in the understanding of such a phenomenon as business types, and their classification changed accordingly. On the other hand, the simple (primitive) definition of the concepts "Limited liability company" as "Непубличное акционерное общество", "Public limited company" as "Публичное акционерное общество" does not allow a student to understand a place of such phenomena as ОАО, ООО, ЗАО in the thesauruses. Despite the fact that these types of businesses are outdated and gone from the official turnover, they "live" in the society mindset and are in demand in the national economic consciousness even among modern youth.

From the perspective of professional practice, a need to differentiate the regarded phenomena may arise when trying to start a business with a foreign colleague. In this communicative situation, misinterpretation of the business type can play a key role, that is why there is a need to classify business types in Russia and to identify relating and differentiating features of business types in Russian and English pictures of the world.

As it can be seen from the ideographic part, thesauruses themselves are not informative enough for students to form correlations on their own, therefore students' professional thesaurus formation in the framework of the intercultural approach should be with a teacher's assistance or under his guidance, in addition, special training with well thought-out methodological system is needed.

Conclusion

The presented view on the problem of students' professional thesaurus formation is innovative, since the object of consideration is concentrated not on the skills of thematically related lexical units operating, but onthe foreign professional pictures of the world formationwithin an intercultural approach, which, in turn, takes into account the cultural peculiarities of the native and foreign societies. Such an approach allows students not only to understandthe sense of thematically combined lexical units, not only to use words which correspond to the situations of communication, but also to note the connections and dependencies between the conceptual rows of two thesauruses - native and foreign. Such a comparison is based on the principles of the intercultural approach, which allows to study the interaction of different professional concept spheres (thesauruses), comprehend information about a foreign world picture in its comparison with the native one on the basis of explicit differentiation and correlation. The introduction of the intercultural approach will make it possible to rethink already existing in consciousness and perceived through the prism of the native picture of the world concepts, to make the thesaurus of a language personality more systemic, developed and deeply aware.

The results of the research are the basis for further investigation of distal space of the semantic field "Types of businesses", full thesauruses (with 4 parts) on this theme design, creation of methodological conditions in the form of exercises for thesaurus lexical unitspractice. The findings of the research and the ideographic part of the created thesaurus can be implemented in the educational process at English lessons for accurate economic university students' professional thesaurus formation.

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Formation Conditions of High Quality Food Market Segments in the Region

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Abstract

Research topic relevance is grounded on the lack of high quality supply market segment alongside with the evident food quality deterioration on the market. Formation conditions of the segment are complicated and demand deeper level of knowledge. That can be defined as a ground for the article to be aimed at determination and justification of reasons for this market segment formation not being in growth but resolving instead together with continuous food quality deterioration. Methods of SWOT analysis, five factors of the industry market, product life cycle, and market institutional organization competitive environment analysis were used during research. Trends and reasons of processes on industry market and the segment researched were determined and justified during analysis. All market competitive factors, acting and new coming companies, suppliers and consumers are focused on production and circulation of low quality goods: consumers because of low income while producers because of fast growing expenses. As a result the market becomes filled with degraded quality substitutes. Big distributors dominate in selling food due to profitable price policy and monopolistic market position. There is a lack of effective institutional market organization. Necessity of food market organization modernization with the aim to create formation conditions of high quality food market segment and strengthen institutional controlling and regulating structures is grounded in this research. Theoretical significance of the research lies in the fact that achieved results improve knowledge on industry market competitive factors. In practice achieved results can be used for competitive relations regulation and high quality food market formation.

Keywords: food market, food quality, competitive factors, market environment, monopolism, distributing facilities, institutional organization.

Introduction

Research topic relevance was predetermined by sustained trend of produced and sold food quality deterioration and high-grade, high-quality food disappearance from market turnover. The market becomes filled with food produced with low-quality food and non-food fillers and genetically modified products. There is no possibility to identify product quantity and determine its usefulness on information provided by producers. Choice and consuming conditions for meat, milk, fish and bread, vegetables, fruits and canned products have become unacceptable.

Such situation usually stimulates creation of alternative market segments with a wide high-quality food choice. Representatives of small and mid-sized business enter this market segment in agricultural regions as they can provide production and sell of organically clean and genetically full food. From time to time they have been appearing in Volga region but could not stay for a long time. Formation of this segment is terminated for today. Obviously this problem has objective and subjective background which shall be determined for the problem affecting sustainability of social food safety be solved.

Based on the above the aim of the research is determination and description of competitive relations peculiarities on food markets with the following characterization of current formation conditions of high quality food market segment and measures justification for institutional ordering and sustained functioning of this market.

The following tasks were solved during research: competitive factors analysis on industry market with determination of their system interconnections and intercommunications; characterization of current formation conditions of high quality food market segment; justification of necessity and description of obstacles preventing regional producers enter this market; justification of necessity for food market institutional organization improvement.

Methods and Materials

Methods of five factors of the industry market were applied (Porter, 1985). Adapted to theme method of SWOT-analysis (Grant, 2008) allowed estimating possibilities on industry and inner environment, their actual usage, reasons of usage and allow measures on increasing regulation efficiency. Threats appearing on industry market environment and on production factors market were also characterized. Degree of domestic producers' security from threats is estimated, sources of threats are discovered, and steps on improving institutional rules, restrictions and sanctions producers' security are given.

Results

The analysis made proves formation of high-quality, ecologically clean and genetically full food market segment aiming to strengthen and guarantee social food security as the main task of economy. This segment has not formed yet as there are no economical and institutional conditions for that. The analysis of five competitive factors on food market revealed peculiar nature of this market competition (Porter, 1985). This competition is not based on price and quality indicator but exclusively on price and costs. Quality indicators are hidden and do not play a vital role on market as consumers have lack of knowledge on cheese (cheese product), meat (meat product), and a number of other food products quantity. Producers have an opportunity to hide quality and use profitable price policy manipulating costs (decreasing them by adding cheap fillers in a product).

The analysis of five competitive factors shows the first factor, firms being on market for a long time are on specific positions. From one side they represent large, middle and small business making food. From the other side they represent both buying and selling business with dominating trading chains having competitive advantage. The source of this advantage is a monopolistic power of oligopolies controlling together both volume of purchases and price policy. They have no necessity to go into a huddle for that, they can just monitor other's price and food policy. The majority of firms producing food are representatives of middle and small business. They are not free to choose their own price and food policy as large trading chains dictate them own terms and sell own goods many times more expensive than pay producers. Being on such a distorted position they use ingredients which worsen food quality but improve (or, at least, not worsen) its design. That is the ground reason for permanent food quality deterioration. Trading chains gain excess profits while food suppliers also do not wish to stay at a loss. What is more small business competitive position both among producers and suppliers and retailers stays weak. Trading chains have little interest in working with them because it leads to higher transaction costs and time losses (Tumalanov & Pavlova, 2015).

The second competitive factor on food industry market is new firms entering this market. Entering process usually becomes more active on the growing stage but nowadays when this stage is inactive this process is weak. There are a lot of cases when small business representatives entered this market segment but they did not stay long and left it. Some tried to enter big cities markets, Moscow and Kazan particularly. But there they also suffer from difficulties as costs, especially transaction, are high. Moreover they do not know a lot of information necessary for new producers and sellers. Goods life cycle on market is sluggish (Tumalanov & Pavlova, 2015). There can be years passing before the beginning of growth cycle. Signs of future growth are necessary to be known. Redistribution of the existing volume does not happen even with the market growth. As a rule, only adding volume is going under redistribution (Tumalanov et al., 2017).

These circumstances can lead to high-quality food market stagnation unless positions of existing and new firms turn to be better. Any firm trying to enter this market unless market conditions are favorable falls under effects of "misconceptions". If there are not many sellers (producers) on market, demand exists, prices are attractive, entrance seems to be profitable. But entering firm does not pay attention on a creeping food prices growth, absence of consumers' income and entrance of other firms. This leads to the situation when this firm faces increasing costs, decreasing demand and lowering prices for own product.

The third competitive factor is food suppliers systematically increasing prices. This tendency remains despite efforts of regulating state institutions trying to hold price increase last years. That is the reason for increasing costs for producers. As usual they try to cover these costs by minimizing salaries. However this hint does not help to improve goods quality as producers have to hire unskilled workers with no diligence and capacities. Such state with food suppliers and workers does not help to create high-quality food market segment. On the opposite, impossibility to lower costs or, at least, keep them on previous level forces producers to turn to the second powerful (after lowering costs) way of increasing (or keeping) competitiveness which is a product differentiation.

Now we came to the results of the fourth competitive factor analysis which is substitute goods producers. The analysis witnesses that there is one common category for notions substitute goods producers, product differentiation and diversification. Differentiation is production of new kinds of product with new quality indicators (Porter, 1985). These indicators are not obligatory better, at least, no one speaks directly about it. Diversification is a passage to production and distribution of new products (Olusoga, Mokwa, & Noble, 1995). On the majority food market segments studied by us the fourth competitive factor, substitute goods producers, is presented by firms and companies producing and distributing so called meat products instead of beef, pork and other meat types, milk products instead of milk and so on. This process fully matches competitive differentiation and diversification but not normal consumers satisfaction. All market gaps are filled by these quasi products. There is only one explanation for market self-regulating mechanism blindness to this. Only one development direction is possible for non-regulated or ignorant and limp regulated market which is profit maximization. Product falsification making possible its differentiation and diversification in accordance with the theory of competitiveness allows profit maximization (Grant, 2008).

This process continues. Differentiated substitutes, quasi products do not allow real products with natural qualities occupy own market segment and even oust them from market. Not far ago market was full of enthusiasts trying to occupy and keep (or increase) market share. Today they are leaving market. It is extremely hard, almost impossible to achieve competitive advantage due to costs leadership and quality keeping in modern conditions.

A consumer goes to the main stage as the question appears "what is the situation with the demand for high-quality food?"

The analysis of the fifth competitive factor, consumers position and behavior, is usually executed with the aim of getting closer to the competitive advantage by creation of value (number of values) for a consumer. Segmentation on consumers groups is used to achieve best results in analysis (Fleisher & Bensoussan, 2005). Plus the idea of aggregated demand curve existence is rejected (Smith, 1995). Consumers segmentation allows to disaggregate demand schedule and consider many demand curves. This position also allows to consider food market as a model of imperfect competition with own demand and supply curves in each consumers segment. Such approach can help to explain market peculiarities in globalization. Rapid growth of offer and income in global economy leads to new segments where rich consumers claim high-quality products. Demand exists and grows if market with its institutions is well organized. Any firm with unique resources can define consumer groups ready to pay more for satisfactory product qualities through sectional analysis of consumers demand.

This orientation cannot obligatory bring high profit. The main reason for that is a distribution market constriction and high costs due to necessity of giving up the effect of industrial scale. That often defines as a reason for a little number of those wishing to enter and settle in such segments. What is more risks and uncertainty are high on domestic market. It is obvious for today that only rare firms have opportunities to take such risks when low income rate and corresponding paying capacity are well known for everyone. And their rapid increase and consumers' activity revival are not expected. Average income rate equal to 42,000 RUB and long-term credit burden taking most part of such low amount of money from dozen million citizens do not reassure about growth and development of high-quality market segment.

The analysis of this market segment in our region shows deep traditions of agricultural production in Chuvashia which can help it to occupy corresponding high-quality market gap. Works in this sphere are going actively nowadays. It can be proved by Oldeevskaya agrofirm activity. The firm built barn for 414 heads, started construction of milking and dairy unit for 120 cows in Krasnochetayskiy district. Novocheboksarskiy greenhouse complex for 22 ha on the high-tech basis of the fifth generation, new objects of the agricultural and food processing industry have being constructed in Batirevskiy district, etc. However, it cannot be assumed that the general trend of deterioration in food quality has bypassed the region's food enterprises. The analysis of the sectoral market environment shows that there are significant possibilities for high-quality food market development in the region, but they have not being fully used yet (Table 1).

Table 1. Summary of the results of regional high quality food analysis

Factors of existing opportunities	Significance (in shares from unit)	Estimation of current condition	Average weighted score	Factor's real usage	Reasons of factor's non-usage	Supportive measures
1	2	3	4	5	6	7
"A" Opportunities						
1. Usage of agricultural land	0.15	4	0.60	There are not used agricultural lands	Results of usage do not satisfy small and middle business.	Stimulate results increase by manufacturers support mechanisms.
2. Free workers	0.15	3	0.45	There are free workers but little used.	Employers are not satisfied with workers qualification.	Increase the quality of staff training and level of wages.
3. Investment opportunities.	0.20	3	0.60	There are investments made but their growth rates do not satisfy industry demand.	Investors are not sure in payback periods of high-quality food capital.	Create and use flexible system of this industry segment's investment attraction increase.
4. Demand increase on high-quality food.	0.10	1	0.10	Factor is rarely used due to consumers' inactivity.	Low income and weak population purchasing power.	Stable population income increase can provide system cooperation between state, business, labour

						unions and banks.
5. Export and sell on other regions markets.	0.10	3	0.30	There is export on neighboring regions markets. Global export without government support is complicated.	Absence of government export stimulation.	Stimulate and support damping export by subsidies. Number of developed countries use this practice.
6. Implementation of high-tech technologies in production and distribution.	0.10	3	0.30	Transition to high-tech technologies has begun not far time ago.	Trend to cut costs by ignoring product quality.	Cooperation between government, business and workers in the sphere of high-tech technologies implementation.
7. Availability of workers.	0.15	4	0.60	Hire workers on low wages condition taking unemployment into account.	Underestimation of workers. Overestimation of business. Instability of common price level.	Strengthen government and trade unions control and sanctions for employers dishonest in labor compensation.
8. Good quality food market organization and regulation.	0.05	2	0.10	Market is not organized. Restrictions and norms are not clear. Sanctions used rarely and ineffectively.	Absence of strict rules and restriction norms undermines opportunity for this market organization.	Systematic rules and norms organization with usage of digital economy achievements.
Total opportunities indicators	1.0	2.9	3.05	Level of opportunities usage is average.		
"B" Threats						
Threats appearing				Security level	Source of threats	Steps taken to strengthen security
1) Supplies level and conditions (prices, quality and stability of supplies) are	0.20	4	0.80	Insecurity before supplies rapidly growing prices, quality decrease and instability.	Ineffective control, regulations and sanctions.	More dynamic and flexible regulation, control and sanctions.

getting worse.						
2) Price increase on oil-chemical products, gas and electricity.	0.20	3	0.60	Security is weak nowadays.	Plain tariff policy. Unlimited monopolistic power of corporations.	Improvement of tariff and ant monopolistic policy.
3) Lending difficulties (high interest rate, complicated conditions, and additional bank requirements).	0.05	4	0.20	Security is complicated and weak.	Inflexibility of money-credit policy, banks abuse of their market power..	Regulating policy differentiation for different economic sectors. Institutional restriction of banks market power.
4) Decrease of workers qualification and competence level.	0.15	4	0.60	It is a common trade. Activities are currently implemented to overcome this common trade by increasing workers training level.	Problems in training system of additional workers education.	Improve process of additional education.
5) Domination of trading chains and their monopoly and high concentration in food trade.	0.20	4	0.80	Permanent food price increase, low food quality which lead to monopolism.	Imperfection of anti-monopolistic legislation and policy corresponding.	Improve anti-monopolistic legislation and policy of FAS and other institutions taking into consideration real state of things.
6) Foreign low quality products appearance.	0.05	2	0.10	Customs barriers and restrictions are overcome illegally.	Import through illegal ways.	Take legal measures and corresponding steps against unauthorized import.
7) Low quality food market domination.	0.05	4	0.20	Food quality is getting worse. Measures taken or not do not bring to strong results.	Low threshold of food quality norms and standards. Low control on their execution.	Information on product quality and quantity should be reliable, understandable and available. More effective

						control and sanctions.
8) Demand for high-quality food can be lowering continuously.	0.10	4	0.80	That will happen if real population income would be decreasing. Its increase solves this problem.	Indexation is executed only towards pensions and public workers' wages but it is still inadequate.	Execute indexation adequate to real state of economy and common price changes.
Total threats indicators	1.0	3.6	4.10	Threats level is high.		

Note: Table is made from results of empirical research of competitive factors on food market and adapted to research theme out of table 6.1. on p.78 of "Firms and industry market: strategic analysis" study guide by N.V. Tumalanov (2007). Cheboksary: Chuvash state university publishing house.

Investment of industry, however, is generally increasing and qualitatively improving. Low population income and correspondingly weak demand are the main obstacles for high quality food segment formation and successful development. Other four competitive industry factors are also in the same interconnections and relations as those of a country.

The analysis also shows that threats for the following food quality deterioration are quite significant. Such threats can be both manufacturing production prices growth and complications in getting loans for improving staff qualification. Trading chains merging with each other strengthen their market power getting income often equal to costs without that. All that leads to wider distribution of low quality substitutes. And all competitive factors and their interconnection promote this situation.

Discussion

Widely used five competitive forces model of M.E. Porter (1985) is universal. Both opportunities on SWOT-analysis factors and threats are mainly connected with it. Despite doubts in some of its aspects (Black & Boal, 1994) it remains to be a leading method. Analysis of market segmentation from the perspective of consumers has special meaning in choosing production and selling strategy (Ries, 1992; Duboff, 1992). If we take into consideration W. Smith's (1995) point of view, we should disaggregate demand schedule as each group of consumers has its own demand curve. Perfect competition model is not suitable for explaining such kind of market. Firm and industry development strategy should use differentiated approach to each group of consumers which means that each group should have both own demand and offer curve. This refers also to high quality food consumers and this segment development strategy. Producers should have corresponding competence to enter this market segment and compete successfully. This competence does not consist of external circumstances but internal key competitive factors (Prahalad & Hamel, 1990). More specifically advantages for a firm from usage of key competences are explained from financial point of view (Mahoney & Pandian, 1992). Authors described four types of economic revenues providing stable financial position and competitive advantage.

1. Income from valuable sources, ricardian revenue.
2. Income from market power mechanisms (patents, barriers for entering firms, secret agreement and other illegal actions of the same character).
3. Income from innovations and risks (entrepreneur's revenue).
4. Income from specific firm's sources (quasi revenue).

State support and effective competition development policy are very important for firms entering this market segment (Aleksandrov, 2015). That provides market exploration and firm's market position. Institutional restrictions, norms and rules are vital in modern conditions of market relations globalization (Kharlamov & Skodinskiy, 2015; Tumalanov & Urusova, 2016). For researched market they should be notably rational, strict and flexible at the same time. In that sense membership of Russia in WTO brings significant limitations for the opportunity of institutional support of Russian (including regional) producers (Tumalanov, 2007). These WTO limitations should be leveled. In other case agriculture especially seed production and breeding can fall under foreign companies control (Tumalanov, 2007).

Conclusion

1. The research proved that high quality food market formation and functioning answer interests of government and society. That increases level of food and economic security, has positive influence on demographic processes and supports flexibility of food policy.
2. Additional opportunities for small and middle business of agricultural and processing industries to enter this market and widen their share n it appear. Industry producers can count on a favorable position on production factors market and getting the necessary labor, land resources at a low price on it and organize the release of clean, not genetically modified products and create a competitive advantage by improving abilities and competencies. This production has good prospects and can soon enter the stage of intensive growth.
3. Factors preventing formation and growth of this market are discovered. It is still not institutionally organized. Restrictions, norms and rules are fuzzy. They are strict mainly to the technical side of production but not to deceiving consumers and product falsification. Control is executed ineffectively. Measures preventing production and selling of low quality production are soft and weak. Competences of firms needed for high quality production are insufficient. Mostly low population income and insufficient paying capacity prevent this market formation from side of demand and consumers.
4. Large trading chains are dominating on food market. They use their strong market power and get over income. That is the reason for their economic interests not being in the sphere of product quality improvement. New coming medium and small firms fall into a complicated position caused by increase of costs and unreliability of suppliers. They also have to switch to low quality production. As a result of these negative factors, elements of high quality food market are shortening and

disappearing.

5. Opportunism of institutional structures and institutional imperfections do not allow this market to self-identify and become independently developed on the stage of growth. Government structures responsible should use new approach for this market organization and regulation as it has special importance for food security. Anti-monopolistic policy needs to be tighten by granting more opportunities and power to corresponding institutions, revising legislation, quantity, rights and responsibilities of executors.

That leads to the whole industry concentration only on substitutes and quasi-food and termination of normal food production.

Recommendations

Results of this research can bring a significant usefulness in implementation of regional agricultural complex development strategy and improvement of organizational structures institutionally providing effective functioning of this market and regulating competitive relations.

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The Study of Individuation Mechanisms and Factors

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Abstract
The exploration is gone for the investigation of the arrangement of the associations between the procedure of ethnic individuation and ethnic personality, resilience to vulnerability and multicultural condition. 325 Ukrainians matured 24 to 56 took an interest in the observational research among which 23% individuals were with optional training and the rest – with advanced education. Among those under examination there were 175 ladies and 150 men. With regards to the statistic attributes every one of them lived in various urban communities, towns and towns in extent average of the statistic creation of the number of inhabitants in Ukraine. The accompanying techniques were utilized: an authorial survey on the instruments of individuation, top to bottom meeting, Budner's Size of Resilience – Narrow mindedness of Vagueness and "Ethnic Character" by H.V. Soldatova. It was discovered that prejudice to insolvability urges to arrangement of the troublesome errands, enactment of such instruments as acknowledgment, allotment, aesthetic inventive completion and separation. Narrow mindedness to the intricacy of the world to some degree muddles the elements of specific systems of the ethnic individuation to be specific allocation and coordination in this way supporting appearance of new components.
Keywords: Individuation,multiculturality, ethnic identity, tolerance to uncertainty.

Introduction

1.1. Articulation of issue

Within the post-dynamic approach a number of studies were conducted focusing at the problem of individuation. However, most of the studies were investigating fairytales, myths, narrations created by the clients. That's why there appeared a necessity to develop and approbate psycho-diagnostic tools for the research of the process of individuation, its factors and mechanisms. This study is especially focusing at the process of ethnic individuation, its connection with tolerance to uncertainty, multiculturality and ethnic identity.

1.2. Previous Research Analysis

Following the definition given by C.G. Jung (1954), a founder of the research devoted to individuation, it is a process of achievement of the internal unity with Self and the whole humanity. A core idea of the analytical psychology is a notion of individuation that is defined as a process of establishment that enables a person to realize his/her internal potential to the fullest. Within the framework of our research it is important to notice that individuation makes it possible for a person to feel a connection between his/her in-depth motives and get engaged in the social and cultural context as much as possible. Following and complementing the conception of G. C. Jung, J. Atwood and R. Stolorow (2016) stated that the aim of individuation is an establishment of a stable self-representation. They highlight three basic elements of the process:

- recognition;
- performance of the transcendental function;
- drawing a boundary line between personal and collective contents thus providing the contact with universal topics.

M. Fordham (1976) and E. Harding (1965) consider the process of individuation from the perspective of the archetypes and collective unconscious. Living through this process a person is supposed to find his/her personal interconnection with archetypical images, feelings and behavioral models. Step by step a person starts identifying something that can be classified as his/her personal and something that was passed down from the depth of the ages. Consequently, life gets an inexhaustible sense of purpose as it is not dictated by the outer requirements but rises from the depths of the internal source.

Within the framework of the modern analytical psychology there are studies aimed at the research of not only sources of individuation but of the dynamics of this process too.

Representatives of the school of development believe that the process of individuation starts in the childhood and differentiates between five separate stages of development of consciousness (Lambert, 1981). At the first stage consciousness identifies itself with environment without realizing its body and personality. At the second stage Self separates itself from the environment and other people and at the same time Big Figures of Mom and Dad are identified. At the third stage the fact that projection and its objects are not identical becomes clear. The projection of the timeless values gets separated from the image of Big Figures and is being «transmitted» in the system of religious and philosophical believes. At this stage are the people with religious worldview. At the fourth stage the place occupied by faith is desolated and the decisions are made with an account for the pragmatic and realistic worldview. At the fifth stage subjectivity, reflection and realization develop actively and this leads to the integration of the conscious and subconscious aspects of Self.

M. Stein who is a representative of the School of Development (Stein, 2009; Stein, 2010) in her research points to the existence of two more stages besides those described above. They appear after personality integration. Thus, at the sixth stage a sense of unity of psyche and material world is formed and the seventh stage is typical only of some personalities namely those who achieve the stage of augmented cognition and going into the depth of the collective conscious. Modern Ukrainian researchers of ethnic psychology (Bakhov, 2014; Danyluyk, 2010; Konuykh, 2014) pay special attention to the issues of formation of the of the ethnic awareness and tolerance leaving unconscious aspects of this process beyond the scope of research. O. Hutsulyak (2011) analyses mythological component of the ethnic unawareness and V.M. Zayika (2014) distinguishes between three criteria of personal development. Psychological studies on the border of culturology (Gluzman et al., 2018; Alekseeva et al., 2018; Damgaci & Aydin, 2018; Carothers & Parfitt, 2017; Husnutdinov et al., 2018) reveal close connection between linguistic and psychological components of culture and mentality. According to the results of the previous research formation of the ideological and moral components of the ethnic unawareness (Melnikov et al., 2018; Jesse et al., 2016; Andrew, 2018; Boegershausen, Aquino & Reed, 2015; Ju et al., 2017) is significantly influenced by mass media whereas measures of positive discrimination are considered in the article by A. Oliven and L. Bello (2016).

In the result of the theoretical analysis (Didukh, 2014; Didukh, 2014b) such factors of the process of the ethnic individuation as multicultural environment, tolerance to uncertainty, reflection, personal maturity and type of the ethnic identity were used.

The aim of the empirical research was to reveal the mechanisms of the ethnic individuation and influence of the types of the ethnic identity and tolerance to uncertainty on the defined process. 325 Ukrainians aged 24 – 56 participated in the study among which 23% of the participants were with secondary education and the rest – with higher education. Among those under study there were 175 women and 150 men. As to the demographic characteristics all of them lived in different cities, towns and villages in proportion typical of the demographic composition of population of Ukraine.

The following methods of research were used: authorial individuation mechanisms questionnaire, in-depth interview, Budner's Scale of Tolerance – Intolerance of Ambiguity, «Ethnic identity» by H. V. Soldatova (1998). The study was conducted on the informed consent of the respondents.

Results

No evidential connection between manifestations of the process of ethnic individuation and sex, age and social status of those under study was revealed. It can be explained by the fact that the history of the process of individuation is largely connected with maturity of a person despite the fact that all the participants of the study were working socially functioning adults. The terms for becoming mature do not have any immediate correlation with the stated age of the people under study.

Among the participants there were more of those who were at the fourth stage of individuation (pragmatics was prevailing) and at the first stage (low-differentiated). Such an inequality can be explained by the influence of the external and social factors. The participants of the first group were brought up and worked in towns and villages of Ukraine. They had a little access to the information resources yet lived and grew up in the principally mono-cultural environment. Those who were at the second stage were growing up in the multi-cultural environment. The respondents at the fourth stage had higher education and were actively climbing the ranks, treated their future as promising and closely connected it with successful development of their country and people. The respondents at the fifth stage of individuation were aiming at self-realization and were publicly proactive.

Study of the correlations between the mechanisms of individuation revealed the following regularities (table 1).

Close system of the positive correlations between different mechanisms of the ethnic individuation proves that they are the manifestations of the same process yet their correlation with the other factors of individuation is not the same.

Analysis of the data received distinctly showed that the influence of the personal factors on the development of the mechanisms of the ethnic individuation is uneven. At different stages of the ethnic individuation various factors become determinant. Thus, for example, availability of the multicultural environment and life maturity is an important condition of the realization and differentiation while integration of the personality and his/her creative realization largely depends on the altruistic emotions and tolerance to uncertainty.

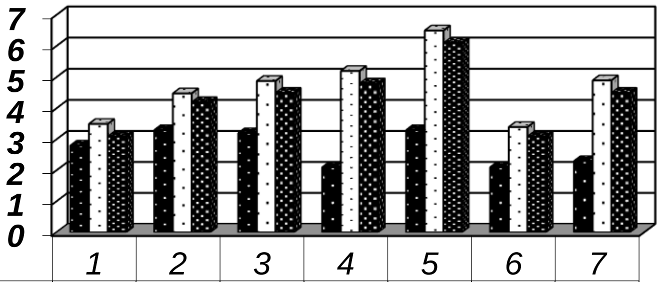
Table 1. Correlation between the mechanisms of the ethnic individuation

	Realization	Appropriation	Reframing	Differentiation	Internalization	Creative realization	Integration
Realization	1	-0,066	0,138**	0,084	0,129**	0,160**	0,093*
Appropriation	-0,066	1	0,443**	0,384**	0,276**	0,251**	0,235**
Reframing	0,138**	0,443**	1	0,389**	0,259**	0,321**	0,274**
Differentiation	0,084	0,384**	0,389**	1	0,224**	0,072	0,016
Internalization	0,129**	0,276**	0,259**	0,224**	1	0,153**	0,318**
Creative realization	0,160**	0,251**	0,321**	0,072	0,153**	1	0,193**
Integration	0,093*	0,235**	0,274**	0,016	0,318**	0,193**	1

*p<0,05; ** p<0,01

It is notable, that all the mechanisms of the ethnic individuation are interrelated and are the manifestations of the same process. The biggest load is on two of them namely reframing and internalization. It can be assumed that it is reframing of the history of the own people and forming of the sense of own responsibility for the contemporary events that are the triggering mechanisms of the individuation process in which mechanisms of realization (as individuation is mostly unfolding at the unconscientious level) and appropriation (that becomes part of the reframing and integration).

Application of the retrospective and perspective analysis of the intensity of the manifestations of ethnic individuation mechanisms showed that most of the respondents irrespective of their age consider the process of individuation as the one that is unfolding now and not in the past or future. Results of the analysis of the individuation process in temporal dimensions are showed in figure 1.



	1	2	3	4	5	6	7
past	2.8	3.3	3.2	2.1	3.3	2.1	2.3
now	3.5	4.48	4.88	5.2	6.5	3.4	4.9
future	3.1	4.2	4.5	4.8	6.1	3.1	4.5

Figure 1. Specifics of the realization of the individuation process in temporal dimensions (average values) (1 — Realization; 2 — Appropriation; 3 — Reframing; 4 — Differentiation; 5 — Internalization; 6 — Creative realization; 7 — Integration)

As the provided data show, the intensity of the manifestations of the individuation process is generally of medium level. Reframing and creative realization show lower indices (3,5 and 3,4 correspondingly), differentiation and internalization are upper-middle (5,2 and 6,5 correspondingly). Individuation process has the biggest impact on the dynamics of these particular mechanisms: their manifestations in the past were perceived by the participants as middle or even low while now they consider them middle and upper-middle and are sure that they will stay the same in future.

Ethnic identification giving rise to the types of ethnic identification can also influence the individuation process although such an influence can be reverse – ethnic individuation can reform non-normative types of ethnic identity. H.V. Soldatova (1998) distinguishes between six types of ethnic identity. Ethnic negativiam which is one of the forms of the altered ethnic identity shows itself in negative attitude to the own ethnic community and search for the stable social and psychological niches on the basis different from the ethnic characteristics. Ethnic indifference is a diffusion of ethnic identity which is manifested in the uncertainty concerning ethnic affiliation and out-of-dateness of ethnic self-determination. Positive ethnic identity is a combination of the positive attitude to own people with a positive attitude towards other peoples. In the poly-ethnic environment positive ethnic identity is normative and typical of the majority of population. It forms an optimal balance of tolerance in relation to other ethnic groups and allows considering it as a condition of the independent and stable existence of the ethnic group as well as a precondition for the peaceful intercultural cooperation in the poly-ethnic world.

Destructive interethnic relations are presupposed by the deformations of the ethnic self-consciousness by the type of the hyper-identity which can appear in three variants. Ethnic egoism that is represented in the relatively safe form of recognition of the events through the prism of the interests of the own people and recognition of the right of own people to solve its own problems at the expense of others. This can be a reason for the conflicts and disruption of interethnic communication. Ethnic isolationism manifests itself in the highness of the own people, necessity of «filtration» of the national culture, negative attitude towards interethnic marriages and xenophobia. Ethnic fanaticism is connected with readiness to go to any length for the sake of implementation of the own understanding of the ethnic interests, refusal to other people to exercise their rights to use resources, rights and freedoms of a person. Connection between the manifestations of individuation and types of ethnic identification is shown in table 2.

Table 2. Connection between the parameters of ethnic individuation and identification

	Positive ethnic identity	Isolationism	Ethnic negativism	Ethnic fanaticism	Ethnic indifference	Ethnic selfishness
Realization	0,101	0,039	-0,079	-0,184*	0,084	-0,230**
Appropriation	0,083	-0,157*	-0,041	0,143	-0,362**	-0,036
Reframing	0,	-0,063	-0,016	0,154*	-0,319**	-0,146*
Differentiation	0,077	-0,228**	-0,316**	0,089	0,048	-0,176*
Internalization	0,221**	0,079	-0,018	0,091	0,017	0,108
Creative realization	0,023	-0,033	0,214**	-0,156*	-0,268**	-0,055
Integration	0,078	0,093	-0,064	-0,194**	-0,302**	0,147*

*p<0,05; ** p<0,01

The data received show that the processes of individuation and identification are not similar. Mechanisms of ethnic individuation manifest themselves irrespective of the level of the positive ethnic identity; at the same time there is a proved negative correlation connection with the deviant forms of ethnic identity.

Some ethnic identity disorders can be prevented with the help of the mechanisms of ethnic individuation. Recognition favors decrease of the manifestations of ethnic negativism, ethnic fanaticism and ethnic egoism. Appropriation negatively influences on ethnic isolationism and ethnic indifference. Reframing does not have the same straightforward effect as it prevents manifestations of all the deviations; this mechanism can in some cases indicate to the increase of ethnic fanaticism. Differentiation prevents negativism, isolationism as it encourages interest in differences between own and foreign culture.

Internalization almost does not show any influence on the deviant forms of ethnic identity and favors forming of the positive ethnic identity instead. Creative realization prevents manifestations of both ethnic indifference and fanaticism. Integration can secure from deviant manifestations however is able to encourage ethnic egoism as this mechanism is focusing on the alignment of the own interests and interests of the ethnic community. Thus, we can draw a conclusion that the development of the processes of ethnic individuation can be enough successful for the prevention of the deviant forms of ethnic identity both excessive and insufficient.

We also analyzed systems of connections between the mechanisms of ethnic individuation and such a manifestation of the personality as tolerance to uncertainty (table 3). Multicultural environment was characteristic of 78% of the participants of our study and positively influences on the mechanism of assignment. It happens due to the process of comparison of the own perception and experience with world outlook of the representatives of the other ethnic groups.

Table 3. Connection of the mechanisms of ethnic individuation with multicultural and tolerance to uncertainty

Mechanisms of ethnic individuation	**Tolerance to uncertainty**			**Multicultural environment**
	Insolvability	Novelty	Difficulty	
Realization	0,175**	0,061	0,207**	-0,027
Assignment	0,262**	0,019	-0,147**	0,242**
Reframing	0,065	0,053	0,250**	0,141**
Differentiation	0,127**	0,031	0,157**	0,115*
Internalization	-0,052	-0,061	-0,073	0,066
Creative realization	0,263**	0,071	0,237**	0,040
Integration	0,013	-0,041	-0,094*	-0,085

Note: * quality at the level 0,05; ** quality at the level 0,01.

There was no connection with such a parameter of tolerance to uncertainty as fear of novelty at all and it can be explained by the fact that the process of ethnic individuation is mostly unfolding «here and now», partly comprising individual and collective past and completely excluding future.

Intolerance to insolvability encourages to solution of the difficult tasks, activation of such mechanisms as realization, appropriation, creative realization and differentiation. Intolerance to the difficulty of the world to some extent complicates the flow of some mechanisms of ethnic individuation namely appropriation and integration favoring manifestation of the other mechanisms instead. It can be explained by the fact that the process of ethnic individuation both answers some questions of a person appearing throughout life (as a consequence of the subjective complexity of the world) and gives birth to new questions.

Conclusions

In the result of the research a close connection between manifestations of ethnic individuation was found out. Mechanisms and stages of individuation are not connected with sex, age and education of a person. They are characterized by the subjective dynamics and connected with multicultural environment of the respondents. The process of individuation is influenced by the level of tolerance to uncertainty and ethnic identity.

At the next stages of the study of the process of ethnic individuation a system of the inter-influence between the process of individuation and trans-generating traumas typical of the residents of Eastern Europe will be analyzed.

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Methodological support in partnerships with the institution of additional education and teachers

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Abstract
In the article, the authors reveal the essence of methodological support in partnerships with the institution of additional education. It was found that methodological support is called a holistic system of activities based on the achievements of science, best practices and analysis of teachers' difficulties, the purpose of which is to improve the skills of each teacher, generalize and develop the creative potential of the team, and achieve optimal education results. The authors examine and analyze the role of methodological support in the partnership of teachers to improve professionalism and organize additional education. In the course of the work, a survey was conducted of the employees of one of the Centers for Continuing Education in Nizhny Novgorod. A questionnaire was developed for the Center's specialists, containing several questions to evaluate their work. which showed that the organization conducts activities for the improvement of professionalism for its employees, but they are not enough, but the management is addressing this issue and is trying to develop this area, teaching competencies that require attention, the level of theoretical knowledge about the forms and methods of working with the organization of additional education, the level of practical skills in the forms and methods of work with the organization of additional education.
Keywords: methodological support, social partnership, additional education, professionalism

Introduction

Among the priorities of modern educational policy of Russia, the National Doctrine of Education of the Russian Federation is distinguished, which defines the strategic goals and objectives of the development of education until 2025, notes (Vaganova 2018);. In the light of the requirements of the new education paradigm, the main task is to increase the professionalism of specialists as an educated, creative person capable of continuous development and self-education, Fedorov (2017) points out. This implies the search for new forms and methods of work with the teaching staff. One of the most effective forms of such work is a methodical lesson. There is a contradiction between the substantial number of additional educational institutions available and the lack of attention by the management to organizing methodological support with the team, which underlines the problem of the study. The aim of the work is to examine and analyze the role of methodological support in the partnership of teachers to improve professionalism and the organization of additional education.

Literature Review

Institutions of additional education, first of all, organize the social environment in which students find themselves. It is up to any such institution to inform students: for example, to conduct lectures, conversations, distribution of special literature, or video and television films. These actions help develop responsibility in the learner. But for the implementation of activities requires special training of teachers. The standard contains a description of the necessary knowledge for the implementation of skills in the activities of the teacher of additional education. However, knowledge alone is not enough for the successful implementation of the tasks of additional education; the teacher needs special personal qualities that ensure his professional competence and success.
Carrying out activities in the organization of additional education, the specialist must have the energy to charge the audience with his positive mood, attitude to the business, the students speak (Vaganova 2017a; Smirnova 2017a; Perova 2017; Bulaeva 2018). And one more important, in our opinion, component of a teacher – professional is the ability and readiness to make a first impression on the audience (in one's own

way, in behavior, knowledge, attitude to professional activity), which in many cases determines the further dynamics of the interaction process.

Methodical support is called a holistic system of activities based on the achievements of science, best practices and analysis of teachers' difficulties, the purpose of which is to improve the skills of each teacher, generalize and develop the creative potential of the team, achieve optimal educational results, notes (Vaganova 2017b; Smirnova 2017b; Ilyashenko 2018c) .

The urgency of the problem of studying the mechanism of methodological support of pedagogical activity in the context of additional education is to find the existing shortcomings and develop proposals for improving this activity. Methodological support for teachers in institutions of additional education is conducted by the methodological service through a specially organized, systematic interaction between the methodologist and the teacher, aimed at assisting the teacher in a situation of professional improvement, taking into account his existing level of professional competence in his work (Tsyplakova 2016; Markova 2018; Garina 2017, 2018). Methodical work is an integral part of the activities of teachers of additional education notes Yashin (2017). Through the methodological support of teachers, tasks are solved to ensure the effectiveness of the activities of circles, training groups, other types of extracurricular activities, educational activities through the active use of information, computer and health-saving technologies, systematic methodical and handouts are being systematized, and teachers are focused on drawing up creative reports and increasing the level of self-education each member of the teaching staff, says (Smirnova 2018a; Ilyashenko 2018b; Potashnik 2018) . An important task is to improve the innovative orientation of the activities of teachers, which is manifested in the systematic study, synthesis and dissemination of effective teaching experience. It is also important to motivate educators to publish excellence in print and other types of media. The organization of methodological classes plays a special role in the system of improving teachers' professionalism (Smirnova 2018b; Ilyashenko 2018a; Lubov 2018) Methodical classes with the pedagogical team of specialists of the organization of additional education of children are designed to ensure that the methodical organization of additional education meets the requirements of the Concept of additional education and the standard of the teacher of additional education: variability, lack of formalization and program updates, methodical diversity Ia (methods, forms, techniques and means) of their expediency, developing, problem and applied orientation.

Methodical studies are organized to solve the following tasks: teaching new approaches to building additional education in a specific area (new forms, methods, techniques, teaching aids) says (Kutepov 2017; Kuznetsov 2018; Pavlov 2016) to finding various sources of information required for an additional education teacher to solve professional problems and self-education; improving methodological and logistical support; establishing links with the methodological service of the municipality, other institutions of additional education of the city, town, district, region; mastering effective methods and techniques for working with students who are gifted in their chosen field of activity, mastering the skills to create the special conditions necessary for further education of people with disabilities are noted (Sadker 2015; Safford 2014; Schmidt 2016; Schweers 2015). The organization of methodological classes on psychological and pedagogical support and improvement of professionalism of the specialist of additional education should be a holistic system of cooperation accompanying and accompanied, which occurs in the process of pedagogical interaction, has a humanistic nature, is complex, uses personality-oriented forms that ensure professional growth of a specialist and productivity his activities speak (Hernandez 2014, Hunt 2015).

Methodology

In order to assess the work with the teaching staff to improve their professionalism, a survey was conducted with experts. In total, 12 specialists from the Center took part in the study. They were offered a questionnaire. After filling out the questionnaire, participants were asked to explain their answers in an interview.

The base of the research: the Trivium private center for additional education for children. The main contingent of children is from 1 to 7 years. On the basis of the center, educational activities for children with speech lag, robotics, chess, dance classes are held; Works on painting and sculpting; consultations are conducted by a psychologist and speech therapist, a mini-kindergarten, a city camp, creative and artistic workshops, and children's parties. In order to develop recommendations on the organization of methodological support with the teaching staff of the Center, observation and study of available documentation was conducted. The purpose of the study is to evaluate the effectiveness of conducting methodological support in partnership with the Trivium center for additional education of children and with their teaching staff as a condition for improving the professionalism of specialists. One of the most important methodical events of the Center "Trivium" is the meeting of the members of the methodological association. It is held 4–5 times a year in accordance with the plan of methodical work on the days established for this with the purpose of collective discussion of the issues of organization and implementation of the educational process, methods of pedagogical activities of specialists, students' successes.

Analysis And Discussion

In the Trivium Center under study, for the period from September 2017 to April 2018, only 2 methodical classes were conducted. In these classes, the Center's specialists master the patterns of actions in a developing educational environment, comprehend the relationship between an environment saturated with intellectual resources and the effectiveness of training and education. The main goal of the first lesson was to discuss and train specialists in the best ways to interact, as well as ensure the continuity of the Center and pre-school and primary education, and the successful adaptation of children to circle and club work. The second lesson was devoted to the organization of work to preserve the physical and psychological health of children of preschool age. A pediatrician, a psychologist, a teacher of a pre-school education institution participated in this event. In the process of implementing these activities, in general, the task of improving the professionalism of the organization's staff was carried out: their professional experience was expanded, and interaction with specialists of different profiles was carried out.

For specialists of the Center a questionnaire was developed containing several questions for the purpose of evaluating their work. The first was a question about how research participants evaluated the level of theoretical knowledge about the forms and methods of work about the organization of additional education.

Table 1

Questionnaire for center specialists

Question	Answer Options
How would you rate your level of theoretical knowledge about the forms and methods of working with the organization of additional education?	A) highly B) medium C) low
How do you assess your level of practical skills in the forms and methods of work with the organization of additional education?	A) highly B) medium C) low
How do you assess the desire of colleagues and management to interact with you?	A) highly B) medium C) low
Which side of your professional competence, in your opinion, needs improvement from you?	A) pedagogical competence B) methodological competence C) instrumental competence D) integral competence D) communicative

	competence
At what level do you consider the work of the management of the Center to improve your professionalism?	A) highly B) medium C) low

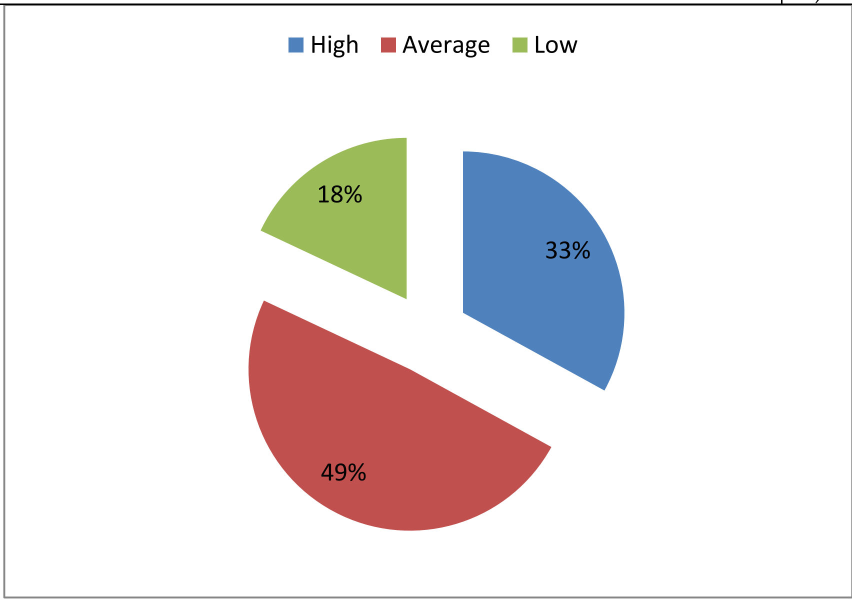

Figure 1 The results obtained on the basis of the analysis of the first question about the level of theoretical knowledge

The results showed that the majority of participants (49%) evaluated their theoretical knowledge at an average level: in an interview, the participants explained that they generally possess the knowledge they need to conduct group and club work on specialization. However, theoretical knowledge about the effectiveness of the organization of classes in the conditions of the Center is not enough for them. In the conversation, the participants also explained that this level depends on the personal aspiration of specialists to obtain theoretical knowledge, which, at times, they do not have enough time.

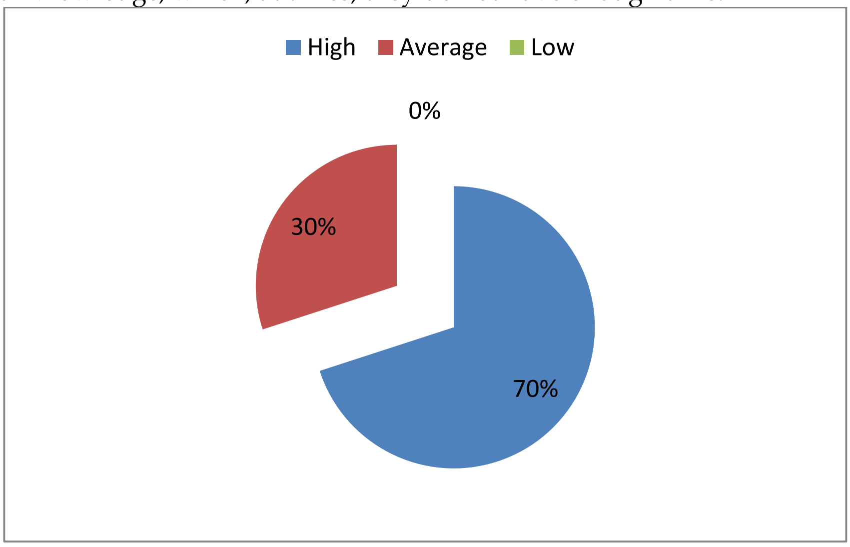

Figure 2 The results obtained on the basis of the analysis of the second question on practical skills

None of the participants noted a low level. The majority (70%) of specialists are confident in their practical knowledge. 30% of the study participants considered that they needed to learn from the experience of their colleagues, to take part in various events organized by specialists in other similar centers, which is not being carried out at the moment. These participants do not always feel confident in the competent work with the parents of students. In most cases, participants need to master innovative forms of cooperation with parents, and they are also concerned about the psychological side (resolving conflicts in working with parents with a low general and pedagogical culture, etc.). In the conversation, the participants explained that it was difficult for them to build pedagogical communication in tandem with other employees of the Center due to the lack of necessary knowledge**.**

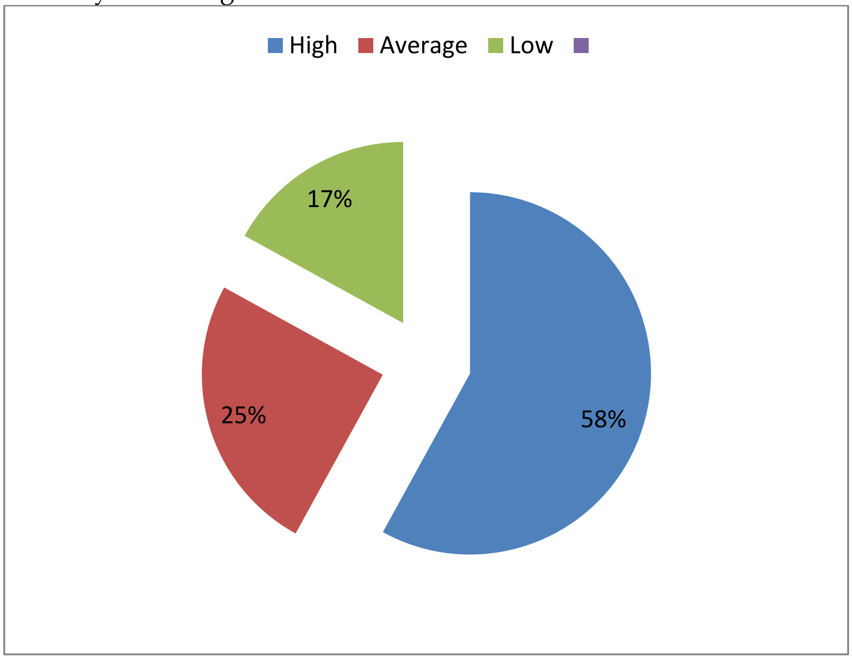

Figure 3 The results obtained on the basis of the analysis of the third question on the assessment of the willingness of colleagues and the management of the Center to interact with the study participants

Most participants appreciated the interaction with colleagues and management. In the conversation, they explained that, in general, in the event of problems arising in their work, they may turn to their colleagues and management. Participants noted that colleagues and leaders approve of them, try to help them in every way possible in organizing events, give advice, tell in detail about their observations of children, etc. Nevertheless, 17% of the participants indicated that they did not find the support of the leadership in solving urgent issues. In many ways, they relate to the material aspect of the activities of specialists.

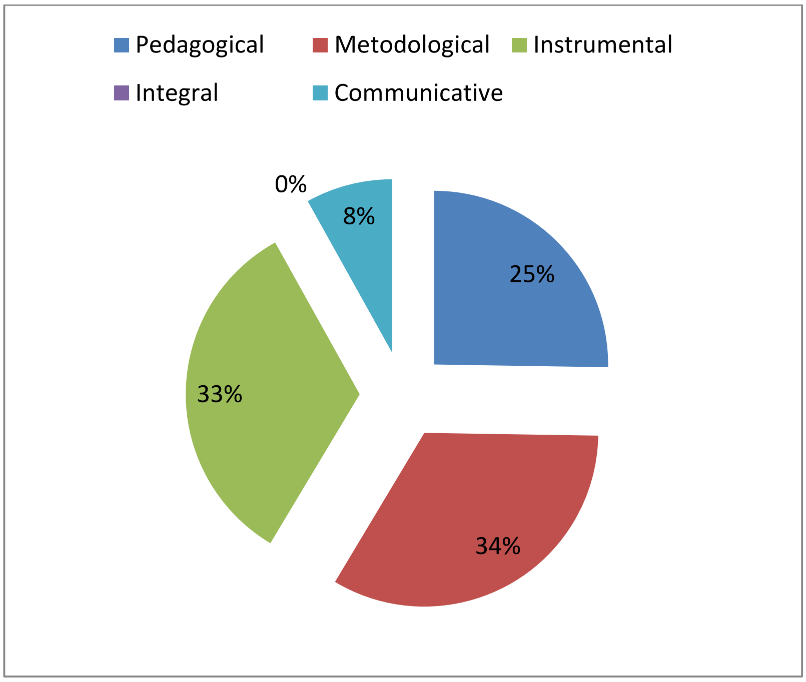

Figure 4 The results obtained on the basis of the analysis of the fourth question "Which side of your professional competence, in your opinion, needs improvement from you?"

Most teachers believe that they have the least instrumental and methodological competence. This means that, in general, experts still have little understanding of the scientific and theoretical foundations of the profession, they do not completely see the correctional-educational process and, in many ways, act intuitively. Experts noted that they lack the necessary methodological and psychological knowledge. Also, specialists need to improve knowledge of differentiated pedagogical technologies, ideas about methods and means of correcting and preventing existing disorders in children, as well as methods and forms of cooperation with parents. Most of the participants, in their opinion, have developed integral competence - the application of theoretical knowledge in practice, the desire to develop their personality as a professional. Teachers also noted that they lack a personal culture of communication, the development of empathy, the motivation to gain practical experience.

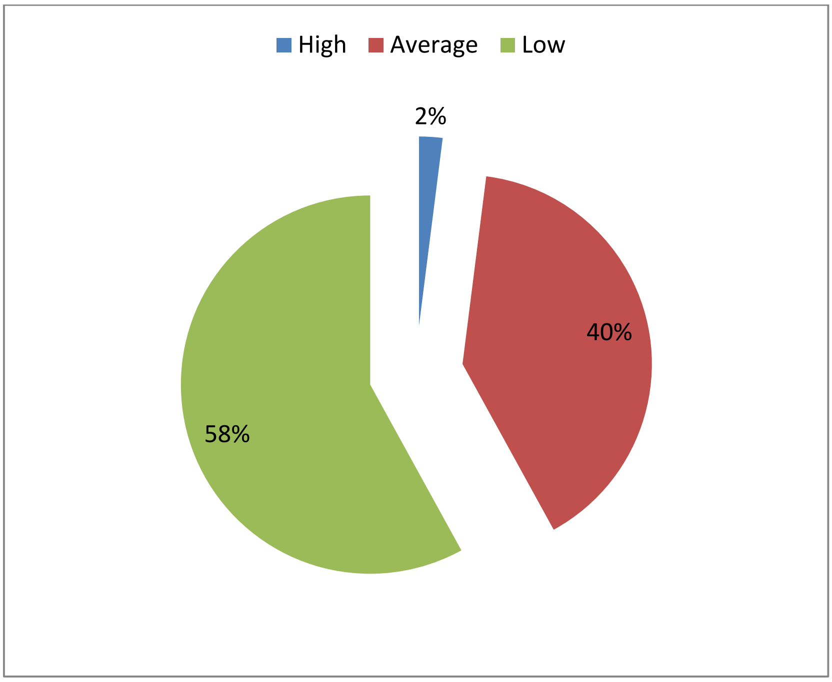

Figure 5 The results obtained on the basis of the analysis of the fifth question "At what level do you consider the work of the management of the Center to improve your professionalism?"

Only 2% of respondents indicated a high level of leadership assistance. In general, as shown by the answers of specialists, the organization still carries out activities for them to improve the professionalism of workers, but they are not enough, but management is addressing this issue and trying to develop this area. All participants admitted that they would be happy to participate in events within the walls of the Center itself.

Conclusion

Observing and studying the documentation of the Center showed that the main link in the management structure of the organization's teachers is the methodical association of teachers. It is this department that develops and implements specific projects and events, consistently implements plans and recommendations approved by the administration. The head of the methodological association builds its work, analyzing the activities of the methodical association in the past year, comprehending the tasks set for the new academic year, getting acquainted with the plan of the upcoming district and school-wide events, annual plans of the school's educational and educational work. The tasks of the methodical association determine the directions of its work: holding meetings of the methodical association; meeting the requirements of regulatory documents, decisions and recommendations of a methodical association; acquaintance with advanced experience in the field of additional education and its introduction into the activities of specialists; preparation and holding of conferences, seminars, round tables; intellectual marathons, olympiads; activities for clubs and clubs; attendance of classes according to available directions. Thus, the role of methodological support in the partnership of teachers to improve professionalism and the organization of additional education was reviewed and analyzed. The survey and interviews showed that the issue of improving the professionalism of the staff of the organization of additional education in the Center in question requires additional attention. It may be noted the importance and the need to improve the mechanism of methodological support of pedagogical activity in the conditions of the studied center of additional education.

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Providing partnerships and promotion of additional educational services

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Abstract

The active changes taking place in modern society are the reason for changing priorities not only in the sphere of economics and politics, but also in the field of education. Therefore, educational institutions are seeking new methods that promote the development of the organization in the best possible way. One of the promising areas in this regard is interaction with social partners. Institutions of additional education of students are one of the main social institutions that provide the educational process and the development of individual abilities of students. In their work, they try to attract new tools to provide a higher level of services. In the article, the authors reveal the importance of social partnership for institutions of additional education. The essence of social partnership for educational institutions as a whole was revealed and its necessity was revealed by interviewing participants in a particular institution of additional education. A large percentage of respondents consider courses from center specialists useful educational information that is easily used in ordinary life, which has a positive effect. In addition, the great popularity of such a new direction as body ballet was defined, which includes quite a lot of physical exercises, without requiring large power loads and sudden movements.

Keywords: social partnership, additional education institution, students, parents.

Introduction

Measures to improve the education system reflect the state program of the Russian Federation "Development of Education" for 2018-2025, as well as the concept of the development of additional education for children until 2020. At the same time, the leadership of the institutions of additional education is faced with the task not only to provide high-quality training for existing students, but also to attract new students.

In addition, the socio-economic conditions in which educational institutions operate force leaders to look for new forms of management, new, improved management mechanisms, additional resources capable of ensuring the sustainable functioning and further progressive development of the educational institution. One of the promising areas in this regard is interaction with social partners.

Institutions of additional education of students are one of the main social institutions that provide the educational process and the development of individual abilities of students. Their presence in the country has an important role. In modern education, an individualized approach is appreciated, and since general education institutions do not have a choice of type of activity, additional education institutions provide it, besides students can choose the level of complexity and pace of development of the educational program of additional education in their chosen field. These institutions solve the task of developing the skills and abilities of students, which will ensure self-development in later life.

Additional education at the state level is taken as an important resource for ensuring the human right to free personal development and professional self-determination. Services in the system of additional education are the results (products) of the activities of the collective of the institution of additional education in various areas of social and cultural activities: group activities, club activities, development of creative innovative projects, organization and holding of competitions of conferences, forums, exhibitions and other events of various sizes are designed to perform such functions as communicative, outreach, cultural, recreational and health vayuschaya ideological defining the mission of additional education in modern Russian society.

The communicative function is that a special communication space is created on the territory of the institution of supplementary education, connecting people with common interests and goals (Prokhorova, 2018). The informational and educational function is manifested in the fact that the institution of additional

education expands the horizons of students and their parents in various areas of artistic and technical creativity, as well as topical issues of everyday culture and life organization through the promotion of healthy lifestyles and safe behavior (Myalkina, 2018). The cultural function, its essence is that participation in the work of creative teams, circles and club associations allows each participant to make his own contribution to the creation of new cultural events, new creative products and services that expand the cultural diversity of the surrounding society. Recreational and recreational - active leisure time ensures that the psychological and physical overloads associated with compulsory study load (school, college, university) will be to some extent compensated by other types of creative activity (artistic, dance, music, technical) .
An educational institution, like any other social organization, actively interacts with the external environment, which has a multilateral influence on it (Campbell 2014), (Banks 2013). The establishment of additional education, given the lack of funding, in turn, can influence the situation in its immediate environment by promoting services and building partnerships (Bulaeva 2018). Promotion of services of the municipal institution of additional education should be based on mutually beneficial interaction with social partners, which are government management structures of different levels, educational organizations of all levels of education; cultural institutions (theaters, museums, etc.) and sports; commercial organizations.

Literature Review

Modern social partnership

"Social partnership" is a relatively new concept. It appeared in Russia in connection with the change of forms of ownership (Garina 2017). Today, the term has received an extended interpretation: it means a certain type of social interaction, characterized by a special way of regulating social relations between different social groups based on equal cooperation. In this case, different authors can find some differences in the definitions (Hamitowa 2017). But at the same time, all researchers see two aspects in social partnership: organizational (in this case, social partnership is seen as association, community, union, joint activity) and personal (supposes relationships based on trust, mutual understanding, consent and, moreover, participation in a common cause and even empathy) (Chaikina 2018). And this is no accident, because not only enterprises and institutions can act as partners of an educational organization, but also individuals, in particular parents of students. Modern educational organizations are independently developing mechanisms for finding and establishing partnerships (Ilyashenko 2018a). The researchers propose to distinguish the relationship: in form (contractual, organizational); by level (macro level, meso level, micro level); by type of interaction (charity, sponsorship, cooperation, investment) (Garina 2018). When characterizing the very process of partnership development, the stages are marked - preparatory, organizational, functional (Tosolt 2010). At the first - preparatory stage, common goals, values, capabilities and resources of the parties are determined (Carl 2015). The second stage defines the legal framework of the partnership. Legal registration of social partnership relations is carried out by concluding contracts (Ilyashenko 2018b). Next comes the functional phase in which the construction of partnerships takes place - partnership projects are being developed, joint activities are planned, the functions of both parties are further elaborated and directly implemented (Tiedt 2012). All this should be done while observing the principles of voluntariness, mutual interest, responsibility of the parties, as well as mutual trust (Vaganova, 2017b). Only in this way can mutually beneficial relationships be established that serve as the basis for long-term joint activities (Ilyashenko, 2018c). The school forms the "open space" of its activities, involving everyone who is interested in its development and promotion (Nikolai, 2017b). By initiating, actualizing and coordinating social partnership, the school itself rises to a new level of its development (Smirnova, 2017a).

Partnerships in the promotion of additional educational services

Social partnership plays a big role in promoting the services of an additional education institution (Ilyashenko 2018d). Promotion is a set of activities aimed at increasing the demand for the product being promoted and, as a result, aimed at increasing sales efficiency through the communicative impact on personnel, partners and consumers (Skatova 2018). In the field of education, three methods of product promotion (out of four possible) are used: advertising, direct marketing, and direct public relations (social partnership) (Calkins 2014). Public Relations (PR) - measures to build relationships between the organization and the audience to create a reputation that is beneficial for the organization (Vaganova 2018). PR is a managerial function of establishing and maintaining mutually beneficial relations between an organization and the public, the success or failure of this organization (Nikolai 2017a) depends on the mood and opinions. PR activities in the field of education are primarily aimed at strengthening and building trust between the target audience and the educational institution (Ivanova 2017), (Vaganova 2017a). First of all, PR activities should be aimed at ensuring that educational institutions have a positive reputation and long-term relationships with consumers (Kochetova 2017). The target audience of PR activities in the field of additional education, and at the same time social partners are parents of schoolchildren, students themselves, teaching staff, employees of educational institutions, government officials, partners and sponsors (Markova 2018). As a rule, the following event-events are held to promote services - presentations, conferences, round tables, open days, courtyard holidays, contests and exhibitions, sports tournaments and battle shows, master classes, and open holidays for parents. (Pavlov 2016). As noted, MA Belyaev, V.A. Samkova, holding numerous events (open doors, exhibitions, forums (Berry 2012), conferences, lectures of famous personalities, parents' meetings) the task is to maintain the image of an educational institution, to create its brand, to promote services (Perova 2017). The difference between advertising and direct marketing from public relations is that the first two points are aimed at an additional cash flow, and the third point is focused primarily on creating the image of the organization (Smirnova 2018). Partnerships are built in different ways (Smirnova 2017b).

Methodology

To determine the need for partnerships in the development of an institution of additional education, we conducted a survey among parents whose children study at the Sun institution of additional education after the introduction of classes provided by the specialists of the Rost health center. 32 people took part in the survey. As a result of the analysis of the obtained data, we found that parents are positive about innovations, so the cooperation of organizations can be considered successful. Specialists of the center provide services at the proper level, so that students like to attend classes. Such interaction takes the Sun activity to a new level.

Analysis And Discussion

In order to determine the significance of partnerships in the activities of the institution of additional education, we conducted a survey of parents of pupils of the institution of additional education "Sun", which builds partnerships with the health center "Rost". Thanks to the cooperation with the employees of the center in the institution of additional education, additional directions for the development of students have emerged, such as stretching, body ballet, recreational gymnastics, educational conversations with parents about the methods of maintaining the child's health in modern conditions. We needed to find out the attitude of parents to this interaction.

Among the parents, a survey was conducted, presented in Table 1. 32 people took part in it. Of these, 22 people aged from 35 to 45 years and 10 people from 53 to 55 years.

Table 1

Survey of parents to establish the need for cooperation organizations

Do you like the introduction of the possibility of additional classes of these types in our institution?	Well no
How do you feel about the educational course for parents from the specialists of the "Rost" institution?	I think it is useful / I think that I am knowledgeable (on) about preserving the health of my child and do not need additional information.
Would you like to attend courses for parents in the future?	Well no
Which of the following activities does your child attend?	stretching body ballet

	recreational gymnastics
Do you think your child is happy to attend classes?	Well no
Will your child continue to attend health classes?	Well no
Would you recommend visiting the institution of additional education "Sun" to your friends?	Well no

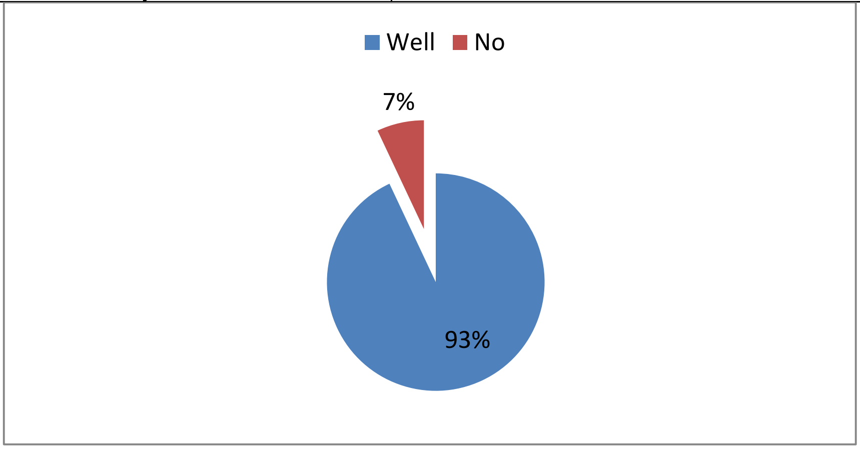

Figure 1 The results of parents' answers to the question "Do you like the introduction of the possibility of additional classes of these types in our institution?"

As shown in the figure, almost all parents are satisfied with the introduction of extra classes from the specialists of the Rost center. In addition, an additional conversation showed that parents enjoy the participation of certified specialists in the field of health preservation in the education of their children.

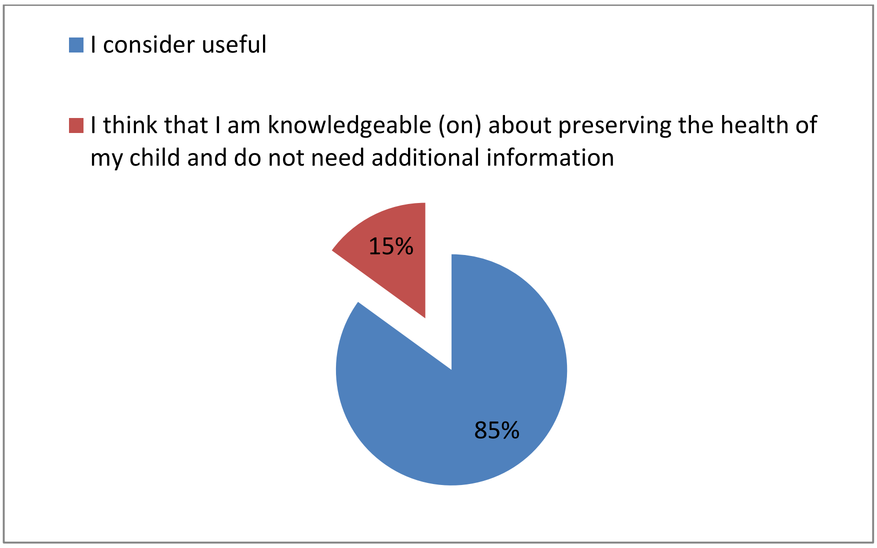

Figure 2 The results obtained on the basis of the analysis of answers to the question "What is your attitude to the educational course for parents from the specialists of the Rost institution?"

85% of parents consider courses from specialists of the center as useful educational information that is easily used in ordinary life, which has a positive effect. However, some parents believe that they themselves are quite knowledgeable in this area. Note that most of the respondents from this number are the older generation, but this speaks more about their conservatism than their reluctance to participate in such events.

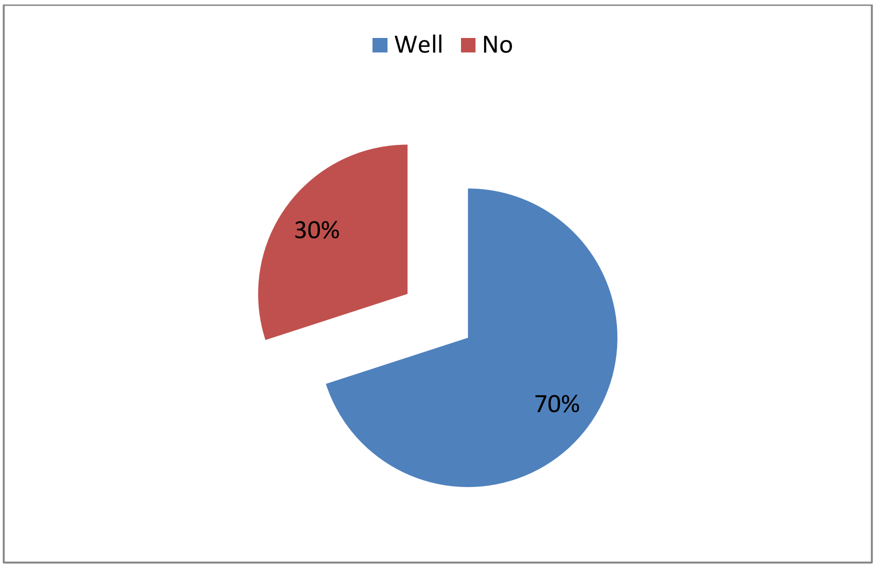

Figure 3 The results obtained on the basis of an analysis of the answer to the question "Would you like to attend further courses for parents?"

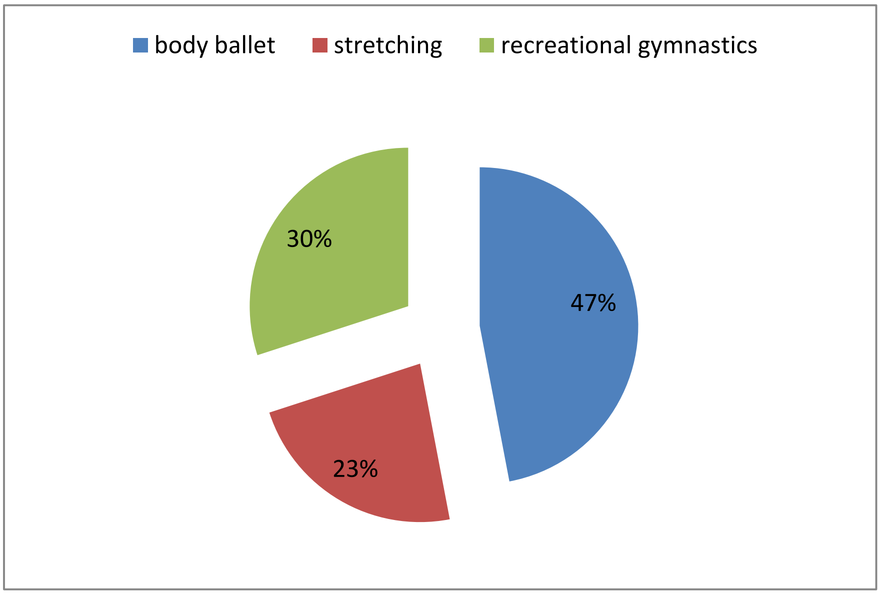

Figure 4 The results obtained on the basis of an analysis of the answer to the question "Which of the specified classes does your child attend?"

The most popular is the new direction of body ballet, which includes a lot of physical exercise without requiring large power loads and sudden movements. Recreational gymnastics is in second place as the most understandable and long-existing type of exercise. In third place (23%) is stretching.

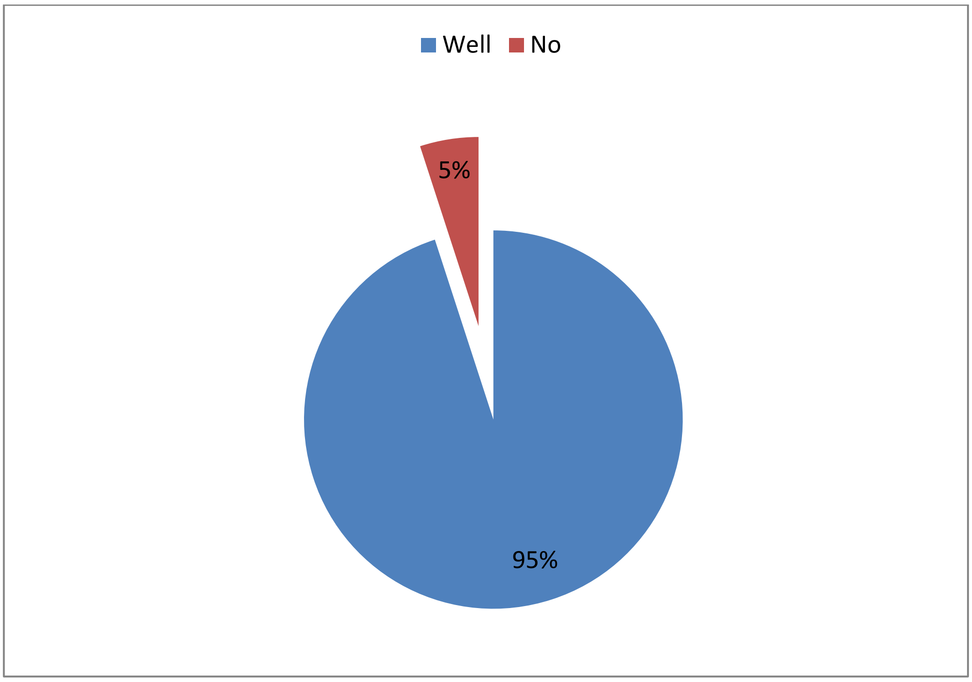

Figure 5 The results of answering the question "Do you think your child is happy with the attendance of classes?"

Almost all students are satisfied with the attendance of their chosen classes, that is, their demand is obvious.

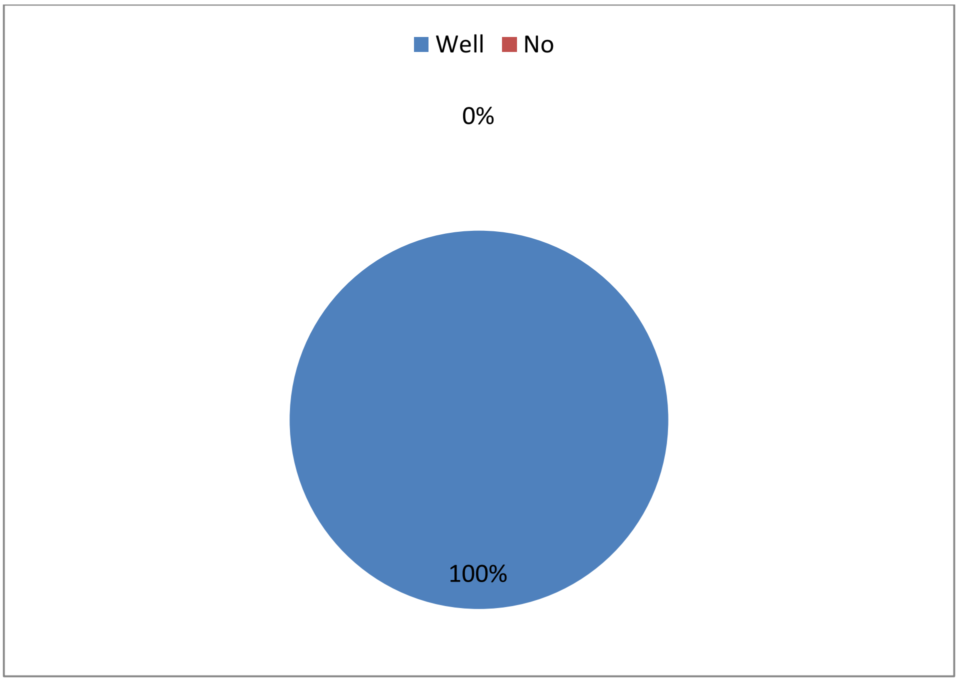

Figure 6 Results of the answer to the question "Will your child continue to attend classes on recovery?"

All parents unanimously advocated further visits to new classes.

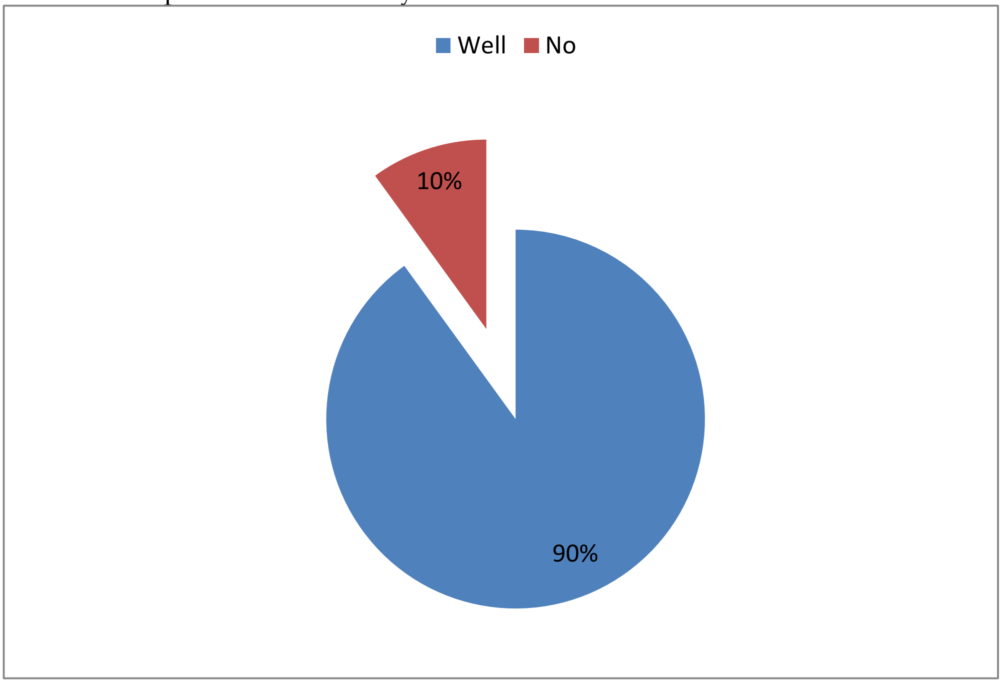

Figure 7 The results of the answer to the question "Would you recommend visiting the institution of additional education" The Sun "to your friends?"

Most parents actively disseminate positive reviews about the "Sun".

Conclusion

Thus, social partnership is an important element in the promotion of additional educational services. For the modern Russian situation, when the possibilities of advertising and direct marketing are limited, social partnership is becoming a decisive condition for promoting the services of an additional education institution. By social partnership is meant such a form of interaction between two or more parties, in which long-term mutually beneficial relationships are built.

Assessing the role of partners for the development of the institution itself, it can be said that social partnership helps to attract resources for the development of the institution, serves as a form of "sharing of responsibility" for training and educating students, and therefore increases the impact on them, and, what is especially important, can serve factor in the formation of a positive image of the institution of additional education.

The study showed that parents perceive the partnership of the Sun additional education institution with the Rost health center positively. Additional services that appeared in the institution seemed to them useful and expanding opportunities for students and as a consequence for the institution of additional education. In this case, the benefits of social partnership are obvious.

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Management of Consolidation Potential of Patriotism in the Regional Space of The South of Russia

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Abstract

Patriotism has a powerful resource potential, which allows consolidating society around socially significant goals and objectives, in connection with which the management of the consolidation potential of patriotism becomes a significant factor in social development. The article actualizes and considers the problem of managing the consolidation potential of patriotism in the South of Russia from the standpoint of critical understanding of the Russian socio-political reality the regional space of which is represented by a complex interweaving of ethno-cultural, confessional, ethno-political and economic processes, and is characterized by tension and contradiction of interethnic relations. The obvious consolidative and solidarity potential of patriotism in the case of its effective use in the regional space of the South of Russia can become the basis for the harmonization of inter-ethnic relations and the solution of acute social problems. However, it depends on the choice of paradigms of patriotism (statist, civil, etc.) in the management strategies of regional power structures and organizations of regional society. In the course of this study, the author substantiates the statist vector of patriotism of the population of the South of Russia, which corresponds to the all-Russian logic of Patriotic education of citizens of the country against the background of curtailment of the democratic course of the Russian state's development, in which patriotism becomes a powerful resource of political influence and manipulation of mass consciousness, and its consolidation potential is used to strengthen the ruling elite and its political course.

Keywords: patriotism, social consolidation, regional space, potential management, statist patriotism, blind patriotism, constructive patriotism,civic patriotism.

Introduction

In the critical stages of social development, in the period of fundamental reforms and change of the social order, there is a rethinking of values, moral, political, ideological orientations, accompanied, as a rule, by a crisis of the system of society's spiritual reproduction and the growth of threats to the national security of the state. It is Patriotic values, as the researchers note, that help people not to get lost and find in them the *foundation* of civil consolidation (Orekhovskaya & Orekhovsky, 2016), to remain as a socio-cultural whole, able to overcome the difficulties and obstacles that necessarily arise in a period of profound social change (Volkov, 2008). However, very often, on the wave of social changes, their misinterpretation with skillful agitation by interested forces, there is a distortion of patriotism, the very essence of this phenomenon, which in such a meaningless form, devoid of its deep value bases, ceases to be a mechanism of social consolidation.

In the modern world, patriotism as a managerial resource and ideological weapon is actively used by various political forces in various countries, which has created a discursive space in which patriotism is studied in the context of its relationship with nationalism (Anderson, 1983; Gellner, 1983; Hobsbawm, 1992; Miller, 1995; Beck & Beck-Gernsheim, 2009), distinguishing between true and false aspects and meanings (Dustin, 2005).

In Russia, patriotism in its historical trajectory of formation appears as a feeling of love for the Motherland, the place of birth and residence, i.e. it is irrational or included in the structure of the mental matrix of social behavior in Russian society as a basic element (Lubsky, Kolesnykova & Lubsky, 2016). In its mental security patriotism after a long search for a national idea that can unite the Russians, proclaimed such an idea (Lubsky, Kolesnykova & Lubsky, 2016; Volkov, & Lubskiy, 2016), which becomes a powerful factor in the mobilization of the Russian population, especially against the backdrop of sanctions policy of the West.

The problems of consolidation of Russian society is inherently stacked in problems of regional consolidation, without which, principally it is impossible to talk about consolidation in Russia, the regional space which is multi-ethnic and needy in the platform for intercultural dialogue and the formation of

Russian identity as the basis for inter-ethnic consolidation. In this respect, the South of Russia attracts considerable attention as one of the most multi-ethnic regions of the Russian Federation, in the national republics of which ethno-national identity plays an important role, based on ethno-cultural traditions and historical memory of ethnic communities. In this regard, of particular scientific interest is the question of how Patriotic values and Patriotic practices are formed in the regional space of the South of Russia, and what management technologies are used in this case.

Methodological Framework

The Russian scientific literature has a long tradition of studying patriotism, which has accumulated extensive material in the study of this phenomenon from the standpoint of its consolidative potential and various disciplinary practices (philosophical, historical, political study, psychological, sociological), the generalization of which is presented in a number of studies (Rozhkova & Vasilyeva, 2014; Volkov, Vereshchagina & Lubsky, 2018; Volkov et al., 2017), from which it follows that patriotism in Russia is naturally associated with the history of Russian society in its individual ethno-regional formations, having its own specifics and problem areas.

With all the available scientific literature, the social potential of patriotism in local communities in the South of Russia as an object of management has not yet become the subject of special sociological research, which determines the scientific novelty and significance of this study, in which the interpretation of theoretical and empirical information is carried out in the logic of the cognitive scheme, appealing to the analysis of Patriotic practices formed in the regional space of the South of the country.

Management of the consolidation potential of patriotism involves the formation of a certain type of Patriotic practices in society, which defines as a significant methodological basis for their study the theory of social practices, which, thanks to the works of E. Giddens (2005), appears in the form of the theory of institutional practices as typical, deeply rooted in space and time, collectively meaningful and acting as the basis for the reproduction of the social order. It is also important to develop the theory of social practices of P. Bourdieu (1994), which substantiates the fact that the components of social practices of individuals' actions can be both expedient, conscious and meaningful, and has unconscious, illogical, devoid of meaningless character, as it may seem from the outside. At the heart of its concept is the notion of habitus, which, in fact, explains the nature of practices and their historical conditionality.

Management of the consolidation potential of patriotism involves the use of the potential of regional sociology, in which the subjects of regional governance (government, business structures, non-profit organizations) operate in a geographically differentiated social space as a space of interaction between various social institutions and actors (Markin, 2014). Moreover, on this basis, management practices in the field of patriotism in the regional space of the South of Russia should be considered from the standpoint of formal (state, government, regulatory) and informal (public) practices.

Results

The management of the consolidation potential of patriotism in the South of Russia, characterized by a complex ethno-social structure, is extremely important and interesting from the point of view of the concentration of negative consolidation factors in a number of local regional communities. The study of this problem from the standpoint of its formal and informal aspects has led to a number of results.

Formal mechanisms for managing the potential of social consolidation of patriotism in the South of Russia are regulated primarily by the state program of Patriotic education of citizens of the Russian Federation, as well as regional programs of Patriotic education of citizens, developed on its basis (*on Patriotic and spiritual and moral education in the Republic of Crimea, on Patriotic education of citizens in the Stavropol region, on Patriotic education of citizens of the Rostov region,* etc.).

The implementation of Patriotic education within the formal boundaries of this Program, quite fitting into the mental program of normative behavior in Russian society, in which patriotism is based on the statist ethic of service and readiness to protect the Fatherland from external enemies, is largely focused on the formation of Patriotic practices associated with the formation of negative identity. It is based on the image of the enemy and the need to fight it, and today almost a quarter of Russians agree that Russia is surrounded by enemies from all sides, and such tactics works to form heroic patriotism which is a well-known and rooted in the mental practices of Russians, including in the South of Russia, and which is the basis of the sovereign patriotism. The main resources for the formation of this type of patriotism is the Great Patriotic War, the historical memory of which and its reproduction in the regional space of the South of Russia resulted in the large-scale development of the military-Patriotic movement, in which representatives of all age social groups take part, but this movement is focused primarily on the youth of the region. Its mass involvement in such Patriotic practices is expressed in the spread of military-Patriotic clubs and organizations, movements and events, various actions *(Candle of memory, Immortal regiment, Roads of glory – our history, Grandfathers' victory – the road of light, Watch of memory*, etc.) dedicated to the historical memory and cultivation of the heroic past of Russia and the region. At the present stage, the most common among the Patriotic practices in the South of Russia are the practices of military mobilization character *(Vertical, Paratrooper, midshipmen, Scout*, etc.), actively supported by regional structures and authorities and aimed at supporting the ruling power in the country and the ongoing political course.

In General, on the territory of the entire South of Russia there are typical military-Patriotic practices, mostly associated with the second world war, with the Victory over fascism, the formation of military training of young people, others, significantly supported at the level of regional authorities, including through active participation in the implementation of such practices of political parties' regional offices (*United Russia, Communist party, Patriots of Russia*, etc.).

Moreover, this strategy of the regional authorities has borne fruit: young people consider themselves Patriotic, actively involved in such Patriotic practices, loves and is proud of the country, its heroic pages, but patriotism is not associated in its consciousness with the manifestation of active civic consciousness.

The consolidation potential of patriotism is used at the level of formal regional management practices in the regulation of inter-ethnic relations, in their harmonization, which is reflected at the regulatory level in the form of the adoption of regional programs aimed at solving urgent problems related to the manifestation of xenophobia, inter-ethnic and inter-religious intolerance.

The management formal aspects of the consolidation potential of patriotism, based on the values of statist, correspond to the informal Patriotic practices of everyday life, regulated by social structures and organizations, social institutions and social groups. They also contain at their core statist values, as they are rooted in the mentality of Russian society and its many peoples, including in the South of the country. However, the specificity of etatist patriotism in the South of Russia is the risks of nationalism, for which the regional space of this part of Russia is a fertile ground for the spread of ethno-phobia, ethno-nationalism, ethno-extremism, etc. Nevertheless, it should be noted that nationalist motives are typical for the whole of Russia, since a fifth of its residents agree with the statement that being a patriot means to believe that your country is better than other countries.

The stately and statist nature of patriotism in Russia and the South of the country in particular contributes to the fact that informal Patriotic practices are often transformed into formal ones, becoming part of regional management practices.

It is not about making a choice and necessarily abandoning the value of one type of patriotism with its consolidation potential for the sake of another. The formation of historical memory and its transferring through heroic patriotism in its military-mobilization design can be combined with everyday patriotism based on civil practices, but this requires a different paradigm of patriotism – not a statist, but a civil one. Its implementation requires appropriate conditions in the form of a high level of social subjectivity as a willingness and ability to take responsibility for what is happening in the country, confidence that it is possible to change something by individual efforts of citizens, but Russian realities, both at the level of the whole country and in the South of Russia, demonstrate the dominance of statist and paternalistic attitudes and values, when the state is recognized as the main actor of social change (Twenty-five years of new Russia, 2018). All hopes for change for the better, for solving social problems and socially important tasks are associated with it in the face of *strong power* (Toshchenko, 2016).

Discussion

The South of Russia is a poly-ethnic mosaic region with a complex ethnic structure and a rich palette of ethnic cultures, the history of interethnic relations at both the micro and macro levels. The history of each region that makes up the South of Russia has its own specifics of relations with the Russian authorities, derived from the history of inclusion in Russia, the presence/absence of interethnic and other clashes, conflicts, wars, traditions of interethnic interactions that have developed over the years of functioning as part of the Russian state. Moreover, the more important it is in modern Russia to create a platform for intercultural dialogue, the Foundation of Russian identity as the basis for inter-ethnic consolidation. In the years that followed the collapse of the USSR, when attempts were made to find a unifying national idea, only with the transition to the new Millennium it was possible to determine that such a platform, such a national idea can and should (according to V. Putin) become patriotism, throughout the history of Russia, which allowed the multinational Russian people to be one and successfully resist all risks, threats and challenges. The regulatory framework created for this policy is being carried out and its further development marks the formal consolidation of this course and determines the nature of formal management practices in the use of the consolidation potential of patriotism. We are talking about the state program for 2016-2020, in which the mission of patriotism is conceptualized in terms of a clear demonstration of the goals and objectives of Patriotic education aimed at strengthening the Russian state, ensuring national security, consolidation of Russian society, the formation of Russian identity and increasing civil responsibility. In one or another variation, but with the preservation of ideological and conceptual foundations, this program is implemented in all regions of the South of the country.

Thus, at the level of formal management practices in the South of Russia, traditional mechanisms of making patriotic population are implemented, associated with the reproduction of state patriotism, which does not define society itself as an important subject of patriotism, and therefore young people become just an object, albeit a key, of Patriotic education without taking into account the fact that the need for a subjective role has already matured, and educational measures of patriotism are not considered effective in the formation of patriotism (Vereshchagin & Volkov, 2017). Nevertheless, in the regional space of the South of the country, the formation of patriotism among young people takes place within the framework of the educational process, the basis of which is the program of Patriotic education of citizens developed by the state. Thus, in the South of Russia Patriotic practices correlated with state patriotism as typical for the Russian society, which traditionally developed within the conceptual boundaries of this type of patriotism, are successfully consolidated. It is based on the idea of the state as the most important value, the main object of Patriotic feelings of citizens and the key subject of management of Patriotic development of society.

In paradoxical borders of the state patriotism formal administrative practices in the field of patriotism formation in the youth environment of the South of Russia connected with the organization and development of the military Patriotic movement based on memory of the great Patriotic War are realized. Of course, Patriotic practices of this kind play an important role in the formation of historical memory, love and pride to their Homeland, but the dominance of this kind of military mobilization and heroic Patriotic practices among young people does not lead to the formation of ideas about how you can show patriotism in civil everyday life. Analysis of the most common Patriotic practices in the South of Russia actualizes this issue in the most serious way.

But what is remarkable, although natural, is the state type of patriotism in its military-Patriotic, heroic and mobilization orientation allows regional authorities to effectively cope with a number of key management functions focused on social integration and consolidation of regional society on the basis of common interests, values and regional identity; social mobilization of the regional community to achieve common goals, representation of the interests of regional society at the national level (Lubsky, 2019).

Another thing is that this type of patriotism, like national patriotism, in the Russian version - statist (Volkov, Vereshchagina & Lubsky, 2018) does not contribute to the solution of another range of functions of regional governance related to the protection of the interests of regional society; ensuring its social stability, social development, acceptable level and quality of life, as to solve these problems in modern reality requires a high level of civic consciousness, civil self-organization and social activity, and the state patriotism reproduces in the mass consciousness and social practices paternalism, which, as rightly noted by researchers, becomes a barrier to the development of inter-sector social partnership, creating a dependent mood of a large part of the population and a low level of social participation (Molodov, 2016). And, it would seem, that the consolidation of society, since the beginning of the XXI century, implemented in the format of state-Patriotic orientation, has brought its effective results in the field of unity of Russian citizens, the formation of historical continuity, but the cohesion of the population is not shielded from the destructive factors of consolidation in such a strategic key, which are manifested in the deficit of civil identity, trust in social and political institutions, low living standards and ineffective social policy, and in regional spaces with a complex ethno-social structure, which include the regions of the South of Russia, negative consolidation effects still occur, and they are associated with identification processes and ethno-nationalist trends. Moreover, in this situation, these negative consolidation trends are transmitted through informal channels of patriotism formation. In particular, we are talking about the family, which has the most powerful potential of *growing* patriotism, but uses its resources in the context of specific socio-cultural and socio-economic reality, formed social order. Therefore, in the conditions of socially un-oriented state, lack of protection of fundamental rights and freedoms of citizens (labor, education, decent life), the family is deprived of the opportunity to form at the level of consciousness of young people a deep sense of patriotism as part of the fate of the *big* homeland, as a willingness to live and work for its benefit and prosperity. In the context of the information society with its active means of manipulation of mass consciousness, mass media are entrusted socialization functions, but the emerging Patriotic attitudes on the basis of this agent of youth socialization acquire the character of situational, temporary and not expressed in behavioral strategies, as evidenced by the data on the high migration of young people outside the Russian state, as well as a high level of pragmatism and selfishness in labor, in work (Vereshchagina et al., 2015). "The Patriotic idea is born by the practice of being, in this sense it is the creation of everyday life" (Orekhovskaya & Orekhovsky, 2016) - these words of Russian scientists accurately reflect the above-mentioned, confirming the idea that the very reality of social life becomes an indicator of the value-ideological content of patriotism and behavioral practices that embody the level and nature of Patriotic attitudes formed in society.

Among scientists, however, there is a slightly different point of view, allowing to present the above described situation from the reverse side, when the solution to the problem of reducing the level of social consolidation of the Russian society under the influence of negative phenomena that thrive in it at the present stage (falling living standards, rising social inequality, corruption, legal insecurity of citizens, etc.) is seen through the use of the resource potential of patriotism (Rozhkova & Marshak, 2014).

Without disputing the legitimacy and justification of such an approach, we believe that unilaterally, without using other resources associated with improving the welfare of society, the level of its economic, social and cultural development, the formation of patriotism is transformed into a declarative practice that is not able to have a real impact on the deconsolidation processes in society, which have gone very deeply and expressed, including in the syndrome of tacit acceptance of the abnormal Russian reality, with universal recognition of the fact that in the post-Soviet period in the country, as twenty years ago, there are acute issues of mass poverty, social injustice and insecurity of the population, spiritual decline and arbitrariness of officials (Gorshkov & Petukhov, 2015). In addition, in the regional space of the South of Russia these negative factors are aggravated by contradictions and difficulties of ethno-cultural and confessional nature, which together hinder the social consolidation of the regional community.

Conclusion

Biological (by a development environment) hazards include natural fires and also invasions of allochthonous insects (locusts, Colorado beetles and others) and various diseases of animals and plants (epizootia, epiphytotia, etc.). At any time, patriotism was a significant value and resource of social development. In the most difficult times, it helped people to survive crises, wars and remain faithful to their country. Often this resource was used for unseemly purposes, directing the Patriotic consciousness of citizens in the direction of the struggle for ideals and values contrary to the values of humanism and the right of every people to national self-determination and Autonomous development. Thus, using the infringed Patriotic feelings of the Germans and the ideology of revenge, a fascist regime was created in Germany, which claimed countless human lives during the Second World War.

In other words, patriotism has a powerful potential to influence the mass consciousness, and it all depends in whose *hands* and how this *weapon of mass destruction* will be used. It can become extremely dangerous based on the cultivation of nationalist sentiments, and can become a source of spiritual revival of society and its successful development.

Management of patriotism and its potential for consolidation in the South of Russia is carried out mainly through formal mechanisms that define as a dominant the statist type of patriotism, which is based on military mobilization Patriotic practices that have received significant distribution and especially in the youth environment, actively involved in the military-Patriotic movement through educational channels, as well as under the influence of heroization of patriotism as the most powerful Patriotic trend in modern Russia. As a result of the actualization of military-historical memory and the construction of historical consciousness based on the heroic events of the past in the youth environment, an acute shortage of civic consciousness in the structure of patriotism is formed, which negatively affects the consolidation processes in the South of Russia in terms of overcoming the trends of negative (destructive) consolidation in ethno-cultural circles and communities.

Thus, management practices in the field of patriotism in the South of Russia based on the etatist paradigm are not able to solve the whole unit of functions and tasks of regional governance related to the problems of social consolidation of regional society and the protection of its interests. There is a need for a different, integrated paradigm of patriotism as a resource of management activities at the formal level and a reference point for activities at the informal level. It should be based on civic values and attitudes, but so far, this paradigm of civic patriotism can only be spoken about in the context of a promising project.

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The Main Trends of Russian Business Travel Market Development

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Abstract

The relevance of the article is determined by the fact that Russia as well as the rest of the world gives considerable attention to the process of developing business travel. This is related to its positive impact on the economies of countries that accept business travelers, since it is characterized by: independence from the season; high predictability; mass character; the provision of high-quality expensive services; promotion of the image and favorable reputation of the host region. The purpose of the article is to present the results of a study development direction of the business travel Russian market. To implement this study, the authors of the article used the methods of comparative analysis, content analysis, the method of expert assessments, methods of quantitative and qualitative analysis, data aggregation methods. The novelty of the research results consists in clarifying the essence of the scientific concept "Business travel", which includes the following components: business meetings and negotiations, motivational events (incentives), congresses / forums / conferences / seminars and events. The paper assesses the segment development prospects of business travel congresses / forums / conferences / seminars and event management. In the article, the authors stress that the sector is underestimated in Russia and significant growth in this area is possible. In addition, potential of Russian regions for the business travel industry development was assessed. Implemented study substantiates a set of measures aimed at further development of the business travel industry in Russia.

Keywords: business tourism,business travel,business meetings and negotiations, motivational events (incentives), congresses, forums, conferences, seminars ,events, business travel industry.

Introduction

Currently, due to the globalization and integration of the global economy, the business travel industry is developing at a rapid pace, and experts expect only an increase in business travel in the near future (Zaernyuk, Mukhomorova & Egorova, 2016, Veretekhina et al., 2017; Semenova et al., 2018). By 2020 the cost of business travel in the world is likely to reach 1.6 trillion dollars (Industriya vstrech kak drayver razvitiya ekonomiki, 2018). An interesting fact is that the number of business trips is hardly affected by economic and financial crises, environmental and political problems. For example, in the region in which there is a military conflict, many international organizations send observers, negotiators, delegations to resolve conflicts, representatives of humanitarian missions. All these travelers travel to the region for business purposes. In fact, business travelers are “ambassadors” of the host region, which contributes to its promotion in the international tourist market. Most of the business travelers make up the well-known and influential people that have an impact on the views and opinions of other people, forming their positive attitude to the host region and business events held in it.

It should be noted that the economic effect from the development of the business travel industry far exceeds many other investment projects. For example, according to experts’ investments in the development of the business travel industry give a multiple economic effect to the development of related industries (transport, trade, restaurant, hotel, advertising business). According to ICCA, each congress participant spends an average of 736 dollars per day, which is three times the cost of an ordinary tourist. Thus, at the expense of large business events the business travel industry allows replenishing the budget of the host region four times as much as the implementation of some other mass events.

In 2018, there is a continuation of the trend towards the recovery of the Russian business travel market after the crisis of 2014, which indicates a further strengthening of the position of business operating in Russia. At the same time, despite the tense relations with a number of foreign countries, there is a growing interest in the corporate segment to international business trips - companies are actively seeking global partners, including for expanding business outside Russia. According to forecasts of experts (Aeroklub, 2018) this positive trend will continue in 2019. Therefore, it is paramount now to clarify the conceptual apparatus of business travel based on the understanding of the nature of this type of travel, as well as its specific organization and on this basis to develop activities for further development in business industry.

Methodological Framework

To carry out the determination about the main trends and directions of development of the Russian business travel market we used methods of comparative analysis, content analysis, method of expert assessments, methods of quantitative and qualitative analysis, methods of data aggregation, classification and structuring of information, reference and statistical data.

The study of the business travel development problems was performed using the following sources of information: materials of scientific conferences, scientific publications on business travel; analytical reviews, ratings of professional agencies.

Literature Review

In Russia, the term "business tourism" is often used in regards to temporary business trips and trips for official purposes, including participation in conferences, congresses, etc., without generating income at the place of business trip (Sineva, 2016; Milinchuk, 2017). Unfortunately, this definition does not quite accurately reflect the specifics of business travel for some reasons: in international practice, the term "business travel" is used to define this type of travel. The business traveler can receive income in the place of residence / business trip (for example, the speaker at the conference from the meeting organizer or sportsperson as a fee for competition win).

Therefore, in our opinion, it is more expedient to understand business travel as travel for business purposes, including preparation of tourist travel programs; installation of equipment; participation in meetings, conferences and congresses, trade fairs and exhibitions; inspection, procurement; contracting for accommodation and transport; sales of products, works and services to foreign enterprises; incentive trips for employees of enterprises; lectures and concerts; working as guides and in other positions in the field of tourism; participation in professional sports events; government travel (Zhukov, 2013).

Currently, in the literature there are different definitions of business travel, for example, "business travel", "an industry I meet", "industry meetings and events", "industry congresses and incentive measures", "industry meetings, corporate and incentive events", "industry event management and incentive activities".

Analysis of the above definitions allows us to conclude that the scope of business travel includes the following components: business meetings and negotiations, motivational events (incentives), congresses / forums / conferences / seminars and events.

Results

4.1. Organizing Companies for Congresses / Forums / Conferences / Seminars and Event Management

Overseas, organizational structures / companies are actively functioning in the market of business consolations, whose functions are strictly demarcated when organizing business events (Guliyev, 2017):

– meeting planners are involved in planning and organizing corporate events (determine the place, time and nature of the event, calculate the budget of the event);
– professional congress organizers (professional congress organizers) provide services for corporate events (congresses, conferences, incentive travels);
– destination management companies, specialized in the reception and service, and business delegations and groups in the venue;
– congress offices (congress/convention bureau) are engaged in attracting various business events in the region.

In essence, these organizations in the course of joint, coordinated work provide the substantive and technical parts of all business events held in a particular region. Thus, in international practice, only specialized organizations are engaged in servicing business travel.

There are also a small number of professional Russian companies in Russia that specialize in providing a full range of services for business travelers (Aero Club, UTS, Concorde group of companies and others).Congress bureaus have been established in a number of Russian regions (Moscow, St. Petersburg, Yekaterinburg, Sochi, and others).

In November 2017, the National Congress Bureau (NCU) was established in Russia with the support of the Government of the Russian Federation to develop exhibition, trade fair and congress activities, as well as integration into the global business travel industry. The key activity of the NCU, within the framework of the fulfillment of the national goals and strategic objectives of the Russian Federation, is to attract more international congress and exhibition fairs to the country and to form a positive image of Russia as a country with a favorable business and investment climate.

Since the founding of NKB Russia under the brand "RUSSIA OPEN TO THE WORLD" was presented at four major international industry exhibitions, such as "IBTM World" in 2017 -2018 Barcelona, «IMEX 2018" in Frankfurt and «IBTM China 2018 "in Beijing. The founders of the Association are: Roscongress Foundation; JSC "Russian Export Center"; International Fund for Technology and Investment (International Foundation of Technology and Investment, IFTI); Exhibition Research Center R&C.

During the first year of operations in Russia NCU 4 major international events have been held, the overall economic effect of the conduct of which will be about 5 billion rubles. In addition, the amount of tax revenue has exceeded 550 million rubles. Additionally, 9 more events are under development. With potential participation in them, 16700 people, the total economic effect may exceed 7 billion rubles. (Natsional'noye congress – byuro predstavilo na press – konferentsii itogi pervogo goda deyatelnosti, 2018).

4.2. Development of Activities of the National Congress Bureau

At the same time, it should be noted that, at present, the reserves of the NCU's activity have not yet been fully realized; further directions of its activity should be directed towards:

– development of infrastructure and material and technical base of the regions, development of common industry standards (Radzhabova & Amiraliyeva, 2017);

– attracting and conducting not only large events but also international industry and research activities with the number of participants of 200 persons and above. It will give a significant impetus to change the infrastructure of the country and has a social effect: airports, train stations , roads, landscaping, construction of sports facilities, increasing the level of hotel services and other services, all this remains after the events to the residents of these regions and undoubtedly improves the quality of life of the population;

– increase the share of Russia in the international market of business travel - up to 1.7% (currently 0.46%), improving the country's standing in international rankings of exhibition-fair and congress activities and the increase in the contribution to GDP of the Russian Federation at the expense of attracted international business events (Radzhabova & Amiraliyeva, 2017);

– the creation of regional convention bureaus, development regions passports, which will act as a starting point for engaging in activities to Russian regions leading industry and may become a flagship for the concentration of efforts on attracting events, taking into account the sectoral specialization of the region;

– visa support for participants of business events (shortening the time for obtaining a business visa);

– development of the system of subventions for the events (i.e. state financing regional business events - conferences, exhibitions, fairs, etc.);

– the use of the ambassadorial program for the promotion of a destination, i.e. not individual companies, products or services, but an entire country or region as a venue for business events. These programs include regularly disseminated information about the advantages of traveling first in Russia, a country used the features that a business traveler wants to see and feel.

4.3. Assessment of the Potential of Russian Regions for the Development of the Business Travel Industry

In order to identify the development potential of the business travel industry in the Russian regions Specialists of the R&C Exhibition and Research Center (VNIC R&C) (Natsionalnoye kongress-byuro predstavilo na press-konferentsii itogi pervogo goda deyatelnosti, 2018) made a rating of the Russian regions potential for the of the business travel industry development by the end of 2017. Saint Petersburg occupies the first place in the rating, as the city hosts major international business events annually (Table 1).

Table 1. The top five Russian cities with the highest rating in attracting exhibition fairs and congress events

City	Largest sites	Major organizers	Recreational possibilities, experience of major events
St. Petersburg	**CEC "Expoforum"** (closed area	LLC "EF-	7000 cultural heritage sites.

	- 50 thousand sq. M, open area - 40 thousand sq. M, the number of pavilions - 3, 25 conference rooms, accommodating 10 thousand people., **CC "PetroCongress"** Indoor area - 3150 sq. M, convertible conference room up to 300 people., 8 conference rooms with a capacity of 10-150 people., 4 meeting rooms	International, LLC VO RESTEK, Primexpo	Over the past five years, more than 100 events held by major international associations
Ekaterinburg	**IEC "Ekaterinburg"** Closed area - 50 thousand sq. M, open area - 60 thousand sq. M, number of pavilions - 4, 8 conference halls, 7 meeting rooms	LLC "UralExpo" LLC "Uralexpocentre - Eurasian Exhibition Holding"	Industrial and theater center of Russia. Over the past five years, 9 major events held by international associations
Sochi	**Main Media Center** Closed area -158 thousand square meters, 5 conference rooms with a capacity of 50-450 people.	PA "SOUD-Sochi exhibitions" Sochi-Expo CCI Sochi LLC	The largest alpine resort. In the last five, 14 events of international associations took place.
Krasnodar	**VKK "Expograd South"** Closed area - 35.6 thousand square meters. m, Open area - 20, 8 thousand square meters, the number of pavilions-4, 5 conference rooms	Krasnodar EXPO" (IT Co. Expo)	Protected Areas, included in the program "Gastronomic map of Russia"
Kazan	**EC "Kazan Fair"** Closed Square -. 6.7 thousand sq open area - 12 thousand sq. m, the amount of pavilions-3.8 conference rooms, 4 meeting rooms	OJSC "Kazan Fair"	Kazan Kremlin, Bulgarian historical and archaeological complex. Over the past five years, 17 events of international associations have been held.

In 2018, St. Petersburg held International Congress of the World Association of the Exhibition Industry (UFI). Second place occupies Ekaterinburg. This region pays great attention to the improvement of specialized infrastructure, which is necessary for the full business travel industry development. In the near future, construction of a congress hall, meeting international standards and designed for 4.5 thousand people, will begin at the Yekaterinburg-EXPO site. The third, fourth and fifth places are occupied by Sochi, Krasnodar and Kazan. In 2017 Kazan began to work on "Convention Bureau of the Republic of Tatarstan", which will further promote the development of business tourism and attract investment to the region.

Among the cities in the TOP-10, Ufa strengthened its position most significantly, rising from 11th to 8th place. In 2017, the Congress Bureau of Bashkortostan carried out active work on promoting the republic's potential, which resulted, in particular, in winning the bid to hold the Apimondia Congress of Beekeeping Associations and the ApiExpo exhibition in 2021.

The TOP-10 is closed by Chelyabinsk, where in the coming year's major international sports and business events are planned to be held: the World Junior Hockey Championship, the BRICS and SCO summits in 2020.

In addition, for the modern period of business travel industry development in Russia there is a tendency of increasing attention of regional administrations to the branding of territories. In 2017, the winners of the first National Territorial Marketing and Branding Prize were announced by the 'Stas Marketing' with the support of the All-Russian public organization Business Russia. Image symbolism of Murmansk recognized as the winner in the nomination "The best brand of the city" (Kankulova & Reshetnikova, 2017). Besides, work on the creation and implementation of brands is implemented in Nizhny Novgorod, Voronezh, Irkutsk, Tyumen and Ryazan. In the future this will allow the city to strengthen its position in the tourism market, as well as to increase recognition in the field of exhibition and fairs, governmental and congress events in the Russian Federation.

In addition, experts (Guliyev, 2017) point out positive trends for the development of the business travel industry in Khabarovsk. In 2017, the government of the Khabarovsk Territory announced the development of a "Concept for exhibition, fair and congress activities until 2025," which indicates the interest of local authorities in the development of the region's business travel industry.

In this rating, Moscow was not taken into account by specialists as an element causing a strong imbalance and distortion of data. According to ICCA, at present Moscow is in the TOP-100 congress destinations of the world and in the TOP-50 of Europe. Since 2013 promotion of the city as congress-fair center is engaged in the Moscow Exhibition and Convention Bureau. In Moscow, three sites are used for large-scale business meetings: Crocus Expo IEC (indoor exhibition area - 215.9 thousand square meters, open exhibition area – 219 thousand square meters, number of pavilions - 3, 49 conference halls); Expocentre Fairgrounds (indoor exhibition area - 105 thousand square meters, open exhibition area - 60 thousand square meters, number of pavilions - 11, 32 conference halls), VDNH EXPO (indoor exhibition space - 39.3 thousand square meters, open exhibition space - 65 thousand square meters, number of pavilions –2, 12 conference halls). The largest organizers of events in Moscow are Expocentre JSC, ITE Expo LLC, Crocus International JSC.

Despite certain successes of Russia in the business travel industry development, nevertheless, Russia still lags significantly behind such countries as the USA, Great Britain, Germany, Canada, and Thailand (table 2). According to ICCA, in the European ranking of countries in terms of the number of events held, Russia ranks 22nd (Industriya vstrech kak drayver razvitiya ekonomiki, 2018).

Table 2. Share of business travel industry in the economies of countries (Industriya vstrech kak drayver razvitiya ekonomiki, 2018)

A country	Share in GDP,%	Absolute Values
USA	2.20	393 billion
Great Britain	2.90	71.7 billion
Germany	1.70	52.6 billion
Canada	1.80	23.7 billion
Thailand	0.60	6.4 billion
Russia	0.046	250 million

According to ICCA, not more than 600 out of 7,000 international professional associations held events in Russia, at the same time, according to expert estimates (Industriya vstrech kak drayver razvitiya ekonomiki, 2018).

Russia can host more than 8,000 congress and exhibition events, which testifies to the underestimation of this sector and its growth opportunities.

Discussion and Conclusion

Some authors (Zaitseva et al., 2018), already wrote about the development of business tourism, in particular about the features of the development of MICE - tourism, about the development and business tourism in the Baltic region in the framework of cross-border cooperation, the article (Zaitseva et al., 2018) gives an overview of the state and prospects for the development of business hotels in the Russian Federation. The proposals and recommendations set out in the article are characterized by originality, because they contain an analysis of the trends of Russian business travel industry development. This research summarizes the experience of development in Russia, in particular such components of the business travel industry, such as exhibition, fair and congress activities.

This study allows us to conclude that for further development of the business travel industry in Russia the following areas require specific activities:

– The presence of state support, the development of public-private partnership in the field of business travel;

– Forming an attractive image of Russia, developing the experience of holding major events (sports, cultural, entertainment, business, government), branding Russian cities;

– Formation of economic and political stability, implementation of measures to provide security in the country for travelers;

– The formation of the professional structure of the organization involved in promoting the capabilities of the Russian regions in receiving and organizing exhibitions, fairs and congress events (regional congress bureau, information and tourist centers);

– Development of transport infrastructure, accommodation facilities oriented to business travelers (congress hotels, hotels with international standards of service and price / quality compliance);

– Availability of modern congress and exhibition centers, centers of international trade, the necessary amount of exhibition and congress areas;

– Using digital marketing to promote Russia as a major center of the business travel industry to boost sales, increase brand awareness and create certain positive trends;

– Training specialists for the business travel industry, developing professional development programs focused on the features of the business travel industry;

– Collaboration with NBC Russian professional Association for attracting major events in Russia;

– Participation of representatives of the National Security Committee of the Russian Federation in international exhibitions and fairs, conferences, forums dedicated to the development of the business travel market;

– Russia's membership in international and national associations, associations specializing in the promotion and organization of exhibitions, fairs, congresses and other business events;

– Conducting statistical report on the business travel industry functioning in Russia.

The application of recommendations proposed by the authors of the article will contribute to the development of business travel in Russia, increasing the efficiency of development and application. The materials of the article are of theoretical value for research in the field of business travel research, and practical value in the implementation of business travel industry development programs.

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Social Investment Model of Regional Management and Its Realization Peculiarities in South of Russia

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Abstract

The social and investment model of regional management is the most optimal and effective mechanism for the development of regional society, since it is focused on the formation and development of organizational, regulatory, structural, cultural and managerial skills of regional management entities in the system of regional management, contributing to the increase of social and investment potential of regional society. The system of regional management of Russia identifies the preconditions for the formation of a social and investment model as an alternative to the existing transfer and raw materials approaches, but the regional specificity in the development of this process is noted. The study of the regional experience of the South of Russia makes it possible to state that in the space of this region, taking into account the diversity of natural, climatic, social, economic, cultural and historical factors, intra-regional specialization is positive, which aims to eliminate unhealthy competition, reduce of transaction costs and specialization within the framework of social resource nature (the level of human capital development).

Keywords: management, region, regional management, social and investment model, social and economic development, South Russian region.

Introduction

The dominant model of regional governance in Russia is related to the preservation of administrative, political, legal and financial mechanisms of social stability and order. However, the deterioration of financial and economic indicators (half of the entities of the Russian Federation (43 regions) finished the current year with a budget deficit) deserves close attention, as it has the prospect of becoming a systemic problem of regional governance. This means that when forming a model of regional management one should take into account the positive experience of regions with sustainable social development, identifying points of growth and perspectives of the transition to a social investment model of regional governance, with the aim of enabling mechanisms for the investment of financial and intangible resources in the regional society, support and development with rootedness and socio-economic perspectives for the region models of regional governance. The social and investment model of regional management is of particular importance, as it is an adequate response to internal and external challenges, predetermining changes in the strategy and tactics of management decisions.

The relevance of this study, firstly, is due to the trends of socio-economic and social development of the regions and, as a result, new requirements for the system of regional governance. Secondly, due to the strategic objectives of the implementation of social and investment policy priorities in regional management. Third, due to the need for scientific justification and methodological toolkit for study the processes of regional management in the framework of strengthening the effectiveness of the current management system. All of the above-mentioned is associated with the implementation of the social and investment model of regional management, the experience of the organization, which is not conceptually justified or analyzed in detail in Russia.

Noting that the system of regional governance in Russian society hardly and sometimes contradictory transfer to the socio-investment model, it should be borne in mind that the Russian regions are heterogeneous in natural, climatic, socio-cultural, economic, socio-territorial indicators that the hierarchy of the status of the regions is based mainly on financial and economic parameters and inter-budgetary relations. Therefore, it is important to address the specifics of the formation and implementation of regional governance's socio-investment model in the South Russian region. This choice is conditioned by the fact that the South Russian region, firstly, is the middle, that the entities of the Russian Federation, included in the South Russian region, are heterogeneous in terms of economic development, of the degree of interaction with the Federal center, having common characteristics of administrative and legal regulation and problems related to the quality of human resources.

Materials and Methods

Conceptually, the foundations of the social investment model of social management were laid in the works of R.L. Ackoff and F.E. Emery (2012), M. Armstrong (2012), C. McNamara (2008), in which the human factor is considered as the main element of the effectiveness of the management system. In the works of B. Waterman and T.B. Peters (2010) this provision is empirically justified. The motto *management not things, but people* is an attempt to consider the management system not through individual technological and socio-structural characteristics, but organized, programmable society.

Other foreign researchers were also engaged in the problems of regional governance, including in the context of modeling and finding ways to improve socio-economic relations in the regional space by optimizing the mechanisms of regional governance and development (Bures & Tucnik, 2014; Gilbert, 2008; Krugman, 2000; Minstry, 2007; Barro & Sala-i-Martin, 1991), while in Russian science these aspects with an emphasis on the social and investment component of regional governance were reflected in the writings of A.B. Tikhonov (2017), V.V. Radaev (2003), N.E. Tikhonova and M.K. Gorshkov (2018), Yu.G. Volkov and V.V. Krivopuskov (2013), V.A. Putilov, A.V. Masloboev and V.V. Bystrov (2017), V.V. Shcherbina and E.P. Popova (2017).

The concept of the socio-investment model of the regions' management was defined in the early 2000s (Popov, 2009; Bobrovsky, 2000; Gavrilov, 2002), but the understanding of this problem is actualized in the conditions of the limited model of transfer management and the aggravation of regional disparities between the subsidized regions and the donor regions, the need for socio-innovative development of the regions and the reduction of the areas of innovation economy and the reduction of adaptation costs (Davoudi et al., 2018; Fartash et al., 2018).

Results

As the results of sociological studies show, the population evaluates the activities of the regional administration on the quality of public services in the field of employment, access to quality education, quality of health (Capitals and regions in modern Russia: myths and reality fifteen years later, 2018). Investments in human capital in the South Russian region can be traced at the level of interest in the development of the region's basic socio-economic segments. We are talking about the rebranding of industry, tourism, logistics (transport infrastructure). The majority of the region's entities are characterized by a sufficiently high degree of deterioration of social infrastructure (60%). At the same time, within the southern Russian macro region, one can talk about the differentiation of entities into leading (Krasnodar region), *middle* (Rostov, Astrakhan region), depressive (Volgograd region, Kalmykia) (Prospects for investment development of the region (for example, Rostov region), 2018). In this context, the social and investment model of regional development should be based on the totality of objective parameters and management resources corresponding to the task.

A serious challenge is the need for radical modernization in the southern Federal district of agricultural and industrial economy, which is characterized by low (even by Russian standards) productivity, weak susceptibility to innovation. For many objective reasons, the post-industrial transformation of the economy may face a number of specific difficulties here, and perhaps its implementation will be slower in the southern Federal district than in other Federal districts of Russia. The most important internal threat is the loss of the former attractiveness and prestige of the South Russian regions for living. In the new conditions of development, many South Russian resorts were uncompetitive, losing in terms of price and quality Turkish, Croatian, Greek and Montenegrin counterparts. Objectively positive effects of natural factors can be neutralized and even annulled by the poor state of social, leisure and transport infrastructure.

One can state that the priorities formulated at the level of the Federal center, focus on overcoming the backlog and neutralizing internal and external threats to regional development, which focuses the attention of regional management on administrative and legal regulation. In this context, it is important to assess the socio-investment model of regional governance in terms of ensuring regional and national security, as well as increasing the socio-investment attractiveness of the region through the growth of economic indicators.

The Rostov region, as the middle region in terms of the all-Russian indicator, demonstrates the advantages and difficulties associated with the implementation of the social and investment model of development. Based on the fact that regional governance in the Rostov region is characterized by a sufficient level of continuity and reliance on local regional elites, we can say that there are prerequisites to consider the model of regional governance implemented in the Rostov region authoritarian, set up for tight control of the regional society (Nesterova, 2012).

However, one cannot rush to the conclusion that the regional office uses only administrative resources. Indeed, management practices in the Rostov region can be described as socially coordinative and socially developing. The regional office has not reached the position, which with confidence can be defined as socio-developing. Unlike the leaders of social and investment development, the regional office announced the transition to the social and investment model only in the last two or three years. The emphasis was placed on identifying approaches to solving the problems of social and investment development through socio-developing practices associated with increasing economic activity and economic investment in the region. This was reflected in the fact that the regional management system of the Rostov region during 2014-2016 years actively presented the project to increase economic investment in the region. The difficulty was that in the conditions of the sanctions regime, the plans to attract foreign investors turned out to be quite illusive. That, as noted earlier, was not a strong incentive for social and investment activity due to the preference of foreign investors for urgent projects and focus on cheap labor.

It is noteworthy that if we rely on the criteria of qualitative assessment, which are combined into three groups: the institutional design of the investment model, regulatory centralization and accounting system of social activities, then the system of regional management has not yet advanced the first group of criteria related to institutional management in the socio-investment model; but at the same time, the system of social shares has become regular. The point is that the position of coordination of management structures' activities and various public funds and social associations is actively promoted. This is evidenced by the fact that in the system of regional governance it has become the norm to hold consultations with representatives of civil society on the formation and implementation of projects aimed at improving the quality of human resources.

Within the framework of the South Russian region, the Krasnodar region is the undisputed leader in such components of the investment potential as labor, consumer, production, financial, institutional, infrastructure, tourism. This situation is superimposed on the reproduction of the scheme *from the achieved*, as a result of which the Rostov region, as it is shown by expert assessments, without experiencing the influence of management changes, characterized by an attitude to social innovation as dependent only on the management factor, occupies an unstable position in the investment rating of the regions (25-26 places, respectively, according to the assessment of social and management factors) (Prospects for investment development of the region (for the example of the Rostov region), 2018).

In this sense, the starting point is the understanding that human resources are the trigger of economic activity. The region has almost exhausted the expansionist option of increasing resources: there is a pendulum migration associated with the high outflow of young professionals and young workers to the capital and Krasnodar region, and compensation is due to the arrival of the rural population, in particular young people. However, because the rural population has a lower degree of capitalization of educational and professional resources, there are barriers to economic projects.

Since there is no rental economy in the region, the transition to the social and investment model is conditioned. Nevertheless, there are difficulties associated with overcoming the view of social investment as a matter of business structures themselves. Since large state corporations do not operate in the region, the hope rests on small and medium-sized businesses that are not able to independently implement social and investment projects. Therefore, there was a chain of administrative interaction: the structure of the regional administration, social funds, and business structures. In this context, social funds are not only competitors of the regional governance system. As the experience of the last five years shows, the priority is the implementation of projects that transfer certain managerial and Supervisory functions to social funds in stimulating business structures to invest in the development of human resources.

The socio-investment model in the Rostov region corresponds to its middle position in the hierarchy of regional statuses, revealing typical problems associated with the fact that in the region, relying on industrial potential, there are inevitably problems of an economic nature, associated either with the modernization of existing production, or with the construction of new facilities. The second problem is that the regional labor market is still too narrow to work on training specialists with advanced knowledge.

The constraining factor is that the social and investment model of regional management is included in the solution of actual social problems that is connected with reproduction of human resources on an old basis. There was no breakthrough in improving the quality of human resources, as well as in the formation of a system of regional management for the implementation of quality social services. If we compare the management mechanisms in the Rostov region and Krasnodar region, the ratio is in favor of the Rostov region, as there is a targeted program to increase the economic attractiveness of the region, while regional management in the Krasnodar region is based on the use of social and territorial advantages of the region. However, this does not create a competitive effect, as the administrative resource in the form of support by the Federal center of Krasnodar region is higher than in the Rostov region.

It is important to understand that it is impossible to succeed in the spatial development of Russia if the strategies of the regions developed in the regional management system are not coordinated on the all-Russia scale. Based on this obvious situation, it can be stated that the transition to the social and investment model in the South Russian region is quite isolated, spontaneous, since there is a gap between participation in Federal targeted programs and the desire of regional management to social and investment activity. In this regard, G. Kleiner (2018) notes that in regional development the cooperation is as important as competitiveness, competitiveness should be combined with the ability to conclude and implement long-term agreements with partners and society as a whole. In the southern Russian region, competition has negative consequences that led to the collapse of small and medium-sized businesses. It turns out that if the region is not based on raw material one, the main burden falls on small and medium-sized businesses, so you need to think about the extent to which small and medium-sized businesses can play a role in the deployment of social and investment model of development.

Thus, in the long term, the implementation of the socio-investment model of regional governance in the South Russian region is based on increasing the level of cooperation within the region to create a resource of social lending in order to develop a system of human resources' investment with limited impact of economic efficiency.

Discussion

In the system of regional management, the socio-investment model has the effect of changes in the management culture, the motivation of the actors of the regional management system. Often the General provisions that the system of regional governance should take into account the interests and needs of the regional society in reality means that self-motivation, self-determination in the system of regional governance may come in line with the interests of the regional society, considering the improvement of human resources' quality and socio-investment policy as increasing the reputation capital of the management system and the possibility of building bilateral relations with the regional society, or as experience convinces, to see in the social-investment model only an opportunity to follow or a fashion project.

In this sense, the self-determinants of the socio-investment model of regional governance are based on three levels. The first is norms and rules within management relations. The second is the focus on social investment as a sense of management activity. The third is the practical importance of the socio-investment management model to improve the efficiency of regional management in the perception of regional management actors. Considering each of these aspects, it is necessary to pay attention first of all to the fact that the existing system of internal management relations, based on official subordination, implies social and investment activity as exclusively formalized, not contradicting the basic canons of management activity.

In the current system of internal management relations, personal independence is permissible, permitted, regulated, and social investments should be transferred to the discourse of communication, fit into the reporting criteria, belong to the document management system (this is the world of non-public people, 2016). If we concretize these provisions, then the self-determinants of management activity are manifested in the fact that social investment can be considered as part of improving the adaptability of the management system and contain criteria for maintaining the system of regional management, which excludes the introduction of indicators that do not depend on intra-management relations. It should also be borne in mind that N. Luman (2004) has revealed the possibility of translating the language of external requirements into the language of the management system and the corresponding management scheme.

When it comes to social investments, the most trivial is the organizational effect, the creation of a new structure aimed at strengthening the influence of the orderings power, which has developed in intra-management relations. This can be associated with the satisfaction of certain career ambitions, but in the first and in the second cases it is a question that the socio-investment management model is perceived bureaucratically and contains opportunities for social coordination practices that fit into the system of intra-management relations. Intra-management relations in the socio-investment model need to move to the model of group interaction, to the formation of functional interdependencies based on the criteria of compatibility and the overall usefulness of the actors' actions of the regional management system.

Focusing on the institutional settings governing social and investment management influence, it should be noted that in the internal management relations, there are disciplinary rules, that is, social and investment behavior cannot go beyond corporate management ethics. Speaking about this, it should be noted that for the regions with the emerging social and investment model of regional management, it is important to adopt management changes that hinder non-adaptive changes. It is important to create a common organizational climate that allows determining the cooperation of intra-management relations aimed at achieving a positive result.

Based on the organizational reality, the basic institutional focus of the regional management model include improving the efficiency of interdependent management groups. These actions require both the improvement of technical skills for the effective implementation of the tasks, and the improvement of interpersonal and social competence of employees in the system of regional management. Concretizing this provision, we can say, firstly, that the actors of regional management have a certain level of social competence, which allows solving the problems of administration, but as the analysis of regional management elites shows, the dominant age, is the average age of 35-50 years. These are people of social energy, career prospects, the desire to update knowledge, sometimes limited in a sense of novelty, renewal (this is the world of non-public people, 2016).

Every second actor of regional governance is cautious or negative about organizational change. The logic of such moods is based on the fact any organizational changes open up opportunities not only for growth, but also for loss of status or, in the worst case, of work. In addition, we have to go through the way of acquaintance with new tasks, which is difficult for people with management experience, with a sense of their own professional competence. Probably, the internal management relations in which the principle of subordination, rigid control of the management acts, complicate possibility of transition to focus on innovations as they assume the competition of the internal management environment, acceptance sometimes painful personnel decisions.

Under the influence of informal relations and rules, consolidation of clan groups and interest groups at the working level, the best option for the formation of new institutional attitudes is either an order from administration, which implies a quiet resistance to managerial innovations, or a radical restructuring associated with the arrival of a new team, embodying the idea of social and investment functioning of regional management.

The analysis reveals that in the development of the Rostov district as a region there are difficulties due to internal regional competition and underdevelopment of intraregional cooperation, where a certain positive would make the achievement of affiliation between the Rostov region and the Krasnodar region. Regional office in Rostov region, of course, lags behind, as the past period of stagnation led to a deterioration in the quality of human resources that is associated with the outflow from the capital in the Krasnodar region. It should also be noted that in the regional management system there was a rather painful period of a new management team's arrival, where the obstacle was the distance between the newly appointed managers and regional elites.

Bringing the system of regional governance in the Rostov region into a state of order has led to a lack of attention to the socio-economic development of the districts and cities of the region, and although in the last five years there has been an intensification of efforts to increase the investment attractiveness of the region, in principle, there have been no fundamental changes for the better. Such a pattern can be seen in relation to other medial regions of Russia, where, despite appeals to take into account the specific, often obviously ambitious models of regional development are formed, which are relevant performance criteria, but not the quality (Abramov, Mukhaev & Sokolov, 2017).

The social and investment model formed in the Rostov region has passed the period of social coordination and is legitimized in the vertical of regional management. To enable social investment governance arrangements for the solution of large-scale strategic objectives requires gradual cadre revolution and the formation of specialized social investment structures in the regional management system that performs custom for social design and social strategizing in the development of the regional society.

Conclusion

The institutional attitudes of the actors of the regional management system are based on the principle of low cost, that is, problem areas, tied to the efforts to create a labor market and provide high-quality professional vacancies, are difficult to solve. Clearly, this simplified approach contains elements of the simulation of the socio-investment model. The dissatisfaction with the current activities of the regional management system is recorded really, but, as it is noted earlier, the criterion of reliability of management and in General the desire to be good performers of the tasks of the Federal center leads to the fact that the social and investment model focuses on the head of the region responsible to the Federal center.

Until now, Russia has not formed a modal image of the Manager. Associated with this are the difficulties of developing behavioral codes that combine the tradition of administrating and the novelty of investment. This transition to the social and investment model of regional management is dictated by life itself, when in the conditions of compression of rental and transfer models the emphasis should be placed on human potential, capable of making changes to the existing model of management relations, so that in the regions there was a search for the most promising segments of regional development, for example, the prospect of introducing *green economy* projects.

The socio-investment model is not legitimate in the management space, which is a long way to realize the impact of social investment on the introduction of social and technological innovations. In Russian society, human resources management is associated with the actions of private or public corporations, determined by the criteria of management culture, management style, the nature of intra-management relations. With this right approach in general, it is necessary to take into account that the actors of regional management are officials, that is, perceive social and investment activities through the prism of the existing attitudes for the implementation of departmental Executive functions.

Therefore, it is important that the socio-investment model would be based on the acceptance by the regional management system's actors of the idea of human resources' saving and development, on the interpretation of social development of the region as the development of the population. This is confirmed by the analysis of the state of social and investment model of regional governance in specific regions of the Russian Federation. The diagnosis of the state and implementation of the model under study in the South Russian region, where there are no conditions for the rental economy, mitigating the relevance of social investment, is of great importance.

The experience of implementing the socio-investment model of regional governance in the South Russian region is also interesting because the regional environment, including the region-wide (modal) parameters of development, is associated with the specifics of the *borderland*, the existence of *multiplicity* within the regional space. Therefore, the existing intra-regional relations and models of interaction with the Federal center determine the implementation of the social and investment model of regional governance. In this context, the leadership positions of the Krasnodar region, determined by territorial, financial, organizational resources and inclusion in the Federal target programs, are fixed at the level of intra-regional expansion and, despite intra-regional competition, have a positive value in eliminating intra-regional imbalances. In the Rostov region, the management team focuses on the use of intellectual and logistical potential, at the same time making efforts to develop the social infrastructure of the regional space (*Eurodon* projects, the formation of a network of supporting universities, the development of logistics). However, the negative consequences of intraregional competition and the high level of transaction costs associated with duplication of social and investment projects in the context of insufficient intraregional cooperation have not been eliminated. Therefore, one can state that in the South-Russian region there is an intra-regional specialization that requires coordination of social and investment activity within the intra-regional space.

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Improvement of the Development System of The Personnel of Organizations of the Oil and Gas Sector of the Economy

Mikhail V. Vinichenko, Oxana L. Chulanova, Dmitry S. Klementyev, Marina V. Rybakova, Maksim A. Malyshev, Valentina Ju. Shalashnikova and Daria A. Korosteleva

Abstract

The article discusses the issues of improving the efficiency of the organization of the oil and gas sector of the economy through improving the system of personnel development. Based on a system of methods, the main of which was an online survey and a focus group using the Likert method, the authors analyzed the results of the obtained studies. It is revealed that the personnel development system is most successful in dealing with ordinary employees. The development of management personnel has problem areas, which leads to an increase in staff turnover in this category, who have been trained during development, to human and financial losses for organizations. The main advantage of the article lies in the fact that the nature of the development of management personnel is considered in the system of development of the personnel of the organization as a whole with the identification of the nature of the losses of the organization. The authors propose that managers of organizations pay closer attention to the development of management personnel. It is more technological to work with promising employees of the management cohort, focusing on the development of his soft skills. It is necessary to improve the personnel evaluation system in the formation of a personnel reserve, to improve the socio-psychological climate in the team, motivational mechanisms, to ensure career growth. The harmonious development of all elements of the staff development system will serve as a pledge to improve the competitiveness of the organization.

Keywords: efficiency, staff development, management personnel, satisfaction, loyalty, talent pool, talent management.

Introduction

In the modern world, human potential is increasingly in demand by owners and management of companies in achieving victory in competition. Linear and HR management seeks to maximize the use of all available resources (Ushakov, Vinichenko & Frolova, 2018), primarily human (Kalimullin, Yungblud & Khodyreva, 2016; Buley at al., 2016). In conditions of high dynamics of development of all sectors of the global economy, an acute need for personnel development becomes evident. It is the personnel of organizations that ensures high performance in achieving superiority over competitors in the market for goods and services. Therefore, the views of heads of organizations are directed towards systems for the effective selection of well-trained personnel, the acquisition and development of professional and managerial skills and competencies among employees (Feng & Boyle, 2014; Semenova et al., 2018; Yumatov et al., 2017; Tsitskari et al., 2017).

Scientists propose various approaches to personnel development (Bazarov & Eremina, 2007; Ilina et al., 2018), analyze the experience of various organizations in achieving success in the development of their employees (Sears, 2003), social interaction (Frolova et al., 2016), skills their confidence in the authorities (Ficke, Wuryaningrat & Elvinita, 2015). At the same time, the peculiarities of working with young people (Vinichenko et al., 2017; Demchenko et al., 2018), obstacles in personnel development (Blossfeld & Huinink, 1991; Kataeva at al., 2015; Chulanova & Korosteleva, 2017), unfair approaches to higher positions (Mysnik & Marchelya, 2014; Francis, 2017), in obtaining the desired dividends (Belousova at al., 2016).

Scientists and practitioners are actively searching for technologies to identify, develop and use the most talented managers and specialists in the domestic and foreign labor markets (Bednova, 2014; Effron & Orth, 2014; Mironova at al., 2017; Chulanova & Mokryanskaya, 2017), a real battle for talents is underway (Michaels, Handfield-Jones & Ekselrod, 2006; Schweyer, 2004; Robertson & Abbey, 2004). Some companies use technologies that are combined by such a concept as personnel reserve. In this regard, there are many studies that make it possible to effectively use human potential in the labor process (Cheran, Drotter &

Noehl, 2009; Antropov, Akatov & Podbelsky, 2010; Pilnik & Guschina, 2014) to introduce innovations (Gureva at al., 2016; Usmanova & Eroshkin, 2017; Davoudi et al., 2018; Fartash et al, 2018).

A number of scientists pay special attention to the development of professional and individual competencies among management personnel, employees who display leadership skills (Bronkhorst, Steijn & Vermeeren, 2015; Kirillov et al., 2017), continuously develop emotional intelligence. As part of personnel development, problems of increasing staff motivation are explored (Karácsony, Vinichenko & Aliyev, 2018, Vinichenko et al., 2018), creating favorable conditions for performing labor functions and occupational safety of employees of organizations (Turnbull & Wass, 2015, Rogach et al., 2016, Vinichenko et al., 2016), taking care of the health of staff (Lemke & Apostolopoulos, 2015).

A special place is occupied by technology development staff. More and more practitioners are trying to introduce technologies such as gamification, time management, coaching, shadowing and others into business processes (Werbach & Hunter, 2015; Baxter, Holderness & Wood, 2016; Lumsden et al., 2016; Javier & Felix 2017).

However, a comprehensive study that revealed the nature of the development of management personnel in the overall development system of the organization's employees, its profitability, was not carried out. This has become one of the subject areas of the study.

Methodology

The study was of a systemic nature. It was aimed at achieving the goal: improving the system of development of personnel in organizations of the oil and gas sector of the economy.

To achieve the goal were identified scientific objectives:

1. Identifying the degree of employee satisfaction with their development in the organization;
2. Determining the state of the development system of management personnel.

The research methodology was a complex of general scientific and specific methods that included content analysis, included observation, online survey, expert assessments, focus group, methods of mathematical statistics, etc. The main tools were made by online survey and focus group using Likert method.

To solve the first scientific problem in the period from January 9 to December 8, 2018, a sociological survey was conducted at the territorial production enterprise of the Chamber of Commerce and Industry "Langepasneftegas" LLC "LUKOIL-WESTERN SIBERIA". The online survey method was used. The sample size was 750 people; it represents employees of the Chamber of Commerce and Industry of Langepasneftegaz at the age of 18 and older. The sample is based on quota selection of respondents. The maximum size of the error of this sample is not more than 4.5% with a confidence level of 95%. In order to achieve the required quality of research and the reliability of the results obtained, respondents were briefed on the procedure for completing the proposed questionnaires.

In order to solve the second scientific task of the study, work was done on the preparation of the scientific and methodological base, revealing the nature of the state and development of the system of scientific knowledge on the problem of improving the development system of management personnel of organizations of the oil and gas sector of the economy. Information collection and content analysis of the state of the development of management personnel was carried out over four years (2015-2018) in the Chamber of Commerce and Industry of Langepasneftegaz LLC LUKOIL-WESTERN SIBIR.

The results obtained during the sociological survey were processed by the working group, which was the subject of discussion on the focus group.

A focus group consisting of 10 experts from among domestic and foreign scientists, faculty members, representatives of business structures analyzed the results of the study. The focus of the group was the equipment that allowed to receive data from the Internet and exchange views with colleagues located in rooms located at a great distance from each other.

The main indicators for evaluating the effectiveness of the staff development system were the following: employee satisfaction with the existing development; degree of satisfaction with the existing development program; management staff satisfaction with existing development; what you need to have in an organization for development and career growth. During the field survey, the questionnaires were distributed to respondents in printed form, in the course of an online survey - in electronic form. Surveys conducted anonymously.

Results

3.1. Staff Satisfaction with Enterprise Development

In the course of the study, it was found out that at the enterprise of the Chamber of Commerce and Industry "Langepasneftegaz" the overwhelming majority of employees are "fully satisfied" with 35% or "rather satisfied" with their development 60%. It was difficult to answer 4% and "rather dissatisfied" 1%. (Figure 1).

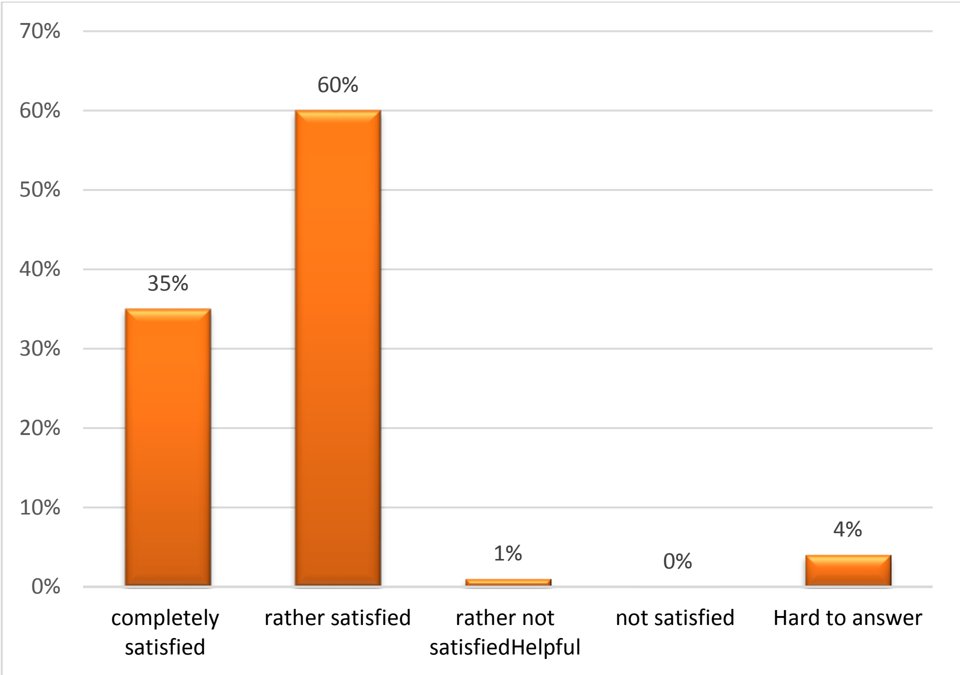

Figure 1. Employee satisfaction with existing development

Studying the opinion of respondents about the degree of satisfaction with the existing development program made it possible to establish that the training program was "satisfied" - 33% or "rather satisfied" - 46% of respondents, i.e. the main part of the respondents (Figure 2).

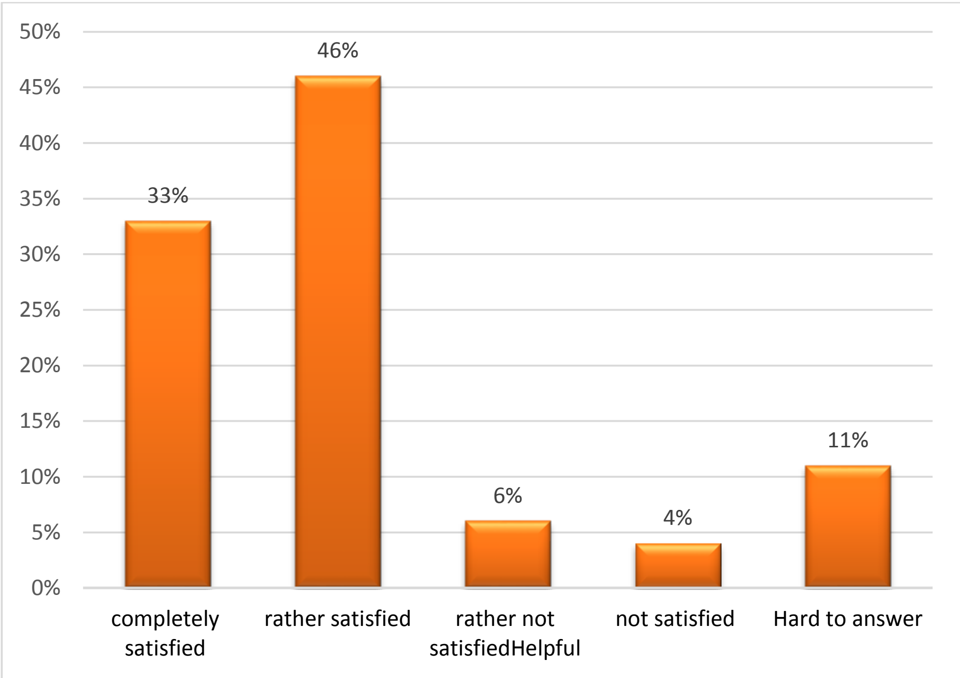

Figure 2. Satisfaction with the existing development program

In the negative sector, they turned out to be "rather dissatisfied" - 6% or "dissatisfied" - 4% is not the main part, but a certain part of the respondents that attracts attention. Difficult to answer 11% of respondents.

Respondents believe that in order to improve the efficiency of the personnel development system, it is necessary to supplement the development program with such methods as: case study — training by solving specific problem situations — 62%; internal benchmarking - comparing the performance of different departments of one organization to improve their work, studying their experience and achievements - 26%; Storytelling - distributing detailed stories about the past actions of management, employee interaction or about any events with the aim of sharing knowledge and experience - 12%.

3.2. Management Staff Development System

An analysis of the data in Figure 3 showed that the satisfaction of the management staff of the Chamber of Commerce and Industry Langepasneftegaz with the existing development differs from the opinion of ordinary employees. Among managers, "fully satisfied" 27% or "rather satisfied" with their development 42% of respondents, "rather dissatisfied" 12%, dissatisfied 2%, difficult to answer 17% (Figure 3)

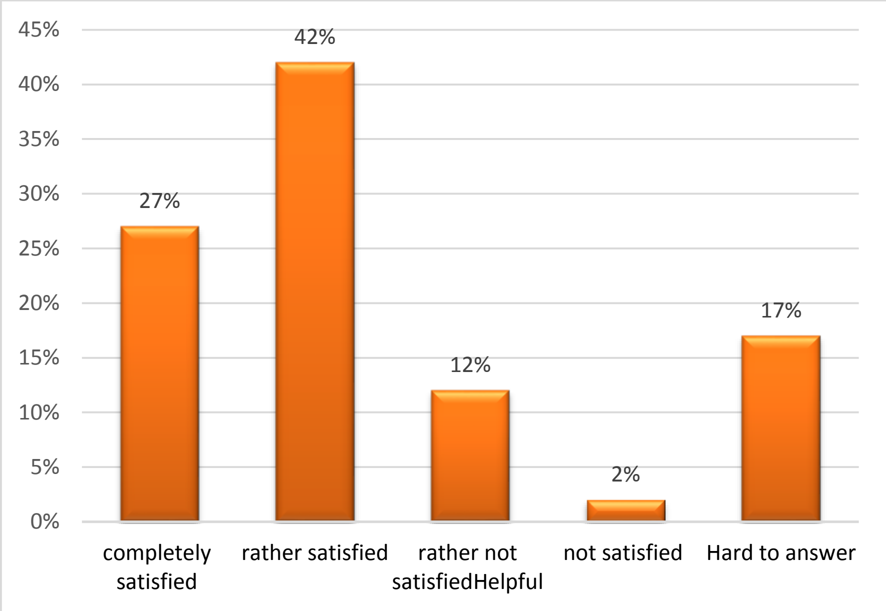

Figure 3. Satisfaction of managerial staff with existing development

The analysis of the opinion of the management personnel made it possible to establish that for development and career growth in an organization, it is necessary to have a good education - 41%, diligence in work - 24%, performance in work - 10% (Figure 4).

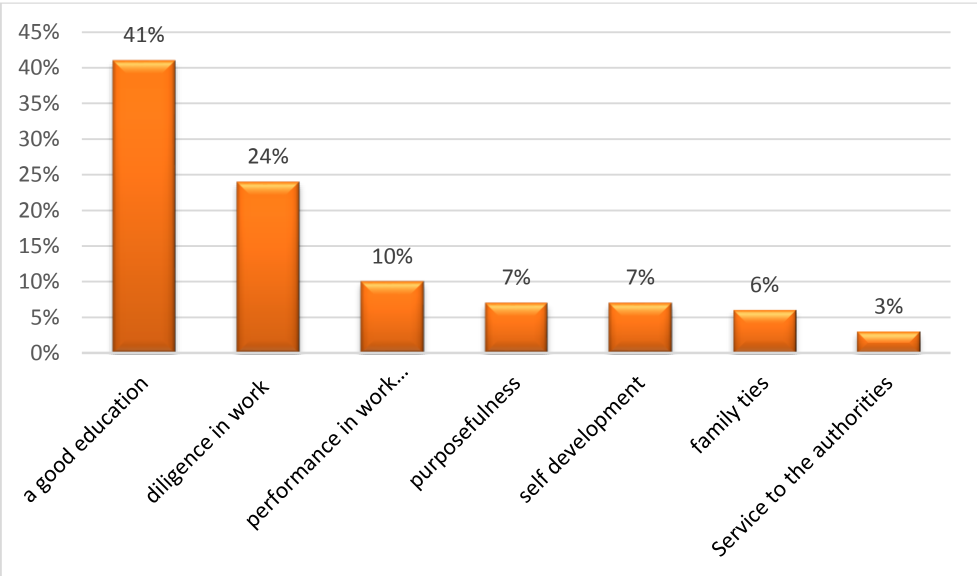

Figure 4. Results of answering the question: "What, in your opinion, is necessary to have for development and career growth?"

Approximately at the same level were single-mindedness - 7%, continuous self-development - 7% and kinship ties - 6%. The diligence of the authorities gained only 3%.

Discussion

In the course of the study, it was established that the personnel development department deals with the development of personnel in the Chamber of Commerce and Industry of Langepasneftegaz. He created a development system for all employees of the enterprise, including management personnel. It includes the organization of work on career promotion of staff, training and staff development; participation in rationalization and inventive work; staff health prevention. One of the main directions of its activity are refresher courses, the organization of in-house training for managers, professionals and employees; preparation and conduct of events that contribute to the selection and professional development of personnel (certification, rotation, internships, competitive selections, etc.); drawing up the business characteristics of employees with recommendations for the most optimal use of the professional capabilities of the individual, taking into account the prospects for their professional development; analysis of the causes of staff turnover, etc. In addition, it is entrusted with the formation of a methodological framework for conducting sociological research. This is correlated with international experience in staff development organizations (Sonnenfeld, Peiperl, & Kotter, 1992; Effron & Orth, 2014; Titarenko et al., 2017; Tsitskari et al., 2017).

HR management managed to achieve a high degree of staff satisfaction with its development at the enterprise. 95% of respondents are "fully satisfied" or "rather satisfied" with their development. The highest approval was received for contests for the title of "best by profession", the results of which set a premium for high professional skills in the amount of 15% of the tariff rate for a period of 1 year.

The complex of measures carried out makes it possible to use more and more fully the possibilities of the employees to increase labor productivity and increase production volumes. Work is underway to train and develop personnel both within the enterprise and outside the workplace, including the Gubkin RSU of Oil and Gas, the Schlumberger training center, the German production company in Germany, SolarTurbines in Belgium and other countries.

As research has shown, there is a certain unused resource in this question. In order to improve the efficiency of the personnel development system, it is necessary to supplement the development program with such methods as case study, internal benchmarking, storytelling.

There are still problem areas in the issue of development of management personnel, as evidenced by a slight increase in the turnover of this category of personnel, leading to a decrease in the profitability of investing in management training. On average, staff development spends about 1% of the annual payroll. These personnel costs are the company's investment in the development of its employees in order to increase returns and dividend growth (Belousova at al., 2016). However, the receipt of dividends from invested funds in the development of management personnel does not satisfy the management. It turned out to be lower than expected. As a result, over 3 years, 25 managers quit, whose development costs amounted to 4,095,000 rubles. 9 of them quit on their own free will after development, bringing the company losses in the form of lost profits in the amount of 14,849,640 rubles.

Analysis of the opinion of the management personnel made it possible to establish that for the development and career growth of this category in an organization it is important to improve the quality of education that they have in the first place. A positive fact is the low level of dependence in the development of managers on factors such as kinship and helpfulness to their superiors. To increase the diligence of employees and performance in work, it is necessary to improve the system of motivation and incentives, leadership styles and improve the socio-psychological climate. These activities contribute to increasing employee loyalty, increasing productivity and labor efficiency (Chulanova at al., 2018).

The focus group discussion brought the results of a sociological survey and content analysis. The experts discussed the results of the survey, revealing satisfaction with the development of employees, in particular, the management personnel of the organization, the nature of receiving dividends from the invested funds in the development of management personnel. The lack of effective development of management personnel has led to an increase in the turnover of this category of personnel. The main reasons for which managers quit were: insufficient motivation after training to stay in the company; inefficient system of selection and adaptation of personnel; poor social and psychological climate in the team, unfavorable relationships with colleagues; low probability in career growth; insufficient development of soft skills.

A focus group analysis of development costs and the effectiveness of management personnel trained has shown that the result turned out to be lower than expected, despite the fact that the productivity indicators of the employees who have undergone development have improved.

Conclusion

Sickness absence monitoring, reporting of occupational diseases and illnesses and ethical and legal issues. Increasing the competitiveness of any organization depends on the nature of changes in the quantitative and qualitative characteristics of its personnel. Positive dynamics should be provided by well-organized staff development. In the organizations of the oil and gas sector of the economy, in particular in the Siberian region, personnel development is among the priority areas in the system of strategic goals. This allows us to strive to improve the efficiency of staff development, increase their job satisfaction, loyalty. However, the system itself has some drawbacks associated with the development of management personnel. They manifest themselves through an increase in the turnover of management personnel trained in development. This leads to human and financial losses for organizations. The management of organizations is faced with the fact of the inefficiency of investing in the development of management personnel. Under current conditions, it is necessary to work more technologically with promising employees of the management cohort, focusing on the development of his soft skills. It is important to improve the personnel evaluation system in the formation of personnel reserve, to improve the socio-psychological climate in the team, motivational mechanisms, to ensure career growth. All this will increase the loyalty of management personnel, the effectiveness of its activities and reduce losses. These activities will contribute to the growth of competitiveness of organizations.

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Communication and Information Capital In Self-Management and Self-Organization of Online Virtual Community

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Abstract

the Information society is characterized by global communication and information interaction and the formation of virtual reality, a global information Network in which there is a communication and information interaction of many actors that are united in social networks and online network communities, which are called virtual communities The actor of communication and information interaction is the subject of the information age and is characterized as "Homo informaticus". In the information society, a specific information subculture has emerged, the carriers of which are social networks and online network communities, which, being social communication and technological phenomena, are treated as social constructs and as an expression of a new kind of sociality. These phenomena have information and ontological status and are self-governing and self-organizing social and technological communities. The system study of self-government and self-organization of online communities is connected with the study of their communication and information capital's possession.

Keywords: information society, global communication and information interaction, virtual reality, online virtual community, "Homo informaticus" as a person of the information age, information subculture, communication capital, information capital, self-government, self-organization.

Introduction

The information age is emerging today together with the Internet, which has ceased to be only a global repository of the most diverse information and a system of its transmission, transportation and redistribution, and has acquired a completely new quality, becoming a new format of information, communication, social, economic, political and daily reality. This requires understanding of its essence and various manifestations in the form of information and communication social networks and virtual network communities. The information, communication and social nature of virtual network communities or, as they are called, virtual communities, forms of their functioning, self-organization and self-government is of particular theoretical interest (Davoudi et al., 2018).

The established communication and information practices in virtual reality suggest that self-government and self-organization of virtual communities is, first, a way out of the direct action of traditional management structures on the part of state, social, political and other institutions. With self-government and self-organization is associated such a view, according to which the variety of virtual community has no vertical chain of command, which is replaced by came horizontal coordination and the traditional social status does not work.

Discussion of this problem in modern research works in this area show that the characterological features of virtual communities' self-government ae conditioned by the specifics of their virtual communication and information interaction, which in achieving the degree of development and self-sufficiency of the online community leads to the formation of new socio-technological phenomena such as communicative capital, or rather, communicative and technological capital and information capital. The acquisition of communication and information capital by the virtual community makes it self-governing and self-organizing social and information community. The study of this is the main objective of this work and expresses the systemic nature of the study of virtual community's self-government and self-organization.

Materials and Methods

To study these problems, as the main research methodological paradigm the methodology of social constructivism should be chosen (Baksansky & Kucher, 2012; Berger & Luckmann, 1995; Lectorsky, 2009; Lenk, 2009; Tokareva, 2011; Raskin, 2006). In particular, the principles of reality explication (social, consensus and media reality), understanding of the construct as a model of explaining reality, methods of institutionalization, legitimization and characteristics of the information environment are used as methodological principles of social constructivism.

To characterize information and communication in the functioning of online communities the principles of communication of N. Luhmann (1995, 2005, 2007) can be applied, from the point of view of its somereference, structural matching and selection.

As a General method of analysis the methods of structural and functional analysis should be applied, through which the structural and organizational forms of network communities and the intensity of their communication and information, personal, professional, social and civil interaction, expressing the functioning of network communities are studied.

To discuss the tasks of a specific analysis the resource and dynamic approaches are also appropriate that involve the analysis of information, personal and professional resources of network communities' actors that characterize the personal self-development of actors and their self- exhibition and self-presentation in the virtual space (Konoplitsky, 2004; Lupanov, 2001; Nazarchuk, 2011; Buch-Hansen, 2014; Tastan & Davoudi, 2015).

Additional special methods are methods of network analysis, in particular, classification of social networks, analysis of their structure as repetitive, regular patterns of relations, multi-level analysis of network groups, network subgroups, their group dynamics (Sergodeev, 2014).

Results

The results related to this work can be divided into two types, namely procedural and conceptual. The first characterize various functional and structural features of virtual communities, the second, derived from the first, characterize their system quality. Thus, the study related to the analysis of the main developments in this area, as well as the classification of social networks, the study of their matrix structure, regular patterns of communication and information relations, multi-level analysis of virtual user groups, online network subgroups, their group dynamics, shows that self-organization in virtual reality includes the following procedural characteristics:

– Autonomous existence of a virtual community, focused not on the approved order to meet the communicative and information needs of individuals, their common interests and preferences, which are one and the rallying factors;

– Voluntary nature of membership in the virtual community;

– The need for a new identity-virtual digital communication-information identity;

– Realization of the need in virtual self-presentation and self-expression

– the need to develop a new space, in particular communication and information space and its technological resources, in order to obtain new information, turn it into information knowledge and thereby contribute to the success of the process of personal self-development and self-improvement, both in virtual reality and in the traditional reality;

– the need to manifest oneself in the communication and information space by playing virtual roles (new status and new identity) in the form of cognition of a new image of oneself;

– The need to acquire communication and information competencies, which means personal, social and group, social, civil and professional development, self-development and self-improvement.

Accordingly, the result is the conclusion that the self-organization of the virtual community is an Autonomous process of coordinated within the community procedural set of individual and collective actions that lead to a system of communication and information interactions within the community and actions to communicate with other communities, social networks and traditional organizational and management structures and social institutions existing in traditional social reality.

Additional procedural results are the conclusions that in self-government and self-organization of virtual communities it is necessary to identify a number of levels that characterize their degree of development and self-sufficiency:

- internal level-adoption of rules for coordination of actions and interactions within the community: discussion and adoption of norms of behavior, the main goals, preferences and interests of the community, the rules of registration of users, values and codes that unite many users in a circle that can be called a stable group, a microsocium;
- External level - adoption of rules for coordination and interaction with other communities, social networks and traditional social institutions;
- Technical level - self-organization as a process of technical and instrumental support conditions and their change for optimal functioning of internal and external levels;
- compositional level - self-organization as a process of coordinated adoption of scenarios, models and schemes of communication and information interaction, consistent with the norms and codes of the community, with external world in relation to the virtual community;
- the technological level is the level of self-organization, which is determined by the resources of communication technologies, the choice of the software and those technologies of communication and information interaction, which ensures the most successful and effective functioning and development of the community in the global Network.

Implementation of these levels of self-organization of the virtual community, in our opinion, are sufficient conditions for its existence and functioning. The following conditions seem to be necessary:

- Voluntary entry into the community and voluntary exit from it;
- freedom of one's opinion expression and one's own assessment, fundamental equality of rights and equality of positions and assessments of members of the community, while compliance with the norms of behavior and value codes;
- self-training of members of the virtual community, as a spontaneous desire of everyone not only to express their opinion, but also to obtain the necessary knowledge, skills and abilities to justify their position through communication and information interaction;
- Self-education as a voluntary overcoming of negative and destructive motivations and actions in relation to both the inner world of the virtual community and the outside world;
- Self-control - development by the community member of virtual reflection in the form of evaluation and self-assessment of their actions and their results in the digital world;
- internal self-organization of each member of the virtual community, which, along with the self-organization of the virtual community contributes to the implementation of rational actions that implement self-learning, self-control, self-education in terms of internal criticality and focus on the optimal functioning of themselves in this virtual community and the community as a whole.

The main result is the substantiation of the thesis that the acquisition and implementation of the above-mentioned rules and conditions of self-organization and self-government of the virtual community is the acquisition of communication and information capital by the virtual community. It is natural that the whole composition of conditions and the whole set of rules represent an image of an ideal virtual world, which in reality, even virtual reality, is not always realized.

Discussion

Self-management and self-organization of virtual community is widely discussed in contemporary research literature, and in this respect, we can point out the work of a number of Russian authors whose works we largely used in the development of this theme, in particular, the work by S.V. Bondarenko (2004), M.G. Bresler (2014), A.V. Nazarchuk (2011), E.D. Nevesenko (2011), Y.G. Rykov (2015), N.A. Ryabchenko (2016) and other authors. Among the foreign researchers, we would highlight the works of N.K. Baum (2013), D. Boyd and N.B. Ellison (2007), H. Buch-Hansen (2014), L. Grossweil, M. Castells (2004), F. Probst, L. Grosswiele and R. Pfleger (2013). References to other researchers on specific issues and problems will be made in the text below.

H. Rheingold (2013) introduced the term *Virtual community* in 1993. He studied social relations in social networks, and in his book, *Virtual Community* described various forms of communication and information interaction between members of various social groups based on e-mail newsletters, news lists, multi-user communities, etc. In his opinion, virtual communities are social associations that grow out of the Network when a group of people supports an open discussion long enough and humanely to form a network of personal relationships in cyberspace.

The discussion of the nature of virtual communities shows that they have a dual nature as social constructs. This duality of social constructs is expressed in the fact that they, on the one hand, which one can call conditionally information-gnoseological point of view, are formed as a reflection in social theories of existing practices of network communication and information interaction and are summarized theoretically in the form of appropriate discourses, and on the other hand, which can be called information-ontological, are phenomena of information reality, the reality of the information world, and such a reality, which expresses a new kind of sociality – the information sociality.

The basis of the social nature of virtual communities is that they are distinguished by self-organization, voluntary nature, self-government, and cross-border nature. This is reflected in their shift on the global level beyond territorial, state, national, ideological, religious and other borders. This is also due to the fundamental lack of vertical governance on the part of social or state institutions. Many virtual communities are characterized by horizontal coordination, virtual stratification, self-organization, the fundamental absence of all sorts of power, and state, ideological, organizational and corporate centralization. Communication and information interaction of virtual communities is characterized by interactivity, independence, voluntariness, motivation by personal communicative and information interests and needs and freedom of access to information resources.

The basis of virtual community is social communication and information interaction. Being information technology product of society virtual communities spontaneously, form new network social assosiations, which consolidate the interested actors that are characterized by network thinking, the network language, network moral network ways to discuss and resolve personal and socially significant problems.

Information and communication capital are such parameters of the virtual community, discussed widely in modern research literature, in particular, in this respect, it is necessary to allocate such domestic and foreign researchers, whose works we largely rely upon: Ya.O. Biketova (2015), V.V. Dekalov (2017), Y.G. Rykov (2015), P. Candon (2016), D.K. Mumby (2016) B. Nixon (2017) and other authors (Probst, Grosswiele & Pfleger, 2013).

Information capital, which includes the necessary and sufficient formats of self-organization and the degree of development and self-sufficiency of virtual communities, specified above, also includes the following components:

– information products in the form of information acquired by the user and the virtual community, stored on tangible media, as well as information knowledge and information skills and abilities;

– Means of storage, replication and dissemination of information and material, technical and technological means of information operations and methods of information transformation;

– developed on the basis of the above mentioned information the competences in the search for new necessary information required for self-development, self-education and self-improvement and meet other information needs;

– ways and means of using information and its application for more effective and successful functioning of the virtual community and information life of each user, a member of the virtual community;

– The implementation of the above-mentioned conditions transforms information into information knowledge, which is a necessary and sufficient condition for the formation of information capital.

Communication capital, as the discussion of this concept in the modern research literature shows, is a complex, including the above-mentioned necessary and sufficient conditions of self-government and self-organization of the virtual community, as well as the levels and degrees of their development and self-sufficiency, described above (in this regard, communication capital intersects with information capital), as well as communication infrastructure, system of communication links and relations, and communication knowledge, which transforms the process nature of virtual communication into a communication culture focused on the successful and effective existence and functioning of the virtual community in its interaction with the outside world and the user within the community.

Conclusion

Self-governing and self-organizing virtual communities with the acquisition of information and communication capital influencing the traditional reality expand the social space of communication and information interaction, which is expressed in the following:

– The space of social communication is expanding, becoming more dynamic, limitless, simple and less expensive than the previous one;

– there is an unlimited expansion of possible vectors of personality development in establishing and maintaining a variety of information and communication links, in which its communication and information needs are realized and communication and information capital is acquired;

– The possibilities of various genres of virtual social communication are expanding social networks, blogs, chats, web forums, posts, comments, likes, etc.

– The creation of various organizations, voluntary associations, communities is significantly simplified;

– Network forms of organization and organizational cellular-matrix structures are distributed;

– Various types of costs for the organization of optimal communication and information interaction and exchange are reduced;

– Logistics of various social technological processes is significantly simplified;

– Various forms of financial transactions and the spread of digital finance is simplified;

– Provision of professional, educational, entertainment and other services becomes more accessible and widespread;

– The number of non-profit organizations, virtual social organizations of communities is increasing, which contributes to the development of civil society;

– Experience of interpersonal, intercultural, transnational communication in various online conferences, chats, web forums is developed.

The determination of the traditional social sphere by technosphere and InfoSphere leads to new forms of social space organization, which is reformatted depending on the communicative and technological saturation, efficiency and productivity of communication and information interaction and information value of this interaction.

Accordingly, the above-mentioned parameters of development and self-sufficiency of virtual community the system study of self-government and self-organization of virtual community is the analysis of their projection in the communication and information capital.

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Philosophy of Being in L. N. Tolstoy's Works of 1850-1860-Ies: a Man and Nature

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Abstract

The relevance of the research problem is due to the need to consider the dialectical relationship of the world of nature and world of the man in L. N. Tolstoy's works of 1850-1860-ies; to determine the direction chosen by the writer in the study of the complex relationship between micro - and macrouniverse; to reveal the regularities of the process of ethical philosophical and aesthetic understanding of the world by early L. N. Tolstoy. The purpose of the article is to derive the formula of the existential dialectics of L. N. Tolstoy, to differentiate the concepts of cultural / natural and intelligent / instinctive. The leading approach to the study of this problem is a comprehensive one that combines elements of hermeneutic, comparative, narrative and biographical methods. The article proves that L. N. Tolstoy in definite periods of his life interpreted differently the concepts of "nature" and "man". In 1850-1860-ies, he perceived «natural» as a synonym of vital, natural and absolute. Such a diverse semantics is explained, on the one hand, by the fact that nature is an objective world that exists independently of human consciousness; on the other hand, it is a fundamental property of nature, what is originally inherent in a man: the nature of character, the nature of the artistic image, the nature of a man. The world created by L. N. Tolstoy in his novel, is real, because it is based on the formula of existential dialectics: being adjoins to being. All phenomena, processes, objects of reality are considered by the writer according to the scheme: reality (being of essence) – existence (connection of things) – essence (sense of things). Relationship with "macrocosm", according to L. N. Tolstoy, colours a lonely man's stay in the world, lonely because a person is endowed with a pronounced personality that does not allow him to feel a link in the overall chain. Even that L. N. Tolstoy's character, who feels involved in the micro-process, cannot dissolve in it, since he is subject to the laws not only of the general, but also of individual existence. Exploring human nature, L. N. Tolstoy notes that the main cause of the misfortune of his characters is a conflict of cultural and natural, rational and instinctive principles. Emphasizing the complexity and richness of nature, the writer avoids direct and categorical judgments, differently assessing the "natural" in a man. On the one hand, instinct is the guarantor of life, as it allows you to adapt to its conditions, to survive, to find your place, to defend it. On the other hand, instinct is perceived as something secondary to the mind, a more primitive beginning. L. N. Tolstoy in 1850-1860-ies considered those characters being harmonious, viable and integral who combine the biological non-conflict with the spiritual one. The materials of the article are of practical value in the practice of University teaching for the development of training courses in Russian literature of the XIX century; in the development of training and teaching tutorials; in lexicographical practice for the compilation of a new type of dictionary – L. N. Tolstoy's idioglossary.

Keywords: L.N. Tolstoy,War and Peace, a man, nature, the philosophy of being.

Introduction

A human being, according to L. N. Tolstoy, contains a part of the "Entity", and under the latter the writer understands the world in the broad sense of the word, the world through " decimal I" (Bilinkis, 1986). The world, the Entity, nature, natura – this is a synonymous series in the perception of the writer. However, L. N. Tolstoy considers that the ultimate goal of nature is a man. "What am I?"- the writer asks himself, as if he is interested in the way the nature "became a man" (Tolstoy, 1984). Consequently, the problem of the relationship between a human being and nature can be represented in two aspects: a man in nature and nature in a man.

The first aspect determines the place of the man in the world, the influence of nature both on him and on the system of his aesthetic and moral philosophical views. Researchers of L. N. Tolstoy's creativity, reflecting on the variety of dialectical connections between the individual and the Entity in the artistic universe of the writer, adhere to the author's formula, derived in "Dnevnik" in 1857: "I love nature, when it surrounds me and then stretches across the whole horizon, but when I am in it... when you are not alone rejoice and enjoy the nature" (Tolstoy, 1984).

Thus, L. N. Tolstoy tried in his diary notes to reveal the essence of his own method, which had already defined well in his first works by that time. His world is "I" and "not me", the latter includes not only the objectively existing reality in its diverse forms (Gromov, 1997; Fortunatov, 1983), but other people (Slivitskaya, 1988; Saburov, 2009). L. N. Tolstoy represents life through the eyes of the artist, and his goal as an artist is to display reality so that "to pour into another his view at the sight of nature" (Tolstoy, 1984).

As for the second aspect, the phrase "human nature" is the most frequently used in literary studies. So, V.D. Dneprov (2011) expands the meaning of this definition, including all the aspects that form a particular human type: for example, the type of the Rostovs, the type of the Bolkonskys, the type of the Kuragins, whereby it is possible to speak about the nature of Natasha, Knyaz Andrei, Anatole (Dneprov, 2011). However, in the strict sense, human nature-is primarily the "wealth" of its" biological manifestations", the world of sensations and instincts. Prima facie such restriction of the meaning constrains the capabilities of the researcher, predetermines a kind of schematism in the study of a complex issue. However, at the same time, if one of the tasks is to identify the actual "natural" in L. N. Tolstoy's characters, it is reasonable to use the combination of "human nature" in its second meaning, because this aspect is insufficiently studied.

Methodological Framework

The study is based on an integrated approach that combines elements of hermeneutic, comparative, narrative and biographical methods.

The hermeneutic method, which presupposes the scientific interpretation of subjectively colored author's statements, gives the possibility to comprehend the numerous meanings of the problem of interaction between a man and nature, taking into account the objective assessment of the time of creating an art work, the influence of traditions and cultural context. Comparative method makes it possible to consider the laws and principles of L. N. Tolstoy's literary texts structuring, as well as their communicative essence, invariant in the structure and semantics of different texts. The narrative method allows us to consider a work of art as a result of aesthetic communication between the narrator (narrator) and the recipient (reader), which reveals the underlying structures of the work. Biographical method based on the study of the writer's life, analysis of autobiography, research of diaries, notebooks, allows studying the evolution of L. N. Tolstoy's views on the problem of the relationship between a man and nature. This method provides an opportunity to understand the work of the Russian classicist better, because throughout his life he had been keeping a diary.

Results and Discussions

Pondering the problem of the interaction of a man and nature, and highlighting the genesis as an artistic and philosophical category in L.N. Tolstoy's creativity of 1860s, it is necessary to consider, firstly, the fact that the writer was not far removed from philosophy, even in his younger years; secondly, the relationship between a man and nature in this author's works reveals L. N. Tolstoy's special opinion on being human, which is a kind of original Tolstoy an ontology and anthropology. And finally, some natural images (for example, astral images in the "War and Peace"), as well as landscapes in general, are so independent, self-valuable that they serve as a necessary material in the study of the features of Tolstoy's worldview (Lomunov, 2010).

In L.N. Tolstoy's works natura naturans (creating nature) is an active creative subject: creative, because creating, but at the same time devoid of reason. L.N. Tolstoy believes consciousness to be absolute value in a man (compare: the late L.N. Tolstoy's "reasonable consciousness"), pure and unchanged, making it possible to perceive phenomena in their unity and connectivity. The more intelligent a person is, the more artificial he is. Confirmation is in the image of the intellectual Knyaz Andrei: the Rostovs are clearer, simpler; Knyaz Andrei is more perfect and difficult.

L.N. Tolstoy's attitude to nature is close to the pagan worldview. E.B. Taylor (1987), an English anthropologist, characterizes the peculiarity of pagan consciousness: "... a person sees the smallest details of the world around him as manifestations of his personal life and will" (Taylor, 1987). Indeed, the oak in Knyaz Andrei's perception is not that other, as a manifestation of personal life and will: the character denies himself the pleasure to live and enjoy life and sees a dying oak, then comes to life and rejoices the tree covered with foliage. Nikolai Rostov notices a tree, as it seems to him, on the borderline between life and death, but, having crossed this line, he does not die. M.M. Bakhtin's (2000) typical remark: "His [Tolstoy's] God is more reminiscent of the pagan Pan... than the Christian God: good thing that it does not come from me, not "I" (Bakhtin, 2000).

The perception of nature as an active creative subject, its humanization brings L.N. Tolstoy with the old Russian tradition. As well as in "The Lay of Igor's Warfare", on the pages of "War and Peace" the response of nature to events in human life attracts readers' attention. Tolstoy borrows from old Russian works the method of comparison: comparing the world of man with the world of nature, the writer achieves the clarity that allows the reader to understand accurately the author's idea without any additional comments. Moreover, each character close to Tolstoy, somehow is involved in his dialogue with nature. This dialogue allows us to distinguish the category of being as an artistic and philosophical one in Tolstoy's works, because being for the writer is primarily an artistic universe in which the movement of human feelings are closely related to natural changes, but at the same time in this plexus of human and natural Tolstoy's complex philosophical views on the world and a man are reflected.

The writer's views are changeable. Tolstoy could prove the idea he liked once in his social and political essays, literary creativity and correspondence but soon for reasons known to only his genius, suddenly abandon it and say something opposite. V.I. Ivanov (2009), correlating L.N. Tolstoy with Russian culture of XIX-early XX centuries, noticed this fundamental feature, especially clearly manifested in the late work: "Truly above all he wanted... emancipation... in the form of... exposure, revelation, simplification. From the power of the word itself, this artist of the word was steadily liberated, as he sought independence from psychology, this clairvoyant of the human soul and the natural soul... and therefore internally antinomic, being himself an anti-artistic force. For that is the work of the artistic genius to reveal the noumenal in the vestment of the phenomenon..." (Ivanov, 2009).

L.N. Tolstoy, at the beginning of his life was fond of Zh.-Zh. Rousseau (at the age of 16 the writer was wearing a medallion with a portrait of Zh. Rousseau instead of the cross on the neck), and in the second half of the creative way he worked on a rational resolution of the "problem of life", ignoring "natural movements"; struggling with Orthodoxy and so much taken from it in his teaching "non-resistance to evil with violence»; who loved music, but in the 1890s wrote a meticulously unjust book against art, in his own way synthesized in his work elements of various philosophical doctrines, starting with Slavophilism of the first half of the XIX century and ending with the positivism of the end of this century (Maymin, 1978). As Tolstoy himself declared, in the early period of his activity, he had no deep knowledge of philosophy, but had a general idea of the history of European philosophical thought. As an extraordinary person, L. N. Tolstoy preferred to appeal to philosophers in search of confirmation of his own theories and assumptions. In the correspondence, in Tolstoy's diary somehow the names of philosophers who at one time or another awakened the imagination of the Russian thinker are mentioned. What became apparent in the 1910s was a latent period in the 1860s, when "War and Peace" had been written. Drawing parallels between Tolstoy's views and other philosophers, it should be remembered that they are conditional, since the writer himself discovered the proximity of his views with the ideas of Western European philosophers after he had created his novel.

For early L.N. Tolstoy Rousseauism became crucial. Following the French enlightener Lev Nikolaevich throughout all his creativity of 1850-1860-ies proves that harmony between a person and the outside world is possible only in the "natural state". From this point of view the following images should be examined: Daddy Eroshka ("Cossacks"), the Rostovs ("War and Peace"), Nikolenka Irtenev ("Youth"). Considering L.N. Tolstoy's works till 1869, it is possible to reveal a synthesis of the spiritual and the material. It is that allowed N.G. Chernyshevsky (1989) to speak about "dialectics" as one of the features of L. N. Tolstoy's literary style. The writer consistently implemented in his works, all three dialectical principles: the principle of universal interrelation, variability and contradictoriness of existence, hence the "changing state", not only emotional (psychic), but material (physical) as well. If thirty-year-old L.N. Tolstoy would be asked one of the main questions of philosophy: "What is primary: matter or spirit?"— he is likely to join to the dualists, like J.-J. Rousseau.

Indeed, L.N. Tolstoy's world of objects, phenomena, processes is in close relationship with the world of mental movements. What is the cause and what is the consequence, L. N. Tolstoy does not determine, because he sees no criteria for such a division. On the contrary, an imaginary Eden is being gradually formed for the reader, harmonious and self-sufficient. The inhabitants of this Paradise – the Rostovs (except Vera), Nikolenka Irtenev, Maryanka, Lukachka, Daddy Eroshka. At the gates of Eden – the Bolkonskys, destroyed the harmony of physical and spiritual, therefore deprived of happiness; Olenin. The characters are not allowed to enter Paradise are Sonia, the Kuragins, the Drubetskoys, the Karagins and Napoleon.

Tolstoy's dualism is special – artistic. The equality of material and spiritual principles immediately attracts attention: the Rostovs are impulsive, have a developed intuition, open to peace and happiness because the environment that brought them up is pleasant, bordered by forests and picturesque nature. At the same time the pictures of nature selected by L.N. Tolstoy specifically as a living environment for the Rostovs, because this type was conceived as the embodiment of nature.

Knyaz Andrei lives in a "bogucharovskaya abode," in "ugly, flat landscape" (Tolstoy, 1980); otradnenskiy paradise is unknown to him. Surrounding is in full accordance with his condition. A year later, in the spring of 1809, Knyaz Andrei goes to the Ryazan estate of his son. The area is the same, but it is perceived differently: green birch forest, pleasing to the eye. Here same is hard not to recall Pierre. The trip is connected with Pierre, here was the conversation in which Pierre demonstrated the necessity of integration into the Entity.

L.N. Tolstoy's genesis is objective and invariable. Only man's views of the world, their place in it in different moments of life change. In the surrounding world our view highlights what is desired, the reason for that is "dialectics of the soul" and "the secret movement of mental life" (Chernyshevsky, 1989). In the literary space of Tolstoy's works, genesis exists independently of human consciousness, but each of the characters sees his own world, creates his own idea of it. It is A. Schopenhauer's (2012) idea, whom L.N. Tolstoy called "the most brilliant of people" in his letter to A.A. Fet of 1869 (Tolstoy, 1978): "the world is my idea" (Schopenhauer, 2012). Unlike the German philosopher, L.N. Tolstoy is not an idealist; the writer's material and spiritual existence is genuine both, it is two-fold: the world outside me (objective) and the world inside me (subjective).

Tolstoy's search is independent. All the characters of "War and Peace" empirically discover the world around; the essence of "phenomena" is available to them. Those characters, who try to put the idea of the world in the Procrustean bed of rationalism, just get confused in contradictions. A striking example is Knyaz Andrei. But late L. N. Tolstoy, who created the doctrine of" intelligent consciousness", could not rationally explain everything, leaving the concept of the divine as something unknowable. The noumenon in the Kantian sense turns out to be unknowable for a man, since the latter may suffer the world sensuously. No matter how hard Peter Rostov tried to get an idea of where the "music of spheres" came from, it remained inaccessible to his understanding. Having a developed natural origin, the character just enjoyed this music and "game of stars".

Being in the literary space of "War and Peace", on the one hand, is an absolute value (eternal sky with clouds floating on it; change of seasons). All these things exist independently of human consciousness. The oak is covered with foliage not because Knyaz Andrei gradually comes back to life, but because it is a decree of nature. On the other hand, existence is relative, because, in the words of A. Schopenhauer (2012), "exists only through another, and for another". Tolstoy's man is "not just" an abstract object of pure knowledge", but a part of this world, physically integrated in it: Know Thyself – first of all, I am bodily, willing and acting, seeking and suffering, in addition manifesting (at the same time) as the will... objective reality (will) coincides with the subjective reality (body)" (Schopenhauer, 2012).

The concepts of the world and man are linked together. A kind of cosmic beginning, which is based on love, is the absolute for Tolstoy. The writer believed that it is necessary to come to love consciously and reasonably. This is confirmed by Knyaz Andrei's reflections after a mortal wound in 1812 or Pierre's reasoning in captivity. L.N. Tolstoy in the first case writes: "Yes, the love that God preached on earth... and which I did not understand, that's why I felt sorry for life, that's what still remained to me..." (Tolstoy, 1981). In the second: "They hold me captive. Who me? Me? Me - my immortal soul" (Tolstoy, 1981). "Every thing in nature" by L.N. Tolstoy is unknowable to the end because of the poorly developed human "ratio", indeed for knowledge you need "rational intuition". For L. N. Tolstoy absolute is transcendent because of its superessence. The writer's divine cosmic principle is supra-natural, orderly, and nature, as one of the components of being, is blind and chaotic. Tolstoy's ontology is close to the dualism of J.-J. Rousseau. The Russian philosopher recognizes the duality of human nature (spiritual and biological principles), and as a consequence – the duality of being (universal and individual). Finally, in the diary of late Tolstoy there is a record: "It is amazing the way we are used to the illusion of our features, separation from the world. But when you understand this illusion, you wonder how you cannot see that we are not part of the Entity, but only a temporary and spatial manifestation of something timeless and non-spatial" (Tolstoy, 1985). Whether a person is "part of the Entity", he would have been solid, according to L.N. Tolstoy, devoid of contradictions, which result from the antithesis: "the temporary manifestation of something non-temporary". In this diary entry, the writer identifies the Entity with the divine, but earlier L. N. Tolstoy's Entity used to be first a harmonious world of nature and from this point of view, a person could be a part of it.

L.N. Tolstoy as the twofold unity of the natural and the spiritual, exactly the twofold, and not the identity perceives both the world and the man. The man and the world, according to L.N. Tolstoy is being, which has its "past", that is becoming, and its "future", that is development. This is the essence of existential dialectics: the being is opposed to not-being. However, the writer has no unbeing, just as there is no otherness. Late L.N. Tolstoy would come to the idea of "eternal life in a man" (not a man, but in a man): "What he learns is one everywhere and in everything and in himself… this is God, and that part of God, which is our real "I" (Tolstoy, 1985). That is, a person from this point of view, indeed, is "a manifestation of something timeless and non-spatial", because his consciousness (and this is part of a person, deprived, according to the late L. N. Tolstoy, individuality) is attached to a certain Entity.

L.N. Tolstoy in the 1860s was still far from such conclusions, the unity of spirit and flesh – that is what the writer saw as the key to life, and the destruction of one of the components leads to death. That is why death was so dire for his great mind, represented absolute nothing. Dying, Knyaz Andrei experienced a state of "awakening from life." Tolstoy notes that Knyaz Andrei being still physically alive "was no longer, he left them," and Knyazhna Mar'ya and Natasha looked after "for the closest memory of him – for his body" (Tolstoy, 1981). Awakening is the beginning of something, but why "awakening"? It means that something tormented L. N. Tolstoy, did not allow him to accept the idea of absolute destruction, destruction of the soul. The idea of death became the idea of leaving. On the proper B. S. Meylakh's remark, L. N. Tolstoy feared and hated death, "though had been trying for years to convince himself that it was blessing" (Meylakh, 1979). The writer really denied the possibility of any other existence, except the earthly one, but in 1905, he says: "... it won't be useful for me in the world beyond" (B. S. Meylakh, 1979). Still, this "orchestra", in which "not all pipes play in unison", as M. Gorky defined L. N. Tolstoy, believed in the immortality of spiritual life: "God is my will", "... believe in Him – and he is," wrote L. N. Tolstoy in his diary on November 23, 1909 (Tolstoy, 1985). In his later work, "awakening" would be replaced by "liberation". The semantic paradigm of this word was precisely built by Ivan Bunin, while creating the book "The Liberation of Tolstoy»:

«Osvobozhdenie (spasenie, izbavlenie) ot smerti najdeno!

Osvobozhdenie v razoblachenii dukha ot ego material'nogo odeyaniya.

Osvobozhdenie – v samootrechenii.

Osvobozhdenie – v uglublenii dukha v edinoe istinnoe bytie …» (Bunin, 1967).

Obviously, paradoxes are inevitable. How can you call being the actual nothingness? However, L.N. Tolstoy could not call nothingness what he did not know, sphere of what was unavailable to knowledge. The writer has being (material) and being (spiritual), and the spiritual is more essential than the material. In this case, L.N. Tolstoy does not contradict his dialectics, since the existence is the "connection of things, phenomena in their interaction" (Feuer, 2012).

This Eleatic formula of being – "I – am", "everything-is" exists only in the present time. Let us draw a parallel with Parmenides, which will help to deduce the formula of L.N. Tolstoy's existential dialectics. Appeal to classical Greek philosophy is not accidental, it is known that the writer appreciated the ancient thought for its aphorism and conciseness, wrote down in a special notebook sayings of Greek thinkers. The philosopher eleat says: "everything is continuous: for things are adjacent to things" (Motroshilova, 2013). "The being adjoins to the being" - that is L. N. Tolstoy's formula. Death is replaced by birth. This is the real existential dialectic. The death of Knyazhna Lisa is accompanied by the birth of Nikolenka ("War and Peace"); Kitty is taking care of the dying of tuberculosis Nikolai Levin and learns about her pregnancy ("Anna Karenina"). In 1813 Graf Ilya Andreevich Rostov died, but a month earlier Natasha married Pierre. Moreover, even Peter Rostov's death is compensated with Pierre's liberation. The continuity is obvious: in the epilogue of "War and Peace" grown-up Nikolenka lives up to his father's ideals – Knyaz Andrei; little Natasha, the daughter of Knyazhna Mar'ya and Nikolai Rostov, is similar to the once "thin", "black-eyed" Natasha, who is now a mother of four children.

So, in the novel "War and Peace" the man and the world are shown in a direct relationship. Both concepts are the essence of cause and consequence that gives you the opportunity to talk about existential dialectic.

L.N. Tolstoy of the 1860s is interested in the idea that constant work on "natural" inclinations should be carried out in the name of those spiritual tasks that are opened only to the inner person. It is necessary to refund "integrity in the spirit" to a man (Kireevsky & Kireevsky, 2006) by the reunification of faith and reason, which are separated by sin. Human happiness is possible only under the condition of harmony with the surrounding world (Abramzon, 2015). Confirmation can be found in the following: Knyaz Andrei is punished for excessive rationality, skepticism deprives him of faith, giving hope and strength, he has no "integrity in the spirit." Intellectual principle takes Knyaz Andrei in the sphere of speculative conclusions, far from the "living life".

The Rostovs, except Vera, are bestowed on "integrity in the spirit." Faith and reason are balanced in them. This noble family is represented in a temporary trinity: the past (Graf Ilya Andreevich and his wife Natalia Rostova), the present (Nicholai, Natasha, Peter) and the future (Natasha's four children and three of Nicholai). They will remain "the last of the Mohicans" after the tumultuous events of 1805-1812. They will lose their fortune, their estate, but not their kin. In their integrity – new life potency, the key to the continuation of the human race.

Pierre Bezukhov plays a particular role: both reason and feeling help the character to discover the world. In the epilogue we meet Pierre, who harmoniously combines the rational and the emotional. The character was constantly torn between the two principles: carried away by Freemasonry, he consciously tried to improve the world and himself; guided by the senses, Pierre found himself in the trenches with the soldiers in the midst of the battle of Borodino and later saved a child from fire and was captured. But that was where Pierre finds the formula of human happiness, regains "integrity in spirit":" the absence of suffering, satisfaction of needs and consequently the freedom of occupation choice, that is, the way of life, now seemed undoubted to Pierre and the highest happiness of the man " (Tolstoy, 1981).

Thus, talking about some integral L.N. Tolstoy's philosophical system of 1860s is improperly, however, taking into consideration the scale of his epic and be aware from his letters, memoirs, diaries of the movement of the author's thought, we can draw the following conclusion: Tolstoy's perception of the world is syncretically connected with the understanding of the man and his place in this world. At the same time, the uniqueness of the young writer's experience lies in the ability to comprehend the phenomena of reality artistically and philosophically at the same time.

Natural and human worlds by L.N. Tolstoy exist autonomously, independently from each other, the rhythm of their development is also different, but the life of one without the other is unthinkable. Natural Philosophy by L.N. Tolstoy becomes an integral part of his anthropology. The world of nature is shown through the eyes of various heroes, it is spiritualized as much as each character and the author himself endows it with life.

In his artistic research L. N. Tolstoy sought to comprehend the diversity of the relationship between man and nature. In the works of early L.N. Tolstoy existential dialectics can be represented in this form:

Being (objective world outside of consciousness)

⇓

Actuality (being of essential and non-essential)

⇓

Reality (being of essential)

⇓

Existence (the relationship of things)

⇓

Essence (the meaning of things)

From the objectivity of the real world L. N. Tolstoy gradually came to comprehending the essence, the meaning of the material world. The path of knowledge often passed through the identification of dialectical connections (existence). Thus, the death of Knyaz Andrei - is a gradual, perceived by the mind break of everyday ties. In addition, almost all the deaths in the novel are accompanied by the birth of a new life, that is, everything "exists only through another and for another" (Rudakova & Regéczi, 2018). Being replaces non-being, and vice versa. According to L. N. Tolstoy, there is a mystery of the world in the patterns of this movement.

In some periods of his life L. N. Tolstoy put different values in the concepts of "nature" and "man". In the 1850s-1860s "natural" was perceived by him as a synonym for "life", "inartificial", "absolute". Such a diverse semantics is explained, on the one hand, by the fact that nature is an objective world that exists independently of human consciousness; on the other hand, it is a fundamental property of nature, something that is originally inherent in man: the nature of character, the nature of the artistic image, the nature of man.

The relationship with "macrocosm", according to the opinion of L.N. Tolstoy, colours lonely stay of the man in the world, lonely because a person is endowed with a pronounced personality that does not allow him to feel like a "point on the streamline" (Gershenzon, 2009), a link of a common chain. Even that hero of L. N. Tolstoy, who feels involved in the "world process", cannot blend in with it, since he’s been subjected to the laws of not only general, but also individual being.

The writer, trying to understand the secrets of the universe, came to the fact that within the boundaries of the literary work he created his own universe, a kind of peculiar model of "micro - and macrocosm". From this point of view, it is legitimately to call L.N. Tolstoy the demiurge. Populating his universe with heroes, the author kept a close watch on the fact, what law determined their development. L.N. Tolstoy is an extrovert, he is focused on the world and man. Therefore with such curiosity he observes what happens on the pages of his own novel. The writer discovers that objective changes are predetermined by the will of the author and the logic of the novel's action, while a series of subjective movements is determined by the law of individual being, which does not obey the creator. Thus, the general being predetermines the individual, but does not subordinate it to itself. The heroes of L.N. Tolstoy are independent and free to choose the path of their development.

Exploring the human nature, L.N. Tolstoy notes that the main cause of his characters’ misfortune is a conflict of cultural and natural, rational and instinctive principles. Emphasizing the complexity and wealth of nature, the writer avoids direct and categorical judgments, evaluating the "natural" in man in different ways. On the one hand, instinct is the guarantor of life, as it allows you to adapt to its conditions, to survive, to find your place, to defend it. On the other hand, instinct is perceived as something secondary to the mind, a more primitive principle. In the 1850s – 1860s L.N. Tolstoy considered as harmonious, viable and complete those heroes in whom the biological is balanced with the spiritual, non-conflict with him. These are in the final of "War and peace" Pierre, Natasha, Nikolai. In the same row may only partly find a place for herself

Knyazhna Mar'ya, because this heroine, though she has become Rostov, still remains loyal to the Bolkonsky-family, whose natural behavior is subject to spiritual values. The ideal hero of L. N. Tolstoy - Knyaz Andrei - turns out to be unviable, he died, his instinct did not save him.

In the heroes alien to the writer the "base nature" appears, their actions are determined by the "animal" principle. Thus, the behavior of Anatole, fawning over each skirt by the call of nature or for convenience, resembles the behavior of a male. Otherwise the "animal" appears in Dolokhov. This hero is a hunter, his whole life is an attempt to assert himself, to prove his own strength: he despises the weak, pursues the strong. Helen is an example of "dead nature", she is even devoid of sensuality.

The way to the knowledge of natural and human being in the works by L.N. Tolstoy goes through the perception of the world by the writer's favorite characters. The writer together with the characters comprehended the world, multiplied, felt differently, but as a result synthesized inside his mind this "worldview", "world perception".

Conclusion

The process of understanding the relationship between man and nature in the works by L.N. Tolstoy of the 1850s-1860s went in two directions.

First, the writer understood the "natural" in two ways. On the one hand, it is the world of the elements surrounding man, on the other – human nature, and for L.N. Tolstoy "natural" is not equivalent to "idealized". In the writer's perception nature is harmony, which, in its turn, lies in the balance of good and evil, eternal and momentary, necessary and useless, etc. That is why nature is both a creative and destructive principle, while maintaining eternal balance. This way it appears on the pages of the novel "War and Peace".

Second, exploring the world of nature, L.N. Tolstoy always comes to the man. The main method of the writer is an art deduction. According to the conviction of L.N. Tolstoy, one cannot consider the man metaphysically, only revealing his diverse and complex connections with the outside world will finally help to know the truth about the man, to explain all that inexplicable that is hidden in the depths of this "miniature universe".

Recommendations

The practical significance of the undertaken research means that the obtained results can be used in the practice of university teaching for the development of training courses in Russian literature of the XIX century; in the development of educational and teaching aids; in lexicographical practice for compiling a dictionary of a new type - idioglossary of L. N. Tolstoy.

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Psychological and Pedagogical Support to Primary School Children in Coflict Relations

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Abstract

The paper studies the manifestations of conflict in primary school age as an inevitable aspect of the complex of social and psychological factors of a modern society. We reveal the psychological features of the conflict behavior and the psychological and pedagogical conditions of support to these conflict manifestations. Moreover, we claim psychological and pedagogical support to be an integral part of the educational process of primary school children in conflict situations. Our results show that psychological conflicts between the children are caused by both (i) emotional and volitional disorders, and by (ii) the insufficient formation of communication skills.

Keywords: conflict,primary school,psychological and pedagogical support, cooperation.

Introduction

The need to study conflicts between children is caused by the essential problems in our everyday life. The growth of conflict at school reflects one of the most acute social problems of our society, where in recent years the use of physical and emotional negative effects have increased dramatically. In particular, the increase of aggression against a person leads to serious consequences for all parties involved in the conflict.

There is enough experience in the field of conflictology in russian pedagogics. The process of junior schoolchildren conflict investigation is complex and based on the grounds of the investigations dedicated to conflict theory (Ancupov & Shipilov, 2013; Ancupov & Shipilov, 2004; Grishina, 2000; Anan'ev, 2001; Dmitriev, 2002; Tastan et al., 2018); the theory of children's personal enhancement (Bodalev, 2015; Bojovich, 2001; Vorob'eva & Shakhmatova, 2006); the investigations of junior school children's emotional-volitional sphere (Polyakova & Mamedova, 2016; Sorokoumova, 2018). Conflict relations in the educational process are studied by A.S. Belkin (1995), N.I. Leonov (2006), A.I. Sorokina (2001) and etc. The advances studies of pedagogical conflicts (Ershov, 1992; Kurochkina & Shakhmatova, 2013; Rybakova, 1991). determine the features of conflicts in education and its significance for pedagogical process. It the scientific works of L.S. Vygotsky (2007), A.G. Zdravomyslov (2005), J.L. Kolominsky & B.P. Zhiznevsky (2001) and etc. the authors indentify the reason for appearance of a conflict as well as determine the strategies to overcome it, discover content of the activities, dedicated to prevention and removal of the consequences which are connected with conflict relations.

Conflict as a psychological and pedagogical phenomenon and as an integral part of personality and society has been studied by many psychologists and educators (Tastan & Davoudi, 2013). Recent work (Mosina, 2018; Pavlenko, 2000) emphasizes the need to create conditions for the personality-oriented interactions between children of primary school age, since it is the interactions that are often accompanied by conflicts that arise. Such conflicts negatively affect both the children involved in the conflict and the class, reducing the productivity of children’s interactions with each other and the level of children’s activity in the learning process.

To summarize, the relevance of the study lies, on the one hand, in the importance of studying conflict manifestations in the early school years and in the psychological and pedagogical support of children's conflicts, and on the other hand, in the small number of experimental developments in the field of research on these issues.

Research Methodology

The purpose of the investigation: to propose, justify and approve productive forms of work on the prevention and correction of conflicts between primary school children.

Research objectives:

1. To formulate the theoretical foundations of conflicts between primary school children in the context of pedagogical science.
2. To consider the causes and characteristics of conflicts in primary school age in the context of the psychological and pedagogical characteristics of primary school children.
3. To devise the organizational and pedagogical conditions of psychological support for conflicts between primary school children.
4. To propose, justify and test experimentally the effectiveness of work on the prevention and correction of conflicts between primary school children based on the diagnosis of their conflict manifestations.
5. To suggest methodological recommendations for prevention of psychological conflicts between primary school children.

Conflicts in primary school age play not only a negative role but also serve as a basis for building relations with other people in the future.

The main reasons for these conflicts are (i) the children’s inability to communicate effectively, and (ii) the personal characteristics of the children themselves.

In the early school years, interactions between children move from chaotic interactions to managed interactions built on joint activities. These activities help to establish certain norms and rules that primary school children use to get out of conflict situations. Such rules are presented in a form developed by the children themselves in the process of interaction. Therefore, the success of prevention and correction of the conflict depends on teaching children to control their actions, to find optimal ways out of conflict situations, to forecast the consequences of their actions and so forth, which, in turn, requires psychological and pedagogical support.

In order to successfully prevent and correct, if necessary, conflicts between primary school children, it is necessary to determine the psychological and pedagogical conditions accompanying such conflicts. These conditions include:

– maintaining a positive socio-psychological climate in the study group;

– consideration of the personal characteristics of each child; building cooperative relationship between the teacher and each child; using methods that help children to become more active in the learning process;

– the readiness of a child to resolve a conflict; the responsibility of a child for his/her behavior; «Regarding the primary school age, we understand responsibility as an integrative characteristic that determines the behavior in educational and other activities based on the social norms of learning motives and a positive emotional attitude to it» (Sorokoumova, Molostova & Ferapontova, 2017).

– using active forms of work, such as conversations, discussions, games, contests, thematic class hours, intellectual, aesthetic and cultural activities;

– teaching communication skills, methods of self-regulation, etc.;

– using by the teacher the principle of “the relationship of pedagogical management and children's self-management, which involves creation of situations that require collective decision making, forming a sense of responsibility for their action, protecting each member of the team from negative reactions and manifestations” (Kurnosova, 2018).

In general, the content and methods of work to prevent and correct the negative effects of psychological conflicts are determined by the main goal – the psychological well-being of a child, children self-realization, the formation of social and communication skills and the overall successful socialization of a child.

In order to achieve this aim we have designed and conducted the empiric study the purpose of which is to diagnose the features of appearance of junior schoolchildren's conflicts and to determine the content of the work dedicated to prevention and correction of such psychological conflicts

Results

The experimental work was carried out provided by State-funded educational institution of Nizhny Novgorod «Secondary comprehensive school № 110». The sample group consisted of first-grade pupils (40 people). The middle age of the children – 7-8 years old. The investigation is both general and individual.

The experiment included three stages:

1. The initial stage, the purpose of which is to diagnose the features of appearance of junior schoolchildren's conflicts.

2. The forming stage, the purpose of which is to organize work dedicated to prevention and correction of psychological conflicts of junior schoolchildren.

3. The control stage, including repeated diagnosis with the methods of the initial stage. The aim is to determine the productivity of the offered remedial and developing program connected with prevention and correction of psychological junior schoolchildren's conflicts.

The empirical study was conducted in order to identify appearances of junior schoolchildren conflicts by applying the interrogation methods, methods of talk therapy as well as by using a complex of diagnostic techniques.

1. The questionnaire of G.P. Lavrentieva and T.M. Titarenko (1992) «Criteria of child's aggression». The purpose is to learn appearance of children's aggressive behavior as the concomitant factor of psychological conflicts.

2. The graphical technique «Kaktus» of M.A. Panfilova (Veliyeva, 2007). The purpose is to determine the features of behavioral reactions of junior schoolchildren.

3. Chromatic test of M. Lusher (Burlachuk, 2007). The aim to determine the features of emotional development and identify child's aggression and anxiety.

4. The diagnosis of self-appraisal by applying the technique «Lesenka» (V.G. Shchur) (Marcenkovskaya, 2008). The aim is to identify the features of child's self-appraisal as well as his/her ideas regarding relation of other people to him/her, the level of awareness of this relation.

5. The techniques of learning about mental conditions «Paravozik» (Velieva, 2007). The aim: to determine the level of junior schoolchildren's positive and negative conditions.

6. Observation of the features of children's communication (the techniques of Smirnova & Holmogorova, 2005). The purpose: to determine the features of cooperation in a group of children.

7. The diagnosis of interindividual relationships in a group by applying sociometric technique «Capitan korablya» (Smirnova & Holmogorova, 2005).

8. Determination of group cohesion with the indicator of Sishor («Psychometric test of K.E. Sishor)» (Volkov, 2008).

9. Parents' questionnaire «Prevention of child's psychological conflicts in a family».

Following the empirical studies in relation to first-grade puppils the results regarding the whole sample group were obtained.

The comparative results of learning about appearances of children's aggressive behavior achieved by applying the questionnaire of G.P. Lavrentieva and T.M. Titarenko (1992) «Criteria of child's aggression» have shown that, in general, the level of appearance of the selected children's aggression is considered as high by both the teacher and the parents. According to the teachers' survey, 45% children have the high level of aggressive behavior, 35% children have the average level, 20% children have the low level. The parents observed that 30% schoolchildren were prone to the high level of aggressive behavior, 50% children were prone to the average level and 30% children were prone to the low level. This statistics requires child correction guidance directed to lower the aggression of specific group of junior schoolchildren.

The diagnosis of the features of appearance of behavioral reactions by applying graphical technique «Kaktus» of M.A. Panfilova (Veliyeva, 2007) discovered that junior schoolchildren experienced unstable state of emotional sphere, and suffered more often than others from such negative emotional appearances as aggression, impulsiveness.

The results of the diagnosis of the features of emotional development obtained with chromatic test of M. Lusher have shown that 50% girls and 25% boys have the high level of aggression and anxiety; 30% girls and 50% boys have the average level; the low level is identified only regarding 15% girls and 25% boys. The analysis of the levels of junior schoolchildren aggression and anxiety based on the chromatic test of Lusher during the initial stage indicates that girls less comply with the pressures and are prone to anxiety more than boys are.

The results of the diagnosis of junior school children self-appraisel based on the technique «Lesenka» have proved the fact that 1/5 children are prone to self-acceptance. It shows the necessity of treatment in the cases of exaggerated self-assessment or low self-esteem. It was discroved that 40% children had self-depreciation as the factor of psychological conflicts. This is a high indicator and , as a result, may become the reason for heightened agression serving as the way of self-protection and self-realization.

The purpose of the technique «Paravozik» was to determine the levels of junior school children positive and negative mental conditions.

By analyzing the levels of junior school children' positive and negative conditions (pic. 2) it can be concluded that negative mental condition is prevailing (80%); 4 children are prone to positive mental condition (20%). Thus, the information also proves the reasons for the children heightened tendency to conflicts.

The observation of the features of children communication was also conducted by applying the techniques of E.O. Smirnova and V.M. Holmogorova (2005).

According to the results of the diagnosis, the high level of communication development is determined in relation to 25%, the average level - 45%, the low level – y 30%. The obtained results indicate that there is interconnection between the children conflict behavior and the level of communication development.

To investigate interindividual relations in a junior schoolchildren group the diagnosis based on sociometric technique «Capitan korablya» (Smirnova & Holmogorova, 2005) was made. The results showed that the level of formation of collective relations in the class was not enough, because there was the high percentage of ignored and rejected children (40%).

The determination of group cohesion by applying the indicator of Sishor (under Rogov's E.I. technique) also showed the low level of junior schoolchildren cohesion.

The analysis of the features of appearance of junior schoolchildren conflicts based in consideration with the observations of their different types of activities, diagnosis of the level of their anxiety and determination of the level of their self-esteem gave the opportunity to identify three level of mental features of appearance of junior schoolchildren behavior, including: high, average and low.

The low level of conflict appearances is characterized by the intention to adequately assess oneself and one's peers, the presence of emotional stability during the communication process, empathy, the ability to perceive a peer as a communication partner the way he is. The low level of anxiety and self-acceptance (or exaggerated self-assess) are characteristic of this level.

The average level of appearance of conflicts is specified by adaptive communication, in the process of which a child from time to time experiences negative moral qualities, the breach of communication rules and conflict situations with peers take place. Moreover, a child is not able to decide on his own whether he should ask for adults' help or keep to himself/herself. There are emotional intelligence, goodwill, empathy and mutual understanding, but in spite of this, overwhelming emotions cannot be always under control. This level is characterized by the levels of both exaggerated and low self-esteem, self-acceptance is rare. The average level of anxiety is found out.

The high level conflict appearances is specified by destructive communication, in the process of which fear of communication or intrusive communication are prevailing, a child is also not able to cope with other fears of different nature. During the communication process, such children don't control their words and actions. If they answer at a lesson, such children either keep silent, or speak much, loudly, but illogical, inconsistent. The characteristics of this level are the high level of anxiety and low self-esteem.

During the empirical study the parents also filled out the questionnaire which according to the results of which the level of family assistance dedicated to prevention of child psychological conflicts and the readiness to cooperate with teachers on this matter were concluded. (таблица 1).

Table 1. The results of parents' questionnaire «Prevention of child psychological conflicts in a family»

Question	Answers
What do you think prevention of child psychological conflicts is necessary or not?	yes – 80 % no – 0 % depending on a situation– 20 %
Do you assist your children regarding correction of his/her behavior as the basis of psychological conflict prevention?	yes – 55 % no – 15 % depending on situation – 30%
Do you want to learn the techniques of assistance dedicated to correction and prevention of child psychological children?	yes – 90 % no –10 %
Can you always determine the mental condition of your child (anxiety, aggression, impulsiveness and etc.)?	yes – 45 % no – 10 % sometimes – 45%
Do you come into conflict with somebody in the presence of your child?	yes – 15 % no – 20 % sometimes – 65%
Do you always know about psychological conflicts of your child?	yes – 30 % no – 25 % partially – 45%
Do you agree that a psychological conflict may be resolved by itself?	yes – 35 % no – 35 % it is difficult to answer – 30 %
Do you want to get the information (in different forms) which connects with organization of children assistance dedicated to correction and prevention psychological conflicts?	yes – 75 % no – 10% sometimes – 15%
How do you relate to your child's success?	praise him in front of others– 45 % praise him face to face – 35 % differently – 20%

The obtained results of the questionnaire have shown the nessesety to carry out an awareness-raising work with parents which concerns prevention and correction of junior schoolchildren conflicts, taking into consideration their proneness to psychological conflicts and their individual features.

Thus, according to the results of empirical study we have determined that junior schoolchildren conflicts are characterized by a set of violations of emotional-volitional sphere (anxiety, aggression, negative mental condition, inadequate self-esteem), as well as the low level of communication development.

In order to reach the purpose at the initial stage – organization of work dedicated to prevention and correction of junior schoolchildren conflicts, decreasing level of conflict appearances in children behavior, we have highlighted the following tasks:

1. Development of the means of children self-discovery.
2. Development of self-confidence, increasing self-acceptance, decreasing level of anxiety.
3. To enrich and diversify the emotional world of a child, teach him correct emotional reactions, junior schoolchildren physical and emotional stress relieving.
4. Improving the ability to successfully realize one's potential through his/her behavior and connections, skill training of self-control in different situations, which emotionally hurt a child.
5. Expansion of cognitive, creative abilities of junior schoolchildren, stimulation of their self-determination, self-development and self-education, a willingness to expand their horizon.
6. Formation of communication competence, communicational culture, relation to moral ideals, ethical standard of behavior, increasing level of good breeding.

7. To correct behavior field.

The listed tasks served as a basis of design for the correction and development program, directed to decreasing level of aggression and anxiety, increasing level of social competence, development of self-confidence, increasing self-acceptance; physical and emotional stress relieving; development of the abilities to do one's best in realizing his/her potential though behavior and relations, communication skill training of junior schoolchildren.

The program included 10 lesson (2 times per week). The lessons were taken after working hours. The duration of one lesson varied from 20 to 40 minutes (depending on the form of the lesson). Preparation and realization of this program were implemented in close cooperation with a social teacher, a form master and the parents of pupils.

The correction and development group lessons in the frameworks of assistance dedicated to correction and prevention of junior schoolchildren conflicts mainly contained games, ability test exercises, purposed for integral psychological development of a child and resolving of the specified psychological problems. Psychotherapeutic techniques increased correction impact.

The designed program also consisted of game trainings aimed at development of junior schoolchildren communication skills directly through the communication process in order to prevent and correct psychological conflicts.

During organizing the assistance the necessity to motivate children, including in order to increase self-acceptance and the opportunities of self-realization was taken into account.

When we corrected the proneness to appearances of conflicts, the autogenic techniques-exercises purposed for regulation of mental condition were implied. It is worth mentioning that the role of theater-playing activities during the forming stage is important. The elements of thearticalization were combines with such social-cultural rehabilitation techniques as game-therapy, doll-therapy, fairytale-therapy, musicotherapy, art-therapy, dramatization, animation, psychodramatic elevation, self-actualization and etc.

In the frameworks of organization of the assistance proccess we taught junior schoolchildren to control their mental condition, form their appropriate behavior. To achieve the literature and didactic games were selected with the purpose of improving the process of emotional-volitional sphere formation.

The particularly important elements are game and project techniques, forming the individual features of junior schoolchildren that can develop only through activities and not can be formed verbally (in group projects, in which a not big group «works» and a final product is created on a basis of joint activity, the following qualities are developing: the abilities to cooperate in a group, to take responsibility for one's choices and decisions, to divide mutual responsibility, to analyze the results of one's activity, to feel oneself a member of a group – to control temperament, character, time for the sake of joint interests). The characteristic of assistance dedicated to development of junior schoolchildren teamwork is activation of relations with parents regarding this field.

Formation of group skills and abilities was also stimulated by both design and realization of education projects that have different purposes including optimization of group relationships. This form, inter alia, was offered for the purpose of jointly carrying out any project by parents and their children according to interests and children education demand and, as a result, gave the opportunity to obtain a certain result

During the control stage the control diagnosis of features of junior schoolchildren appearances was made in order to determine productivity of the offered correction and development program dedicated to prevention and correction of junior schoolchildren psychological conflicts, the qualitative-quantitative analysis of the results of experimental study was carried out, effectiveness of the offered forms and methods of assistance dedicated to prevention and correction of the children psychological conflicts was determined.

The comparative results of learning appearances of children aggressive behavior by applying the questionnaire of G.P. Lavrentieva and T.M. Titarenko (1992) «Criteria of child aggression» at the initial and control stages have shown that, in general, both the teachers and the parents point out decreasing the level of appearances of children behavioral reactions: according to the teachers' observations, 9 children experience positive dynamics (45%), the parents find out that it characterizes 10 children (50%). During the control stage the teaches have observed that 3 children are characterized by the high level of aggression behavior (15%), 10 children – by the average level (50%), 7 children – by the low level (35%). According to the parents' observations, 2 children are prone to the high level of aggression behavior (10%), 5 children – to the average level (25%), 13 children – to the low level (65%). This statistics proves the positive results of the conducted correction work dedicated to decreasing aggression of the specific group of junior schoolchildren.

At the initial and control stages the comparative analysis of the results of diagnosis of appearances of junior schoolchildren anxiety and aggression by using a chromatic test of M. Lusher identified that the level of aggregator and anxiety decreased at the control stage (the high level decreased by 15%). In relation to 45% at the control stage the average level of aggression and anxiety was determined, the low level – in relation to 30% (increasing by 10%).

According to the results of the diagnosis of junior schoolchildren self-acceptance, it may be concluded that following the forming stage of experiment 25% improved their self-acceptance. This fact proves that there is normalization of exaggerated self-esteem and self-depreciation. The appearances of exaggerated and low self-esteem as the factor of conflict have the tendency to decrease. This information indicates that the specific group of children are prone to normalization of the level.

The analysis of the level of junior schoolchildren positive and negative conditions have also shown a positive dynamic. In spite of the fact that there is appearance of different levels of the children negative mental condition, the positive mental condition has increased (by 15%), the high and average levels of mental condition have decreased

Learning the features of appearances of junior schoolchildren conflicts, taking into account the results of the observations of their different activities, diagnosis of the level of their anxiety and determination of the level of their self-acceptance, gave the opportunity to conduct comparative analysis of the levels of junior schoolchildren conflict appearances determined at the initial stage.

The comparative analysis of junior schoolchildren conflict appearances carried out at initial and control stages proves a positive dynamics based on the assistance provided and dedicated to prevention and correction junior school children conflicts: the level of children conflict appearances is determined to decrease by 25%, the low level of conflict appearances has increased by 30% – more than twice.

Conclusion

In general, the results of the conducted analysis indicate optimality and productivity of the offered program purposed for prevention and correction of junior schoolchildren conflicts which was tasted during the experimental study. Therewith, it is worth mentioning that the further work in this field requires prolongation.

Based on the obtained information, the practice recommendations for teachers and parents dedicated to prevention and correction of junior schoolchildren psychological conflicts have been made.

Taking into account that the process of prevention and correction of junior schoolchildren conflicts is quite complex, organization of work in this field requires conscious and widespread using by a teacher the different methods and techniques, selection of which is characterized by the results of the conducted diagnosis.

The results of the theoretical investigation of junior schoolchildren psychological conflicts and their conditions, as well as conduction of experimental study in this field, in the process of which the relevant psycho-pedagogical program purposed for prevention and correction of conflict appearances of junior school children has been designed, prove the following conclusions.

1. The assistance to junior schoolchildren dedicated to prevention of conflicts should be provided in the framework of the next main fields: creating the objective conditions, preventing from the appearance and destructive development of conflict situations; optimization of organizational-administrative operation of educational institution; removal of social-psychological reasons for conflicts; blocking of individual reasons for conflict appearances.
2. The main purpose of psychological-pedagogical assistance involves the selection of the specific way of behavior by a teacher, thanks to which the negative consequences may be minimized and the positive potential in interindividual relations may be maintained.
3. The main types of the activities dedicated to prevention and correction of junior schoolchildren psychological conflicts include: game and training techniques, individual consulting; involving

schoolchildren in project activity in order to form communicative connections, development of the ability to cooperate in a group, teaching the rules of resolving problem (conflict) situations; individual work with the system of child's values; teaching social skills, the ways of effective communication, constructive behavior in conflict situations.

4. The principal methods of prevention of conflict situations in a group of children are to prevent and correct conflicts. The main forms of conflict prevention are the following: learning children self-learning, the ability to control oneself, teaching junior schoolchildren the acceptable ways of anger expression, practice of communication skills in conflict situations, as well as forming such qualities as empathy and trust.

5. Prevention and correction of psychological junior schoolchildren conflicts are characterized by deep involvement of a teacher in the process of communication between children, taking into consideration individual features of each child, as well as the teacher ability to select optimal approaches, including both traditionally pedagogical and connected with psycho-correctional field. The main purpose of psycho-pedagogical correction is considered as removal of communication barriers, development of better understanding of oneself and other people, stress relieving, creation of success opportunities for everyone.

6. In correction work the principle role belongs to the next actions: to provide a child a necessary set of the means and ways of actions in situations which are important for him, to develop the individual effective model of behavior, as well as to create for everyone the opportunities to succeed.

7. The offered program of psychological-pedagogical prevention and correction of junior schoolchildren psychological conflicts is based on a set of games designed for specific goals, training exercises, dedicated to overcome conflict appearances of children behavior, improving their sociability, forming the communication skills, self-confidence increasing and acquisition of self-control skills.

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E-Resources for Technological Support of Foreign Student Independent Work in University Educational Process

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Abstract

The relevance of the study is due to the search for promising directions of foreign student independent work organization, due of transformation trends of the University educational process, the key link of which are electronic resources: interactive computer technologies that activate all activities of the student and accelerate the process of educational information assimilation; computer simulators that contribute to the acquisition of practical skills; interactive testing systems that control the quality of knowledge. The availability and functionality of mobile electronic devices (Internet tablets, netbooks, readers, multimedia projectors, and interactive whiteboards), information and communication applications and programs, the emergence of new devices and equipment also contribute to the effective updating of foreign student independent work in the University educational process. In this regard, the main attention is paid to the substantiation of the theoretical and methodical approach to the use of electronic resources for technological support of the innovative model of a foreign student's independent work in the University educational process. To substantiate the theoretical and practical significance of the implementation of electronic resources for technological support of independent work, the method of pedagogical monitoring was used, with the help of which continuous monitoring of independent work organization was carried out and operational correction of emerging problems was carried out. The article establishes the classification of types and kinds of electronic resources for technological support of a foreign student's independent work in the University educational process; the algorithm of multimedia components' implementation of electronic resources for technological support of a foreign student's independent work. Based on the results of the study, the priority of electronic resources for technological support of a foreign student's independent work is justified and the effectiveness of their implementation is proved.

Keywords: independent work, foreign student, technological support, electronic resources, pedagogical monitoring.

Introduction

The study establishes the priority tasks of higher education of foreign student which is characterized by a focus on the development of social and professional qualities and competencies necessary for future specialists to adapt to the changing requirements of the labor market; orientation on the self-organization and self-realization; motivation for participation in the development of innovative projects relevant to the development of national and global interactions of a new type (Madsen, 1993; Scardamalia, 2004; Titova, 2010; Tomashevskaya, Malinovskaya, 2011; Fomin, 2013; Khalupina, 2014; Wenger, 1997, Davoudi et al., 2018; Fartash et al., 2018; Tatstan et al., 2018). These strategies are justified by the social order of the modern information society to the system of higher education for the training of not only knowledgeable, but also mainly thinking specialist who is able to independently acquire the necessary knowledge and skills for practical activities, creatively regulate the process of self-formation of the necessary competencies. The development of these directions and strategies determines the constant increase of educational time for independent work of the student. In modern University in different disciplines, it reaches 50-80% of the total number of academic hours devoted to their study. At the same time, the study determines that the increase in the budget of time for independent work of a foreign student does not always meet the expected results and does not always provide full quality implementation of the tasks, because:

– the content of independent work, implemented in the mass practice of universities, due to the lack of differentiation and variability, in which the minimum of the individual capabilities, needs and interests of the subjects of educational activities are taken into account, mainly is aimed at the formation of a foreign student's deep knowledge in the field of subjects studied, to acquire the skills of using the acquired knowledge in the educational process, to acquire and develop the experience of classroom and extracurricular forms of creative activity, to develop the skills of knowledge of key concepts and scientific terminology. In General, these important areas replace the goals of independent work of the student's learning activities (Drobyshevsky, 2013; Dybina, 2015; Savchenko, 2010; Fomin, 2013);
– a significant amount of tasks available for independent work is often done formally or simply copies texts of different and available sources including the Internet, in accordance with the traditional levels of organization of independent work at the University: the literal and transformative reproduction of information; independent work on the model; reconstructive independent work; heuristic independent work; research independent work (Bublik, 2014; Ermakova & Galatenko, 1996; Irgalieva, 2011; Kovalev, 2000; Kostromina & Dvornikova, 2007; Titova, 2010);

– poorly are used the resources of technological support of the student's independent work; forms, methods, tools, mechanisms of control, self-control and feedback *student-teacher - educational environment of the University - educational environment of Internet resources*; continuous computer monitoring of the content and results of independent work of a foreign student (Bublik, 2014; Morenko, 2018; Tomashevskaya, Malinovskaya, 2011).

In the current conditions, due to the widespread use of computer and telecommunication technologies in the educational process of the University, the need to rethink independent work is proved. The objective need for discursive filling of its content with new meanings of interactive interaction between teachers and students based on the use of electronic technologies that expand the spatial and temporal boundaries between the subjects of training for communication and information exchange is established (Kovalev, 2000; Petrov, 2009; Senashenko & Zhalnina, 2006; Tomashevskaya, Malinovskaya, 2011).

According to the results of modern research and practical activities of universities the established trends increase upgrade efficiency of independent work of foreign students with the help of electronic resources for technological support of this process (Bublik, 2014; Gordeeva, 2012; Ivanova, 2001; Morenko, 2018; Petrov, 2009; Titova, 2010; Fomin, 2013). In this regard, the main attention is paid to the substantiation of the theoretical and methodical approach to the use of electronic resources for technological support of the innovative model of a foreign student's independent work in the University educational process as the leading conceptual idea of the study. To substantiate the theoretical and practical significance of the implementation of electronic resources for technological support of a foreign student's independent work in the University educational process the method of pedagogical monitoring is used, with the help of which continuous monitoring of independent work organization and operational correction of emerging problems are carried out. The article reveals the modern discourse of the concept *independent work of a foreign student*; establishes the classification of types and kinds of electronic resources for technological support of a foreign student's independent work in the University educational process; determines the algorithm of multimedia components' implementation of electronic resources for technological support of a foreign student's independent work. Based on the results of the study, the priority of electronic resources for technological support of independent work of a foreign student is justified and the effectiveness of their implementation is proved.

Literature Review

It is established that interest in resources of technological support of educational activities for foreign students in the educational process of the University, including the maintenance of independent work of the student is of equal importance and significance along with training activities, actively manifests itself in the mid-twentieth century (Ilyina, 2007; Leuf & Cunningham, 2001; Madsen, 1993). Research results of well-known specialists in the field of information technologies (Bublik, 2014; Kovalev, 2000; Leuf & Cunningham, 2001; Polat, 1997; Scardamalia, 2004; Wenger, 1997) convincingly prove, at present, the integration of pedagogical and information technologies, the emergence of computer multimedia systems and interactive computer programs, the development of telecommunication networks provide universities with unlimited opportunities to build a qualitatively new information educational environment for independent work of a foreign student. A good example is the shared resource - Computer Supported Intentional Learning Environment (CSIL). This is a learning environment supported by electronic resources (Knowledge Forum) (Scardamalia, 2004), empowering possibilities of teachers and foreign students in creating a virtual educational environments for the implementation of the individual approaches to organization of independent work of foreign students: accommodation of learning tasks, materials, sharing research projects, ideas, facts, results of the analysis of independent work, texts, etc. (Galustyan, 2014; Morenko, 2018; Wenger, 1997). In several other studies (Itinson & Rubtsov, 2015; Kostromina & Dvornikova, 2007; Petrov, 2009; Khalupina, 2014), there is a tendency of a radical change of the role and place of personal computers and multimedia technologies in independent work of foreign students. Supporters of the technological support's use for foreign students' independent work (Leuf & Cunningham, 2001; Polat, 1997; Senashenko & Zhalnina, 2006; Savchenko, 2010; Sergeev, 2010; Scardamalia, 2004; Titova, 2010; Wenger, 1997) their positions justify by didactic, informational and electronical - technical benefits of different types of mobile devices (tablets, netbooks, e-readers) and by their fundamentally new capabilities in the organization of the process: rapid transfer of tasks to students, interactivity and mobile feedback; the availability of resources of various search systems to obtain information on issues of interest; unlimited opportunities for the development of technical skills and abilities necessary for the student as an Internet user to communicate and collect information special conditions for the development of analytical skills and abilities to synthesize knowledge into a single whole, to access and select different sources of information, to develop training programs, to place the necessary information on the website of the University or on the subject web page of the teacher. The study finds that despite the fact that electronic resources are widely used as visual, software, management tools in various aspects of educational activities of a foreign student it is groundless to talk about the emergence of a holistic understanding of the technological support of his/her independent work as a pedagogical problem. Finally yet importantly, this contradiction is due to the special variability of the phenomenon of technological support, the qualities of which change after mobile changes in technical means that ensure its existence. Therefore, the study of the features of electronic resources for technological support of a foreign student's independent work in the University educational process seems to be justified and appropriate.

Results

3.1. Independent Work of a University Foreign Student: Structure, Content, Transformation

This study uses: 1) as the most important component of professional training of a foreign student in the educational process of the University, providing targeted, motivated, structured on the totality of actions performed, independent cognitive activity on the basis of indirect system management by the teacher or training program; 2) is carried out by the teacher in the framework of the educational paradigm in the direction of professional training: didactic possibilities of Internet learning technologies; collegial nature of the interaction of the subjects in the educational process; forms, methods, tools, mechanisms of control, self-control and feedback in the course of activity; 3) is accompanied by a permanent computer monitoring of the content (cognitive activity, independence, self-organization) and the results of the student's activity (the level of knowledge, skills to apply the knowledge to solve educational and professional problems, competences of independence and self-organization). It is established that the content of independent work of a foreign student in the educational process of the University is determined by the implementation of the gradual formation of cognitive actions: the student's goal of educational activity-a model of significant conditions of educational activity-the program of their own Executive actions - a system of criteria for successfulness of activity -information about the actual results achieved - assessment of compliance of the real results with the criteria for success-decision-making about the need for and the nature of correction (Kostromina & Dvornikova, 2007; Sergeev, 2010; Titova, 2010; Khlupina, 2010). It is established that the gradual formation of cognitive actions creates the necessary conditions for the implementation of included in the independent work of educational activities: planning by the person the purpose of their activities, educational and professional tasks; giving them a personal meaning; subordination to the implementation of these goals and objectives of other areas of educational activities, interests and forms of employment; correction of self-organization and self-distribution of educational actions in time; self-control of their implementation. It is proved that in this process the active principle belongs to the teacher as a managing subject. The student has the role of a managed subject. Electronic resources of technological support of independent work, their didactic environment with mechanisms of control, self-control, feedback for an objective assessment of results and correction of process of interaction of managing and managed subjects to the level of collegial, partner communication become means of communication between managing and managed subjects (Fomin, 2013). In the course of the research the pedagogical structure of transformations of a foreign student's independent work, which is carried out in the process of:

- planning of independent work (based on the individual characteristics of the goal setting of independent work: awareness and autonomy, efficiency, realism, sustainability, determination);
- Modeling (corrects students' ideas about independent work, creates significant conditions for its transformation in the environment of Internet technologies);
- Programming (reflects the subjective methods and sequence of Executive actions to achieve the goals, due to the types and kinds of independent work);
- Evaluation of results (represents the adequacy, autonomy of self-assessment, performance and behavior, the stability of subjective criteria for assessing the success of the results achieved).

3. 2. Classification of Kinds and Types of Electronic Resources for Technological Support of a Foreign Student Independent Work

It is established that in educational theory and practice of the modern University a strong understanding has been developed of electronic resources as synonyms of didactic material presented in electronic format and used to transmit knowledge to students (Sergeev, 2010; Titova, 2010; Tomashevskaya, Malinovskaya, 2011; Fomin, 2013). It is proved that electronic resources have become a priority structure of the content of a foreign student's independent work; their use becomes a didactic norm, as it allows mastering the theoretical and practical components of the studied disciplines with greater intensity, with an increase in the level, quality and strength of knowledge outside the educational process. It is determined that the most modern and effective types of electronic resources of the University educational process are those that are reproduced on a computer, have a navigation control system and implement the possibility of their adjustment and filling (Galustyan, 2014).

Textual, hypertext, multimedia and presentation types represent classification of electronic resources for technological support of a foreign student's independent work in the University educational process:

- textual-graphical views-the content is presented on the computer screen, does not contain a non-linear presentation. It is based on the standard method of sequential immersion of the person in the studied content (Petrov, 2009; Polat, 1997; Senashenko & Zhalnina, 2006);
- Hypertext-content navigation is characterized by nonlinearity. Text snippets can be viewed in random order, determined by the logical sequence of content, mobility, and motivation of the individual. The disadvantage of this view is the lack of visual and audio series (Ilyina, 2007; Irgalieva, 2011; Itinson & Rubtsov, 2015);
- multimedia views. They are characterized by multi-profile nature, a large volume of memory footprint, extensive capabilities for simultaneous presentation of information in various ways: graphics, photo, video, animation and sound (Morenko, 2018; Osetrin & Pyanykh, 2011; Titova, 2010; Fomin, 2013);
- Presentational. They have the ability to accommodate large amounts of graphic, text and audio

information, combining audio and visual content. Nevertheless, it is difficult to use three-dimensional visual series while the implementation of visual AIDS (Gordeeva, 2012; Ermakov & Galatenko, 1996, Ivanov, 2001).

The established types determine the typology of electronic resources adapted to the technological support of a foreign student's independent work in the University educational process: illustrative (lecture) resources; electronic references, dictionaries; practical (simulators); laboratory work; game scenarios, technologies; automated training systems; control and diagnostic tests.

The established types of electronic educational resources provide unlimited opportunities for the organization of students' feedback in offline and online modes, program management of independent work of a foreign student in the process of individual learning path. The study proves that the development of information and communication applications and programs, the emergence of a new generation of mobile devices and equipment in today's conditions form special requirements for the current classification of kinds and types of electronic resources for technological support of a foreign student's independent work in the University educational process. Among these requirements, there is a special need to modernize the structure of electronic resources, in accordance with modifications of multimedia content:

- updating of navigation devices of electronic resources in search of the necessary information with the help of linearity, which allows you to view pieces of information in the order determined by the logical sequence of content; or nonlinearity, which allows you to use the information in any order, determined by the mobility and motivation of the person;
- clarification of electronic resources' use, taking into account new technical and information achievements: PC, print media, various types of mobile electronic devices (Internet tablets, netbooks, readers, multimedia projectors, interactive whiteboards, etc.));
- correction of means of interactive access, animation of dynamic illustrative materials, video images, demonstrating mobile principles and methods of implementation of individual processes and phenomena on personal computers or local computer networks.

3.3. Algorithm of Realization of Multimedia Components of Electronic Resources for Technological Support of the Foreign Student's Independent Work

To implement the established structure of the algorithm the study justifies navigation; subject-content, subject-process; information and reference, activity-based components of multimedia electronic resources for technological support of independent work, as well as means for assessing the student achievements, controls and communication means.

Navigation component. It supports independent work of a foreign student to master the content of the discipline. This component includes the necessary means of technological support of the student when working with text material, printing the necessary fragments of the navigation device (table of contents, signals, symbols, alphabetical, nominal and thematic pointers, user bookmarks, notes, etc.), providing a quick search for information, the transition to the desired Chapter or paragraph, reflecting the relationship between the main and additional material, as well as allowing the student to track and adjust their user level in electronic resources.

Subject-content component. It contains General information about electronic resources (goals, objectives, place in the educational process, on what disciplines is based and what disciplines supports); the content of sections, a list of topics and sub-topics of the discipline; guidelines for the study of educational material, questionnaires and sheets for monitoring the assimilation of knowledge by students.

A subject and procedural component. It contains the basic components of the organization and implementation of independent work in each discipline individually. It defines the scientific content, methodical structure and sequence of study of the discipline. The quality of study of the discipline can be significantly higher if the methodical recommendations or guidelines for its study are used, which provide navigation of the student in the content of the studied material.

Information and reference component. It contains educational, methodical and information resources that support the independent work of the student of information-search and problem-practical nature. Among them, there can be terminological electronic dictionaries, grammatical reference books, electronic libraries, the list of the recommended sources of information for independent studying, the list of addresses of additional information resources of the Internet (remote courses, business computer games, electronic encyclopedias, and information materials), approximate lists of subjects of project works and requirements to their registration.

The activity-based component. It is intended for fixing the educational and professional knowledge, abilities and skills gained in the course of independent work. The activity component provides the student with mastering the techniques of cognitive activity, develops interest in creative work, the ability to solve scientific and applied problems. It can present practical tasks, both in the form of tests and in the form of collections of tasks (exercises), depending on the specifics of the discipline.

Means of evaluation of educational achievements of independent work of a foreign student. They ensure the collection of current and effective information about the student's learning activities and provide him/her with information on completion of the work in the form of a Protocol of results. Electronic testing is a formalized type of control. Working with training control tests and self-control systems can provide explanations in the case of a wrong answer and recommendations for the use of a textbook, thesaurus or additional material. In the case of placing an electronic educational resource on the Internet-server of the educational institution, it may be provided that the teacher receives information about the results of each student's work through e-mail resources.

Control means. They provide the student with the opportunity to freely choose one of the three modes of operation in the electronic learning environment - self-government, differentiated management by the teacher and management by software learning. The first two types of management are due to the human factor-the student and the teacher and the level of communication between them. The mode of the program means of training provides management of independent work of the student in the course of passing of an individual trajectory of training and in this case, electronic means fix all achievements and mistakes of the student according to the set program.

Means of communication. They are intended for the organization of electronic interpersonal communication between subjects of training with the use of asynchronous and synchronous communication. The learning process in this case is of an active activity-communicative nature.

The research substantiates didactic priorities of multimedia components of electronic resources for technological support of a foreign student's independent work in the University educational process:

– interactive nature of communication between teachers and students, innovative types of control and self-control, implementation of feedback through various test systems available to all entities (teachers and students) at the same time, monitoring the process and results of independent work;
– search, processing, storage and presentation of information: the formation of the ability to enter, edit and display text on electronic resources; work with graphic information, the use of a computer for calculations, the preparation of spreadsheets; the search for data from various sources, the use of abstract information, checking it for accuracy; the organization of storage of information, adequate forms of its presentation; the use of information to solve problems);
– expansion of spatial and temporal boundaries for communication, information exchange, access to electronic libraries, encyclopedias, dictionaries and other information resources;
– ensuring active interaction of students in the process of collective independent work to find a solution to a problem, obtaining the necessary advice in a remote format, exchange of experience with other students;
– innovative nature of educational tasks' presentation to students through greater clarity, variability, expansion of the thesaurus, the use of a set of situations and tasks of different levels of complexity, increasing the number of information resources to find the necessary knowledge, electronic lecture notes, Bank control tests, orientation (technological) maps, samples of work, regulatory requirements, multi-level educational and professional tasks, options for the content of the subject page of the teacher ON the web-site of the Department, University;
– constant (online) monitoring of students' independent work, correction of its course and directions of searches in solving educational and professional problems;
– practical orientation of independent work based on virtual training, laboratory work, workshops.

It is proved that the use of multimedia components of electronic resources for technological support of students' independent work in the University educational activities provides effective implementation of individual routes of the student: focused on obtaining knowledge; on the formation of himself as an educated person; on the formation of himself as a future specialist; focused on scientific activities.

Conclusion

The study confirms the theoretical and practical importance of electronic resources for technological support of a foreign student's independent work in the University educational process as an actual direction of his/her professional training. Based on the results of the study, the importance of electronic resources is confirmed, the priority component of which are multimedia technologies that activate all activities of the student, accelerate the process of assimilation of educational information and control the quality of knowledge. The availability and functionality of mobile electronic devices (Internet tablets, netbooks, readers, multimedia projectors, and interactive whiteboards), information and communication applications and programs, the emergence of multimedia devices and equipment contribute to the effective renewal of independent work of a foreign student in the educational process of the University. It is proved that a new, multimedia generation of electronic resources for technological support of a foreign student's independent work activates the increase of General cultural, professional and communicative competencies; orients the person to acquire knowledge and skills of working with educational and cognitive information on modern media; develops techniques of creative and mobile orientation in the flow of constantly changing information; expands the spatial and temporal boundaries of cognitive activity in the interactive interaction of the student with teachers, in the process of communication and information exchange with fellow students. In this regard, the article substantiates the theoretical and methodical approach, the key element of which is the use of electronic resources for technological support of a foreign student's independent work in the educational process of the University. To substantiate the theoretical and practical significance of electronic resources' implementation for technological support of a foreign student's independent work in the University educational process, the article reveals the structure, content and transformation of the modern discourse of a foreign student's independent work; the classification of kinds and types of electronic resources for technological support of a foreign student's independent work in the educational process; the algorithm of multimedia components' realization of electronic resources for technological support of the foreign student's independent work is defined. Based on the results of the study, the priority of electronic resources for technological support of independent work of a foreign student is justified and the effectiveness of their implementation is proved. This problem as a research area is not limited to the solution of the goals and objectives. Important for the formation of the personality of a foreign student is the justification of models for the implementation of his/her individual routes in independent work, focused on obtaining knowledge, on the formation of themselves as an educated person, as a future specialist, as a scientist, researcher.

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Administrative Anti-Corruption Law in the Social Sphere in Accordance with International Standards

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Abstract

The study aims to show the scope and limits of administrative anti-corruption regulations, to detect the causes and factors leading to corruption in the social sphere and to identify the possibility of reinforcing administrative anti-corruption means, including in accordance with international standards. A dialectic approach to the examination of social phenomena made it possible to analyze the above issue in historical perspective and the comparative analysis was used to compare Russian anti-corruption legislature with international legal instruments and the anti-corruption laws in force in selected countries. The study defined administrative enforcement as a means of counteracting corruption in the social sphere, determined various administrative procedures adopted in anti-corruption mechanisms and highlighted a discrepancy between Russian anti-corruption legislature and international laws. For the first time in research on administrative law, the study focused on the adoption of administrative anti-corruption regulations in the social sphere in accordance with international legal standards.

Keywords: counteraction, corruption, social policies, health services.

Introduction

Traditionally, the public administration system uses methods such as persuasion and enforcement. Without starting a discussion on the functional and institutional aspects of these methods, let us focus on the potential of using administrative enforcement in anti-corruption strategies in the social sphere (Denisov, 2004). To reveal the gist of administrative anti-corruption actions, objective attention should be paid to the law enforcement institution in general, which is the basic category in relation to administrative enforcement (Plokhoy, 2015).

In this regard, a number of ideas should be put forward as a basis for a research on administrative enforcement in the anti-corruption mechanism in general and in the social sphere, in particular.

First, administrative enforcement is part of public enforcement implemented by anti-corruption actions.

Second, administrative enforcement measures are part of administrative anti-corruption legislations and, therefore, their effective implementation in the sphere under investigation depends largely on the quality of other administrative legislations.

Third, the classical approach to defining the content of administrative enforcement has not proved very efficient in combating corruption (Khasanov, 2015).

Fourth, the potential of administrative enforcement measures remains scarcely implemented, despite specific aspects of the fight against corruption (Khasanov, 2015).

Research Methodology

The present study adopted the system approach that addressed administrative anti-corruption law in the social sphere in terms of the identification of trends and interactions inherent in its structural elements and, on the other hand, of the focus of administrative anti-corruption measures on achieving the expected results.

The research also used the comparative law method (when analyzing the establishment of the administrative anti-corruption legal system in the social sphere in a number of countries), the formal study of documents and research studies on the topic under investigation. The method of formal logical analysis was needed to examine legislative and subsidiary acts regulating anti-corruption issues.

The research also draws on the structural and functional method and certain elements of the sociological, historical and axiological methods of research. The rationale for adopting the above-mentioned methods is the authors' effort to integrate the largest possible methodological framework offered by various sciences (philosophy, political and legal sciences as well as sociology) for the study of administrative anti-corruption issues in the social sphere.

The combined research methods used in the present study, first, identified the areas and scope of research and, second, provided an opportunity to fully assess the content of the issue concerned and to canvass a comprehensive understanding of administrative anti-corruption law in the social sphere.

A review of research studies indicates that our research topic is sufficiently well explored in terms of criminal law and criminology. In particular, S.V. Plokhov (2013) and T.A. Balebanova (2013) did their doctoral theses on this issue. Over many years in recent history, a number of administrative law researchers have investigated the administrative aspects of the fight against corruption. As an example, A.S. Dylkov (2015), A.V. Kurakin (2008), M.M. Polykov (2009), D.A. Povny (2011) and A.A. Shevelevich (2008), among others, conducted special research in this area.

Results

Issues relating to the progressive development of our society are particularly due to major deficiencies in institutional measures to combat corruption, especially in the social sphere. The quality of human life and people's financial and moral well-being eventually depend on whether the problem with street-level corruption is resolved or not. Today, it is still common practice that the government channels its major effort into fighting corruption in public and municipal services, whereas other spheres of public administration – especially those of decentralized nature in terms of legal regulation and administration – remain without proper protection against corruption. Due largely to this circumstance, corruption keeps growing in different areas of the social sphere.

As the Minister of Internal Affairs of the Russian Federation mentioned at the Meeting of the Anti-Corruption Council Presidium held on 15 March 2016, "…criminal intrusions mostly concern the sphere of procurement of goods, works and services for provisioning governmental and municipal needs, construction, motor road maintenance, public health services, education, science and culture" (Fair.ru, 2016). Corruption in the public and regional administration is heterogeneous and volatile. As an example, according to the data provided by Russian Procurator-General's Office, the total sum of bribes received was 2.3 billion rubles in 2016, one billion rubles more than in 2015.

33,000 corruption crimes were registered in 2016, down 1.4% from 2015. The average amount of the bribe was 425,000 rubles in 2016, up 1.4% from 2015. In 2016, a total of 12,000 corruption cases were brought to court and 13,000 people were convicted. Moreover, 2.5 billion rubles were voluntarily returned to the State in 2016 and measures were taken to recover the corruption-related property damage totaling 33 billion rubles (Lenta.ru, 2017).

Unfortunately, socially oriented priority national projects and programs have been undermined. As an example, increased funding for the Health Program has not improved the quality of medical services provided and health care shows the highest percentage of corruption. The diversion and misallocation of public funds remains the central problem with the implementation of the nation-wide Education Project almost in all the constituent entities of the Russian Federation. The program entitled Accessible and Comfortable Accommodation for Russian Citizens is not fully effective, due, among other things, to corruption. The situation regarding the implementation of another program, Reforms in the Housing and Communal Services Sector, is no better.

This situation suggests the need to identify new priorities regarding the implementation of public anti-corruption policies and the improvement of administrative anti-corruption law, taking into consideration current public relations in the social sphere.

Unlike other areas of public administration, the social sphere is specific in that it involves most citizens and both publicly funded and extra-budgetary social institutions and organizations provide social services, which – for objective reasons - often operate as economic competitors, i.e. health care centers, educational institutions and so on. The lion's part of public funding goes to the social sphere. As an example, in 2017, the following publicly-funded state programs were funded as follows: Development of Health Care (3 971 027.7 rubles); Development of Education for 2013-2020 (37 403.9 rubles); Social Support for Citizens (1 079.7 rubles). All public funding should be spent only to the targeted recipients.

The problem is that the main effort of the State is to combat corruption in government agencies and administrative bodies, which understandably do not provide social services. As a result, the social sphere remains without proper protection against corruption, which leads to the unlawful charging for otherwise free services in high social demand (health care, education, physical training and sports). In this regard, corruption pushes out, in a coherent and systematic manner, citizens from the system of free social services resulting in the growth of social tension and in the diminishing trust in the central sphere of life, i.e. the country's social policy, on the part of citizens.

An issue of particular concern is the fact that there still is no official definition of the term "social sphere". Instead, there is a list of healthcare, educational and social activities involving legal personalities and individual entrepreneurs.

The No. 296 Order of the Government of the Russian Federation of 15 April 2015, entitled On Approval of the Social Support for Citizens State Program of the Russian Federation, mentions the following subprograms:

1) Social protection of certain categories of citizens;
2) Upgrading and promotion of social services for the population;
3) Enhancement of effective public support for socially oriented non-profit organizations;
4) Older generation;
5) Provision of conditions for the implementation of the Social Support for Citizens Stage Program of the Russian Federation.

Based on the above, the main beneficiaries of public social programs are not only legal and natural persons providing social services and support, but also the so-called unprotected citizens who suffer most from corruption in the social sphere. This is why corruption, along with other causes, leads to negative consequences such as increased and unsubstantiated spending by citizens and misallocated state funds, which should have been used to deal with socially important issues but, instead, have ended up in the pockets of officials. In our view, the recently established decentralized nature of social administration does not make it possible to build an effective administrative anti-corruption legal system. Accordingly, it is suggested that administrative anti-corruption law in the social sphere should be promoted in a fundamentally different way, considering its features and needs of law enforcement practices. Now, a number of primary tasks should be tackles to overcome corruption in the social sphere.

First, forms and methods of administrative anti-corruption regulations should be unified to the maximum in the social sphere at its various levels.

Second, specific features of public relations should be taken into consideration, which are established in this or that segment of the administration and functioning of the social sphere.

The research shows that departmental anti-corruption plans do not sufficiently highlight measures taken to record the activities of various public and administrative anti-corruption bodies in performing these or those public functions. This reduces the law-enforcement capacity of these documents in anti-corruption actions and the effectiveness of administrative anti-corruption regulations. Meanwhile, a differentiated approach to dealing with corruption might help identify its distinctive features and find proper administrative legal ways to influence it.

It should be recognized that reducing corruption in the social sphere is impossible without imposing public and private law regulations in other sectors.

As of now, there is an acute need to carry out strict anti-corruption policies both in the public and private economic sectors. It is axiomatic that economic problems are at the basis of corruption, specifically in the social sphere. In this regard, addressing a wide range of economic issues may help reduce corruption both in the private and public social services sector.

The specific nature of the social sphere's functioning is related to its areas of activity and to the fact that administrative law regulates its basic relations. Accordingly, proper administrative anti-corruption measures introduced to the social sphere may make a positive contribution to resolving the issue under investigation. In terms of its institutional framework, administrative anti-corruption law should comprise components of various functional nature. As an example, the development of legal, organizational, informational and technological components is necessary to effectively combat corruption in the social sphere. Each of the above-mentioned aspects can be used, in their own way, to ensure the functioning of the anti-corruption mechanism in the social sphere.

Administrative anti-corruption law should combine both regulatory and protective anti-corruption means. Such an approach will reduce to a maximum corruption risks in the social sphere and the corresponding law enforcement activities. Of special importance in enhancing the effectiveness of administrative anti-corruption law is the removal of contradictions between the regulatory and law enforcement practices in anti-corruption measures implemented in the social sphere.

The development of a comprehensive theoretical model of using administrative and legal arrangements to combat corruption in the social sphere will decrease social tension in Russia. Furthermore, more focus should be placed on national and international legal standards and related rules of international law. The removal of contradictions in the system of administrative anti-corruption law in the social sphere will help to determine the main elements of offences in this sphere, to differentiate them from contiguous acts and to counter offences in this sphere by filling gaps in administrative law and improving its practical applications. From this perspective, a comprehensive research on administrative anti-corruption law in the social sphere seems necessary and urgent.

Administrative anti-corruption regulations are mostly based on the related international legal standards. As an example, the Federal Law on Counteraction of Corruption of 25 December 2008 highlights that the State's cooperation with international organizations is one of the principles underlying anti-corruption measures (Art. 3, Para. 7).

Today, a system for the international legal cooperation between states has been established to combat corruption, which is a comprehensive mechanism for states to interact at universal, regional, sub-regional and bilateral levels. Corruption impairs the social activities of all members of the world community. The social sphere cannot flourish in a corrupted system, which leads to population reduction in this or that country and to the decrease of funds that the government has to allocate to working people and to the purchase of supplies (books, medicine, computers and so on). Corruption also leads to the misallocation of public funds provided for social services (schools, hospitals, roads, police and so on), hence the decreased quality of services. Favorable conditions are created for people with money and connections to amend laws and decisions taken by public authorities. Finally, corruption undermines the credibility of the government. The difficulty is that there are no international acts on corruption in the social sphere (at least, universally), which creates a need to introduce and pass them.

Having ratified the United Nations Convention against Corruption, Russia did not subscribe to the provision concerning corruption crimes such as illicit enrichment and the responsibility of legal persons, which is a gap, in our view. The following documents deserve attention in terms of systematic administrative anti-corruption enforcement strategies in the social sphere:

– the Inter-American Convention against Corruption, signed by the Organization of American States on 29 March 1996 (given that all anti-corruption measures suggested by this convention are substantiated and preventive; and
– the Convention on Combating Bribery of Foreign Public Servants in International Business Transactions of the Organization for Economic Cooperation and Development (hereinafter OECD), adopted on 21 November 1997 and aiming at the criminalization of legal persons' corruption activities.

Attention should also be given to the project carried out by the OECD (2013), The Integrity of Educational Systems (Intégrité des systèmes d'enseignement), which seeks to provide assistance to States in their fight against corruption in the educational sector by analyzing the corruptogenic factors in the educational system.

The Program of Action against Corruption, adopted by the Committee of Ministers of the Council of Europe in 1996 (2011), also requires thorough examination, as its Administrative Law Section (Unit 3) contains a number of terms related to the codes of conduct of officials. The Model Code of Conduct for

Public Officials, which is an appendix to the Recommendations of the Committee of Ministers of the Council of Europe of 11 May 2000 No.R (2000), also addresses the issue relating to ethical rules and codes of behavior for public officials.

It would be desirable that Russia should join international movements, such as the World Health Organization's network for fighting corruption in the drug purchase sphere. It is also advisable that Russia analyze data obtained and take appropriate measures, based, for instance, on the data provided by the Report on the extent of Corruption in Education in 60 countries (including Russia), prepared by the UNESCO International Institute for Educational Planning.

Although Russia is a member of the World Health Organization, it did not join the following serious international organizations combatting corruption in the healthcare sector, not even as an associated member: European Healthcare Fraud and Corruption Network (EHFCN), Center for Counter Fraud Services (CCFS) affiliated with the Portsmouth University (Great Britain), European Observatory on Health Systems and Policies and others.

For instance, the European Healthcare Fraud and Corruption Network adopted in 2005 the European Declaration on Healthcare Fraud and Corruption in Europe.

Unfortunately, there are no acts directly aimed at combatting corruption in the social sphere within the framework of the Eurasian Economic Community and the European Union.

To sum up, Russian legislation does not quite correspond (or does not correspond at all) to international anti-corruption regulations, which calls for thorough revision, given the gravity of this issue in Russia.

Specificities of countering corruption in the social sphere abroad. Until recently, the absence of special compositions of corruption delicts committed in the social sphere has been a common feature of corruption offences both in Russian and in many other countries. Countries such as Austria, Great Britain, Denmark, India, China, the USA, Switzerland and Finland have no legal definition of the notion of corruption, which is why the punishment for corruption is administered for specific lucrative acts on the basis of legally defined terms such as bribe, bribery, abuse of authority and so on.

Among corruption infringements are both corruption crimes stricto sensu and other infringements of law committed for lucrative purposes.

Foreign law highlights a number of corruption infringements committed, particularly, in the healthcare sector. These wrongful acts run counter to the notion of corruption, as defined by Russian legislation. As an example, distinctions are made between bribery in medical service delivery, procurement corruption, improper drug-marketing practices, undue reimbursement claims, etc. (Örtenblad, Löfström & Sheaff, 2015). In our view, such definitions facilitate the classification of corruption infringements.

The United Kingdom of Great Britain and Northern Ireland, in its Bribery Act of 8 April 2010, defines bribery as one person's agreement to receive "a financial or other advantage", which constitutes "an improper performance of a relevant function or activity" (Art. 1). Evidently, such a broad definition makes it impossible to determine the corpus delicti (Polukarov, 2017c).

Among the main punishments in all countries are imprisonment and imposition of fine on the offender, which is logical in case of lucrative crimes, usually involving monetary rewards.

Almost in all States, corruption crimes are considered as serious wrongful acts.

The most difference between foreign law and Russian anti-corruption legislation is the criminal responsibility of legal persons for corruption crimes. The significance of legal persons' responsibility for corruption infringements committed in the social sphere could not be overemphasized, given that public administration does not have exclusive jurisdiction over the social sphere (healthcare and education), in contrast to the traditional areas administered by public authorities (law enforcement, administration of justice and provision of security).

Privately owned entities (educational organizations, hospitals and pharmaceutical companies) are active participants in the social sphere that provide social services similar to public organizations. As a result, legal persons (economic entities and non-commercial organizations) provide a wide variety of social services and, thus, can be considered as potentially inclined towards criminal activities in the sphere under investigation. Relevant circumstances point to the significance of strengthening their administrative responsibility for corruption infringements. In a number of foreign countries, a combination of criminal and administrative measures are taken to combat corruption. Besides, legal remedies against corruption are largely homogeneous, hence a high demand for them in both public and private areas of social service delivery (Polukarov, 2018).

Issues relating to the implementation of corruption-related international legal standards into Russian legislation. International legal anti-corruption standards in the social sphere are of great significance for the improvement of Russian legislation. However, not all relevant provisions of international legal acts are introduced to Russian legislation on countering corruption, which has a certain negative impact on the quality of anti-corruption state policies. In recent years, Russian government authorities have taken significant steps in the fight against corruption: a relevant legal framework has been established, institutional changes have been made and measures have been taken to involve citizens in the prevention and suppression of corruption. At the same time, anti-corruption measures in a number of areas of social relations, require additional regulations, means and techniques (Polukarov, 2017b).

By tradition, the social sphere remains one of the most corruptogenic ones, which is due to the insufficiency and incoherence of anti-corruption legislations, closed activities of social and other institutions, somewhat ineffective public and social oversight that is not always highly effective, inefficient preventive measures, greedy interest of the parties in maintaining corruption-related connections and more.

Among factors contributing to the growth of corruption in the social sphere are the subjects' confidence in marginal patterns of behavior (legal infantilization and nihilism), and this despite the fact that the State allocates significant funds to the social sphere.

The Federal Law No. 97-FZ of 4 May 2011 ("On the amendments to the Criminal Code of the Russian Federation and the Code of Administrative Offences of the Russian Federation on improved anti-corruption governance") has implemented international standards to Russian legislation by expanding the range of persons who could be prosecuted for receiving bribes. This law, however, has a significant omission, in our view: it lacks the definition and, most importantly, the legal applications of terms such as active bribery and passive briber, introduced in 1999 by the Criminal Law Convention on Corruption of the Council of Europe.

Another major gap is the absence of provisions for corruption in both the Code of Administrative Offences of the Russian Federation (CoAO RF) and the Criminal Code of the Russian Federation (CC RF). In our viewpoint, there is a real need to define and legislate on terms such as "corruption infringement" and "corruption crime", given that both the CoAO F and the CC RF contain only special provisions.

The international community considers confiscation of property as the most serious means of combating corruption. The Criminal Law Convention on Corruption suggested that States should adopt legislative and other measures that may confer them the right to confiscate or exempt in other ways instruments of crimes and earnings from crime activities, recognized as such in accordance with the present Convention, or property of a value equivalent to that of such proceeds (Art. 19). In this regard, and considering Russian law enforcement practices, we deem it necessary to restore confiscation as a type of punishment.

In promoting anti-corruption regulations in the social sphere, it should be kept in mind that Article 1 of the Civil Law Convention on Corruption of the Council of Europe, adopted 4 November 1999, requires each party to provide in its domestic law for effective remedies for persons who have suffered damage as a result of corruption, to enable them to defend their rights and interests, including the possibility of obtaining compensation for damage. At the same time, the author points out, according to Article 5, the possible responsibility of the State as an entity that authorized the official (or other) person to act on its behalf. In Russia, however, there have been almost no cases where a citizen was granted reparation for material or moral harm incurred as a result of corruption acts. The real implementation of reparation mechanisms would make the authorities more attentive when appointing persons to managerial positions and would result in the legal competitive selection of officials (Polukarovm 2017a).

The Convention of the Council of Europe suggests that members States criminalize deliberate acts related to corruption abuses or inaction aimed at concealing or misrepresenting information when preparing or using invoices or any other accounting document or report, which contains false or incomplete information, or when illegally omitting to make entries on accounting reports concerning payment transactions. The CC of RF features only a general rule on forgery (Article 292), and the examined practice reports lead to the conclusion that forgery concerned mainly sick lists and various official documents, whereas invoices, other accounting documents, reports and accounting records are not such. This situation seems to be a notable omission, given that the above-mentioned documents can be used to commit other, socially dangerous infringements. We consider it necessary to add "accounting documents" and "accounting records" to the Article 292 of the CC of RF, which would increase responsibility for real forgeries in public office. As a reminder, a Consolidated Report on Russia was published 15 March 2013 as a supplement to the report on the implementation of recommendations by the Russian Federation. Unfortunately, this Report has not had any significant impact, which is clearly an omission (Polukarov, 2016).

Discussion and Conclusion

If Russia ratifies the Civil Law Convention on Corruption of the Council of Europe, it will be possible to cooperate on civil actions against corruptions, in particular, in obtaining evidence abroad, in establishing jurisdiction, recognizing and respecting foreign judicial decisions and court fees. The provisions of the United Nation Convention against Corruption (Article 13), adopted by the United Nations General Assembly on 31 October 2003 by Resolution 58/4, stipulates that each member State will take measures to actively involve the civil society in the prevention of and fight against corruption. The following measures are aimed to increase such participation:

- improving transparency and involvement of the population into decision-making processes;
- providing the population with effective access to information;
- holding public-awareness events, which would foster public intolerance against corruption, and promoting educational programs, including school and university curricula;
- respecting, encouraging and protecting the freedom to seek, receive, publish and disseminate information concerning corruption.

Clearly, these measures to be taken by public authorities are rather general and need further specification in national legislation. In this regard, we consider it an urgent need to regulate in more detail the forms and methods of interaction between public authorities and civil society.

Unlike previous research, this article developed a major conceptual framework for the promotion of administrative corruption regulations in the social sphere, based on international anti-corruption standards, as well as conditions and requirements necessary for the effectiveness of new legal techniques, forms and methods in undertaking preventive measures to reduce corruption in the social sphere.

Another new provision concerns the definition of theoretical and law enforcement practices aimed at countering corruption in the social sphere. In structural terms, it should include the organizational, informational and law enforcement components. The present study proved that effective anti-corruption measures in the social sphere are possible only if all of the above components are combined, in which case they will provide an effective mechanism for the implementation of administrative anti-corruption actions in the social sphere.

The present study proved the need to extend administrative anti-corruption strategies to the entire social sphere and substantiated the fact that these strategies should not be limited to use only by public authorities in the social sphere. It was shown that, due to the regulatory and protective impact of administrative anti-corruption strategies, they should institutionally affect the entire social sphere, while taking into account, in functional terms, the performance of each of its segments. Equally revealing is the finding that an integral part of State social policy should be the fight against corruption in the social sphere and, consequently, in public programs for the promotion of these or those components of the social sphere. The consolidation of anti-corruption measures should follow their implementation.

The research novelty of the study consists in the proof that the content of the administrative anti-corruption regulations in the social sphere is based on legal remedies, the implementation of which should take into consideration their essence in terms of target, subject, industry, institution and function. The study provided a theoretical framework for the provision that general anti-corruption measures defined in legislative and relative acts do not take into account the specificity of corruption's manifestations in the social sphere, which decreases their regulatory and protective potential. This said, the study proved the need to develop and adopt special regulations aimed at countering corruption in the social sphere using administrative and legal arrangements.

Recommendations

The obtained research findings make it possible to develop specific areas of public anti-corruption policy, as their primary objective is to improve administrative anti-corruption regulations in the social area, in general, and also in its most significant segments. The research provides an opportunity to expand the boundaries of anti-corruption legislation and to remove individual contradictions related to the implementation of this legislation in the social sphere. The obtained research findings reveal the theoretical and law enforcement regulations relative to anti-corruption measures taken in the social sphere, so they have a direct practical significance in terms of the following:

– development of suggestions on improving the legislative and departmental anti-corruption regulatory activity in the social sphere. As part of the study, amendments have been developed to the Federal Law of 25 December 2008 No. 273-FZ (On Countering Corruption), the Federal Law of 17 July 2009 No 172-FZ (On Anti-Corruption Regulation of Legal Acts and Draft Regulations) as well as the letter from Russia's Ministry of Labor of 13 November 2015 No 18-2/10/P-7073 (On the Criteria of Prosecution for Corruption Infringements);
– implementation of anti-corruption arrangements in the social sphere and identification of corruption-prone activities in the federal executive bodies exercising its functions in the social sphere;
– anti-corruption policies in terms of methodology and didactics. Specifically, the results of the study can form the basis of teaching various courses on anti-corruption strategies. Furthermore, the research findings can be used to elaborate the content of the Master Plan to Counter Corruption in Federal Executive Bodies Exercising Its Functions in the Social Sphere.

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Social Networks Influence on Young People Socialization: Study Peculiarities in Contemporary Social Theory

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Abstract

The purpose of this article is to analyze the study specifics in modern sociological science of social Internet networks' impact on the socialization of young people. The paper uses the methods of comparative analysis, system and structural-functional analysis, generalization. The article analyzes the existing methodological approaches in modern sociological science, which can be used in the study of the specifics of social Internet networks' impact on the socialization of young people. It is established that the study of social Internet networks' impact on the socialization of modern youth is advisable to carry out through the integrated application of several methodological approaches. The combination of different approaches allows us to consider such aspects of social networks' impact on the socialization of young people as the accumulation of virtual and real network connections, the formation of social values, the presence of socialization risks and the transmission of behavioral guidelines of both positive and deviant nature.

Keywords: socialization, social Internet networks, youth, socialization risks, virtual communication, digital technologies, social capital,**m**information society.

Introduction

The role of social networks in the process of youth socialization is a largely unexplored aspect of the study of both virtual communications and modern forms of socialization process. This is due to the fact that at present, the existing classical and relatively recent ideas about the process of socialization and its agents have gradually lost their relevance and scientific adequacy.

There is a need for a serious conceptual review of these perceptions, taking into account the changes that are taking place and that have already taken place. However, while virtual communication is rapidly growing, becoming more complex, changing, sociological science is not so dynamic and simply does not have time to analyze the current changes that occur in the communicative space of the Internet. This determines the significant difficulties associated with the sociological conceptualization of the phenomenon of social networks and network communication.

The multi-paradigmatic character of modern social science, which is one of its main advantages and benefits, allows us most effectively to use the different approaches developed in the science concerning the study of social networks' influence on process of socialization.

The toolkits of different approaches, their emphasis on individual nuances and features of socialization greatly facilitate the task of studying the process from different angles, in its various aspects, but the researcher faces a more complex task of analysis and rethinking of numerous concepts in order to form a holistic scientific knowledge of the problem. The solution of this problem is not possible without reference to the theoretical studies of the classics of sociological science, despite their antinomicity, the presence of mutually exclusive and contradictory provisions in various scientific concepts.

Materials and Methods

In modern sociology, a number of methodological approaches have been developed, each of which offers its own vision of the phenomenon of social networks and their impact on social processes, including the socialization of young people.

Thus, the neo-institutional approach, based on the concept of M. Castells (2000), focuses primarily on the transformations' study of interactions and relationships between the state and society under the influence of the development of network communication. This approach belongs to the paradigm presented by the theories of *information society, knowledge society*, the theory of global network society. The concept of *information society* has become firmly established in the social and humanitarian discourse a few decades ago, when information and communication technologies were just beginning to have a large-scale impact on the social and cultural development of the world.

Japanese, American, and then European sociologists introduced the term *information society* in the second half of the twentieth century, emphasizing that it is information and knowledge that acquire dominant positions in the modern world, become the main commodity, value and tool at the same time.

The foundations for the future concept of the information society were not accidentally formed in the 1960s-1970s in Japan, where computer technologies were rapidly developing and were actively introduced into production and social sphere. Nevertheless, if the original research of the *coming* information society was reduced to technological aspects, i.e. to the positive impact of computerization on the economy and public life, the deepening of ideas about the information society has raised questions that are more global.

In parallel with the concept of the information society, perceptions of modern society as a post-industrial society have developed. D. Bell (1999), listing the main characteristics of post-industrial society, names among others (transition from the economy of production to the economy of service; the power of managers; the dominant role of knowledge as a source of innovation; management of technological progress) and intellectual technologies, which imply the emergence of computers and computerization of all spheres of social life of modern society without exception (Bell, 1999).

Becoming successful, socially successful person associated with the information skills and knowledge, their application that determines the significance of information technology in the process and education and of socialization in General. Possession of information skills and technologies, the ability to work with information becomes not just an advantage – in modern society, it is a necessary skill, without which the individual is doomed to the position of a social outsider.

M. Castells (2000), who can be attributed to the largest modern researchers of the information society, made a critical rethinking of their predecessors' concepts, who worked on the concepts of post-industrial and information societies in the 1960s – 1980s. Castells believes that information has played a key role in socio-economic development in the past, so it would not be quite right to characterize modern society as information society, but it would rather to characterize it as an era in which information and communication technologies form new network structures. The revolution of information technology, according to M. Castells, has also led to the emergence of a new form of existence of society – a network society characterized by globalization of economic activity, network organization, flexibility and individualization of labor.

Of course, as M. Castells (2000) rightly points out, networks and information cannot be called a phenomenon of the society of the XXI century, because they existed before, but it is in modern society that information and network structures acquired a completely different role, which allowed them to dominate in a number of spheres of social life. In modern society, there is a plexus of networks and information and communication technologies, which together form a new social structure, fundamentally different from the previous models of organization and functioning of society.

Another consequence of the technological revolution and Informatization of society was the transformation of various social institutions and processes, including the socialization of younger generations. First, transformational changes affected the most important institution of the family for society. Although the value of the family is undeniable in modern society, this institution has undergone the most extensive changes.

In the modern information society, traditional institutions of socialization (family, education system, etc.) are weakening their positions. This is especially true of post-Communist and post-Soviet societies that have undergone a systemic transformation. In the process of transformation, the institutions of formal socialization lose their functional effectiveness especially quickly. The rapid development of information and communication technologies, the computerization of everyday life, the emergence and widespread use of youth subcultures and counterculture led to the birth of intersubjective consciousness, in which the other person was seen as something no less reliable than his own "I" (Khaziyeva & Klyushina, 2014). The crisis of socialization was also a consequence of the crisis of self-identification, as the former structures responsible for the socialization of the individual no longer satisfied the identification and communicative needs of modern man.

This situation was determined not only by the emergence of information and communication technologies, but also by numerous other economic and social factors inherent in the modern world. The younger generation has lost distinct guidelines and meanings, or rather – was faced with a rather difficult prospect of the need for their independent search and in this search the older were no longer, as before, reliable and experienced advisers (Kirdyashkin, 2018). Their place was taken by the Internet - it is in the interactive space that young people today draw the bulk of their knowledge, and not only carries out virtual communication.

At the same time, the modern sociological discourse has formed an ambiguous attitude to the transformation of the Internet and social networks into an actual institution of youth socialization. Trying to follow *in step with the times*, Western researchers in large part not critically enough perceive the fact of *digital* socialization, focusing on the democratic nature of the Internet in General and social networking in particular, and decentralization as the key advantage, enabling adolescents and young people to be themselves and to communicate with loved ones in the mental aspect (Awan & Gauntlett, 2013). From this point of view, Internet communication has a stronger impact on the formation of new social relations in modern society, which can result in leisure communication, as well as in some social and political actions (Diani & Mcadam, 2003).

Modern youth, if we turn to the generational theory of W. Strauss and N. Howe and W. Strauss (1991), developed in relation to the United States, but has the ability to project on the Russian reality, refers to two generations – generation Y (the so-called "Millennials", or the Millennium generation), whose representatives were born during the 1980s – the first half of the 1990s, and generation Z, whose representatives were born in the late 1990s-the first decades of the XXI century (Howe & Strauss, 1991).

Features of socialization of modern youth is that their maturation is already fully in the information age, in the age of digital technology. Modern young man cannot imagine life without the Internet, gadgets, and digital technologies. The Internet, including virtual networks, is beginning to play an increasingly important role not only in the daily life, studies, work and leisure of today's young people, but also in their socialization.

Recently, new concepts of *digital generation* have appeared. Thus, American researcher gene Twenge introduces the concept of *generation iGen* (internet generation) (Pichugina, 2019). The Internet generation includes people born between 1995 and 2012. The formation of this generation took place in the era of the total spread of gadgets, digital technologies and social networks of the Internet. They cannot imagine life outside of digital technologies. Gadgets are becoming increasingly influential in the lifestyle of this generation, with the help of which young people and teenagers go online, communicating with their own kind and getting access to the content they are interested in. It is through the prism of virtual reality that the network generation "perceives and constructs the real world, the future of which, as an information world, is largely determined by the value and behavioral attitudes of the network generation generated by it" (Krasnorutsky, 2017).

Results

The second approach, related primarily to the sociology of P. Bourdieu (2002), is characterized by the analysis of social networks from the perspective of social capital accumulation. As L. Voropai (2018) notes, in sociology of P. Bourdieu (2002) there is a close relationship between the concepts of social capital, socialization and habitus: "Habitus is a product of socialization process and includes learned and reproduced by the individual (*agent* in Bourdieu's terminology) ways of perception, thinking and action, which are also socially marked and determined". At the same time, the habitus in the conceptual system of P. Bourdieu is a form of cultural capital incorporated by the individual in the course of socialization, which mainly determines the career potential and overall social success of a person.

Widely using the concept of capital borrowed from Marxism, P. Bourdieu (2002) considered social capital as a set of resources and opportunities possessed by the individual due to its integration into certain social networks and groups. Influenced by Marxist tradition, Bourdieu understood social capital as a social relation, emphasizing the relationship between social relations and economic capital. Social capital can materialize in real forms, turn into real economic capital. At the same time, Bourdieu introduced an innovative moment in the traditional ideas about capital, highlighting its various types that can be converted into each other, which allowed "more accurately and nuanced to describe and conceptualize the complex system of social interactions and relations of power that has developed in the transition from industrial to post-industrial society" (Voropai, 2018).

Thus, considering economic capital as only one of the forms of capital, he allocates along with it cultural and symbolic. Moreover, if by economic capital Bourdieu understands the economic resources available to the agent, -money and property, - then the cultural capital is education, knowledge, manners, skills obtained by the agent because of socialization and habitualized his social group.

In direct connection with cultural capital and in relation to mutual conversion with it is social capital – obtained through birth or acquired connections, which largely determine the social position of the agent and his career opportunities. Thus, according to the concept of P. Bourdieu, the formation of the personality of an individual agent through the assimilation of habitus and socialization is to acquire social and cultural capital.

From this point of view, the influence of social networks on the process of socialization of the younger generation, as it seems to us, is legitimate to consider on the basis of the methodology of P. Bourdieu (2002) as additional opportunities for the acquisition of social (in the form of connections) and cultural (in the form of skills and knowledge competencies) capital.

In turn, the well-known representative of the theory of rational choice J.C. Coleman (2004) gave rise to a different conceptual line of analysis of social capital, considering the latter not as an attitude that produces things, but as a *thing*, that is the source of relations. It is the relationship of individuals among themselves, based on trust and partnership, become, as emphasized by J. J.C. Coleman (2004), the social capital that, like glue, cements society.

R. Putnam (1993) emphasizes that social capital has the features of social organization – trust, norms and networks that contribute to the effectiveness of social communication and improve coordination of actions (Putnam, 1993).

F. Fukuyama (1999) also defines social capital as "an opportunity arising from the existence of trust in society". Accordingly, at the individual level, social capital is understood, first, as a resource of the individual, allowing him to use the common (collective) resource of the community. At the same time, social capital can have a group, not an individual character, being a resource of some community of individuals-organizations, enterprises, parties, etc. (Macerinskiene, Minkute-Henrickson & Simanaviciene, 2009).

These additional facets of the interpretation of the concept *social capital* allow us to see the impact of social networks and as the formation of public trust, the assimilation of social norms.

The main features of social capital include flexibility, durability, reliability, the ability to produce other forms of capital and to invest (Robison, Schmid & Siles, 2002), although, of course, if you apply the concept of social capital to reality, these criteria do not work in all cases. Social capital opens up the possibility for an individual to use resources, including economic resources, of the Association or network to which he or she belongs or with which he or she has a trust relationship. If in the traditional sense it can be a family, clan, genus, ethnic Diaspora, in the modern information society virtual communication is becoming increasingly important. Accordingly, social ties and relationships are also settled in the virtual space.

Discussion

Modern sociology is rapidly developing a new paradigm-social riskology. Considering social phenomena and processes from the point of view of their ability to generate risks and in close connection with the ability of society to reflexively understand the riskiness of certain factors, researchers in this area pay attention, first of all, to the negative, risky consequences of the impact of social networks on socialization - and for the younger generations themselves, and for society as a whole. They associate the use of the

Internet with a number of social and psychological risks. Among the psychological risks is the Internet addiction associated with a sense of euphoria from being online (Beard, 2011), the emotional need for constant online presence and the replacement of real social connections with virtual ones (Varlamova, Goncharova & Sokolova, 2015).

B. Zizek (2017), formulating his critical concept of socialization in social networks, argues that many network platforms do not satisfy the need of young people in development, encouraging them to abandon existing social relations, replacing them with a focus exclusively on virtual reality. The leading role in the socialization of young people is played by *strong ties*, which are characteristic of the real, not the virtual world. Thanks to *strong ties,* relations between people deepen, developing into more frequent and close interaction. Online space is a territory of *weak ties*, which are fleeting and changeable, and from their rupture or establishment of new ties a teenager or a young person loses or acquires little.

Speaking about the risks of cyber socialization, modern researchers at the same time note the existence of different strategies and approaches to the use of the Internet in General and social networks in particular in certain groups of young people.

For example, J. Smith, B. Hewitt and Z. Skrbiš (2015), summarizing the sociological research conducted in Australia, concludes that young people who were brought up with limited access to Internet resources, perceived network technologies primarily as a tool to improve the quality of their studies or work. The Internet provides more productive opportunities for academic and other research than other, more traditional ways of doing intellectual work.

With cyber socialization, many modern researchers also associate the spread of aggressive behavior towards others or themselves among young people and adolescents (Boldakova, 2015); obtaining unsystematic and carrying numerous risks information of extremist, pornographic, suicidal content; with de-socialization they associate the *dropping* out of social reality and, as a consequence, the spread of alcoholism, drug addiction, and other forms of deviant behavior among *cyber-dependent* young people (Rostovtseva, Mashanov & Khokhrina, 2013).

In addition, the Internet, according to the separation theory put forward By L. Henderson, P. Zimbardo and J. Graham (2002), acting as a catalyst for communication and a tool for increasing communication activity, is also able to reduce social activity in real space. For example, S. Lee (2009) emphasizes that young people in the process of cyber socialization have a kind of shift; they begin to communicate less with real friends, relatives, family members, as their communication priorities are shifted to the virtual space.

The researchers note that *changing* the direction of the young man to virtual communication entails a high probability of difficulties in real social communication (Komarova, 2018), the young man can turn into a kind of modern recluse (for example, Japanese *Hickey* (Baeva, 2018), seeking to reduce contacts in the real social space to a minimum. Thus, the consideration of the impact of social networks on the socialization of young people in the perspective of social riskology focuses on the identification of numerous social, psychological and socialization risks. At the same time, the greatest number of risks are faced by representatives of the generation of *digital aborigines*, whose childhood has already fallen on the era of the universal spread of digital technologies.

In this regard, the modern sociological science has widely adopted the approach of increasing the controllability and manageability of the activity of adolescents and young people on the Internet, which would protect the younger generation from the many risks of interactive communication and would focus on the development of constructive ways and purposes of using the benefits of the Internet.

Conclusion

The study of the problems associated with the socialization of young people in the global information and communication space requires the involvement of several methodological approaches presented in modern theoretical sociology.

The corpus of such approaches includes:

– The theory of the information society, especially the theory of the global network of M. Castells (2002), which clearly emphasizes the qualitative difference between the modern type of culture and sociality, due to the specifics of Internet technologies. These theories make it possible to realize that in the modern world a type of culture has been formed in which the material and symbolic parameters of the individual's life are completely immersed in network communication, and this radically changes the modern man in the specifics of his social connections and interactions;

– theories of social capital, which go back to the sociology of P. Bourdieu and give the opportunity to consider the impact of social networks on the socialization of young people in terms of the accumulation of virtual and real social relations, specific skills of network communication, competencies acquired in social networks;
– the concept of social riskology developed in the theories of *risk society* that provides the paradigm of vision of the network communication processes from the viewpoint of produced by them, socialization risks associated with the formation of deviant trajectories of socialization, the stream and securing the youth behavioral deviance, deficiency of the interiorization of social values.

These methodological approaches can be used comprehensively, despite their different paradigmatic affiliation, since the tasks arising from the purpose of the study focus on the analysis of socialization risks generated by the involvement of individuals in a qualitatively updated environment of socialization, formed by modern information network society.

The breakthrough in the field of digital technologies that characterizes modern society has contributed to a radical change in social reality in the direction of the formation of a global information and communication space, the economic, cultural and symbolic dimensions of which are constituted by cross-border network connections. A significant component of this Constitution constitute the social Internet network, which is the most widespread form of involving young people in information and communicative interaction.

The expanding influence of network communication on the personal formation of young people and adolescents involved in it gives grounds to see an informal agent of socialization in social Internet networks, able to effectively compete with traditional socializing institutions. This potential is largely due to the multi-functionality of social Internet networks, which combine the performance of information, communication, identification, recreational functions, which provides a high attractiveness for young people of social networks as an institution capable of satisfying a wide range of requests and needs.

In Russian society, as in all post-Soviet societies that have gone through systemic transformations, traditional socializing institutions have been functioning for a long time with insufficient efficiency, which was caused by the introduction of new foreign cultural values on the Russian soil and into the basis of socialization. At present, the impact of this dysfunctionality of socialization institutions remains and the socializing influence of Internet networks actually fills the deficit of the effectiveness of targeted institutional socialization in relation to the age categories of young people born in the mid-1990s, which corresponds to the *generation* Z in the classification of M. Prensky.

This complex includes the theories of the information society and the theory of the global network of M. Castells (2002), which make it possible to consider social networks in the broad context of global cultural, symbolic and social changes of our time; the theory of social capital of P. Bourdieu, which allows to assess the impact of social Internet networks on the process of socialization in terms of mastering by young people the skills, qualities and connections that have a positive potential for further building life strategies and the formation of values and normative attitudes; theories included in the paradigm of social riskology, allowing to identify and assess the socialization risks produced by the influence of social Internet networks.

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The Impact of Market Conditions on the Strategy to Promote the Services of Russian Telecom Operators' Promotion Strategy

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Abstract

High requirements to information transfer are on the one hand the reason, and with another the driver of active growth and transformation of the market of services of the Russian telecom operators, complementing and expanding the range of traditional and generating new offers. Active promotion of new opportunities by leading Russian telecom operators improves the quality of services for the transfer of various types of data in digital format. Consumers who actively participate in the selection of the optimal individual set of communication services and prefer to save money from their personal budget have a significant impact. These points determine the purpose of the study - to assess the impact of market conditions on the strategy of promoting the services of Russian telecom operators. For the analysis of the existing problem, theoretical and empirical methods, methods of quantitative and qualitative analysis, methods of data aggregation, expert evaluation, classification and structuring of information, reference and statistical data, comparison method were used. As a result of the study, the factors determining the development of telecom operator services on the Russian market were structured. The development strategies of cellular communication companies have been assessed and features of the promotion of mobile operators have been highlighted. The obtained data were used to compile a rating of cellular operators in Russia. The materials of the article can be used in the work of specialists dealing with the promotion of services of Russian telecom operators.

Keywords: service prediction, cellular communication, development strategy, services, telecom operators.

Introduction

There are 4.92 billion mobile users in the world, which is 66% of the total population. (Digital in 2017 Global Overview report from We Are Social and Hootsuite, 2017). The market of telecommunication services in many countries tends to expand and intensify competition from national and international telecom operators, as well as operating in conditions of instability in the development of customer preferences, what has a direct impact on economic results and efficiency of use of resources in the course of rendering telecommunication services (Filatov et al., 2015). The market of mobile communication services refers to high-tech markets. According to a study by BDRC Continental consulting company and the British provider Cable.co.uk, Russia in 2018 was among the leaders of the countries with the most accessible Internet (4th place) (Worldwide Broadband Price Comparison, 2018).

As it is noted in the work (Zhuravleva & Slobodkin, 2006), an important factor in the development of the telecommunications industry is the successful and dynamic development of the Russian economy.

Articles (Dudarenko, 2011; Kurasov, 2010) showed that the introduction of 4G networks into industry practice improved the quality of mobile communications, increased data transfer speed, increased operators' profits, and significantly reduced the costs of mobile communications and the Internet.

In the dissertation research by V.V. Alekseeva (2007) analyzes scientific and theoretical approaches to the study of marketing strategies to increase the competitiveness of Russian cellular companies, study methodical approaches to the development of marketing strategies of Russian mobile communications companies in the regional market in the telecommunications sector, on the basis of which the author developed a methodology for assessing the competitiveness of cellular enterprises. in telecommunications. In a study by E.A. Vasilyeva (2010) the structure, problems and prospects for the development of the telecommunications services market, and developed methods for ensuring the competitiveness of cellular communications enterprises in a saturated market are studied. In the study of B.N. Asekova (2004) the organizational and economic basis for improving the quality of cellular services on the Russian market in the face of increasing competition are developed. One of the key points in the development of cellular operators' services is the systematization of approaches to identifying achievement measures, the organization's goals, types and criteria for the manifestation of applied promotion strategies in a telecom operator, which determines the relevance of the research topic.

Methodological framework

The methodological basis of this study was the scientific research of Russian and foreign researchers (Shake & Sutton, 1984; Pishchin, 2009; Zhuravleva & Slobodkin, 2006; Dudarenko, 2011; Kurasov, 2010; Rozanova & Bulychenko, 2011; Matyushkina & Ponomareva, 2016; Pakhomova, 2018) and others who were engaged in the research of the services market telecom operators, as well as the results of analytical agencies and research consulting companies.

To study the impact of market conditions on the strategy of promoting the services of Russian telecom operators, theoretical and empirical methods, methods of quantitative and qualitative analysis, methods of data aggregation, expert assessment, classification and structuring of information, reference and statistical data, comparison method were used.

Results and Discussion

The main factors influencing market conditions on the strategy of promoting the services of Russian telecom operators.

According to the results of empirical research (data from the TMT Consulting analytical agency, Fig. 1), the telecommunications market in Russia annually shows an increase in sales of services, the highest growth rate observed in 2018, compared with 2017.

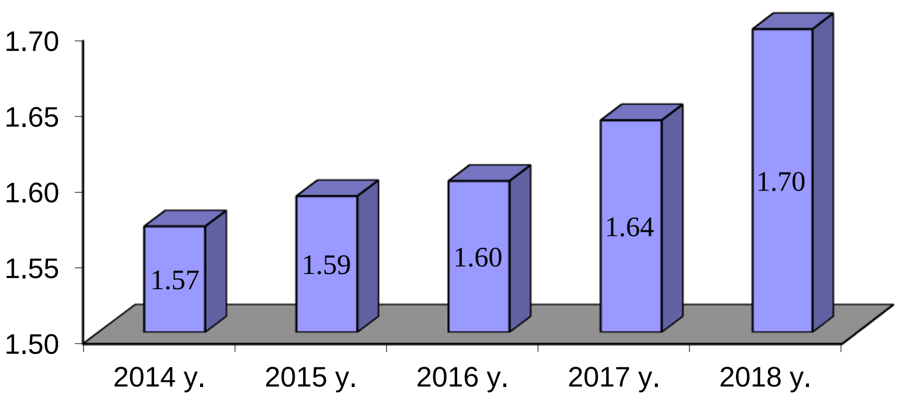


Figure 1. Telecommunications market in Russia in 2014-2018, trillion rubles (The telecommunications market in 2018 received a record growth over the past 5 years, 2018).

In general, the volume of the telecommunications market increased from 1.57 trillion rubles in 2014 to 1.7 trillion rubles in 2018.

The rapid growth of the telecommunications industry in Russia is characterized by the following trends:

– increase of entrance barriers (cost of equipment and software for mobile communication),
– tough competition in the mobile market,
– reduced competition from traditional means of communication (wire telephony, radio communication).

According to some authors, for the telecommunications industry it is necessary to use the network model of the market when the number of participants is determined and on which there is a high differentiation of the products and services offered, and refers to the network oligopoly (Rozanova & Bulichenko, 2011). This model of product differentiation, where each product can be characterized through a set of properties was developed by British economists (Shake & Sutton, 1984).

Traditionally, foreign authors believe that the telecommunications industry is characterized by monopolistic competition or oligopolies (Parker & Röller, 1997; Valletti, 1999; Valletti & Cave, 1998; Stole, 1995).

In assessing the telecommunications market in Russia, the Herfindahl-Hirschman Index (I_{HH}) was used, which helps to determine the degree of market concentration based on the share of each market participant in the industry.

$I_{HH} = \sum_{i=1}^{n} S_i^2$,

where Si is the share of the i-th operator in the total volume of services of the cellular communication market, n is the number of operators.

Interpretation criteria for the result: that the greater the proportion of enterprises in the industry is, the greater the likelihood of a monopoly is, and the level of the Herfindahl-Hirschman index above 1800 indicates a highly monopolized or oligopolized industry.

For Russia, I_{HH} = 2449, which indicates a very high degree of concentration of the cellular communications market, that is, its oligopolistic character.

As noted above, the market for services of cellular operators belongs to high-tech markets, therefore, as noted by O.N Pishchin (2009), innovations are the basis for increasing the profit and competitiveness of cellular communication service companies.

Improving the quality of telecommunications services leads to higher prices for tariff plans (Harno, 2010). In this regard, cellular companies are forced to do their best to optimize tariffs, manage pricing and develop strategies to promote the services of Russian operators.

According to the results of the materials' research of existing scientific research on the development of telecommunication services in general, and services of mobile operators, both in the Russian Federation (Fiseysky, 2008; Kobylko, 2009) and abroad (Choi, Lee & Chung, 2001; Corrocher & Zirulia, 2009), conducted by the authors of the article, identified and grouped the main groups of factors determining the development of cellular communications of Russian operators (Table 1).

Table 1. The main factors determining the development of services of telecom operators on the Russian market

Factors	Content
1) Growth of mobile subscribers in the regions	Qualitative indicators of the growth of telecommunications services are accompanied by a disproportionate growth rate of the subscriber base in the regions.
2) Consolidation of assets of mobile operators	The growth in the number of subscribers is accompanied by the consolidation of the assets of large operators through the absorption of small ones in strategically important regions.
3) Reduction of tariffs and the growth of data traffic in mobile services	The main share of telecommunication services falls on the GSM standard (79 regions of Russia with the number of subscribers over 139 million).

4) Providing an integrated package of telecommunication services	The growth in the number of subscribers is accompanied by the expansion of the service package: mobile communication, access to the satellite television program package and access to the mobile Internet, access to mobile applications and electronic services, access through social networks content through special applications.

With the development of 4G / 5G / 6G technology in Russia, operators' pricing strategies transform the structure of the services provided, adding access to the package of satellite television programs and access to the mobile Internet to the package of services, and the emphasis on the promotion of services is changing.

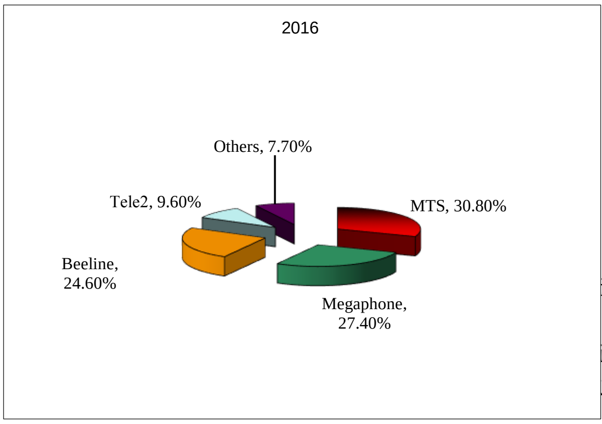
According to the results of the study, it is possible to identify such features of the market of services of mobile operators, such as:

- oligopolistic character, high degree of concentration of the cellular communication market,
- competition of strong brands in the market;
- the high rate of technological change of the “leading four” towards the formation of 5G / 6G networks in Russia.

3.1. Investigation of Strategies for the Promotion of Mobile Operators’ Services

Cellular services today are the most profitable and rapidly growing segment of the telecommunications market.

The market research shows the sustainable development of the four main companies MTS-31%, Megaphone - 29%, Beeline (PJSC “Vimpelcom”) - 23% and Tele2 - 16%, which already in 2017 accounted for 99% of the entire market and this trend continued and in 2018.



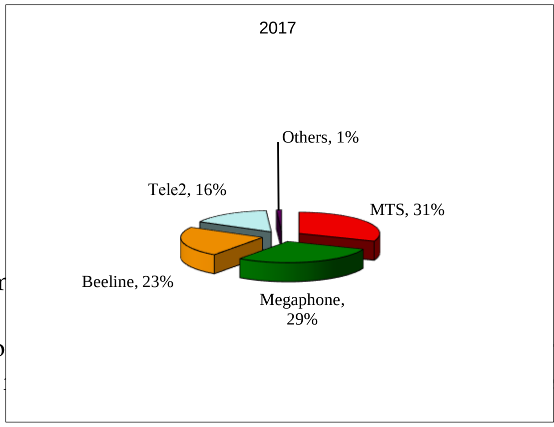


Table 2. Key financial indicators of mobile operators (Market shares and key financial indicators of mobile operators in 2017, 2018)

Indicators	MTS	Megaphone	Beeline	Tele2
Revenue billion rubles.	442,9	321,8	327,5	123
Net profit billion rubles.	56	20,52	7,6	-5,5
Change in revenue compared to 2016, %	1,7	1,8	19,8	16,2
Change in net profit / loss	15,6	-29	-63,2	64,6

compared to 2016, %				

Of a particular interest is a quantitative study of the formation of pricing policies for the provided mobile communication services by market participants.

Until 2017, the main method of competition between operators was price reduction. But the decline in the revenue in 2016 led to a revision of the promotion strategies, and a tacit agreement on “reconciliation” was made by the mobile communication companies. Operators have moved from dumping policy to a strategy aimed at retaining subscribers. This strategy had a positive impact on the mobile communications market. So, for example, in the 3rd quarter of 2017, revenue growth was observed, whereas for the same period of 2016, the revenue growth rate was negative.

A study of the telecommunications market allowed compiling a rating of major companies.

Table 3. Rating of cellular operators in Russia for 2018

Operators	Percentage of voice connection failures and breaks during a conversation, %	Number of not received SMS, %	Average speed of the mobile Internet, (Mbps)	4G coverage in Moscow and Moscow Region,%	Budget Tariff Plans	Favorable tariff plans
MTS	0,8	2,4	10,1	30,9	«SMART»	"SMART Overseas"
Megaphone	0,7	1,7	13,1	32,2	“Turn on! Write"	“Turn on! Communicate
Beeline	15,1	0,0	5,0	28,8	"All for 350"	"All for 600"
Tele2	1,2	1,2	9,4	8,3	"My conversation"	«My Tele2»

* developed by the authors, based on expert estimates of RosKomNadzor

As you can see, Megaphone provides Internet services of 13.1 Mbit / s, whereas Beeline (PJSC “VimpelCom”) - 5.0 Mbit / s, but at the same time Megaphone has the largest number of failures when connecting to IP / TCP and http. Independent analysts at ComNews Research estimate that, on average, Russian subscribers have to pay 350 rubles for a minimal set of cellular services per month.

For communication within the region, the MTS operator has become the cheapest. and if we talk about affordable communication throughout Russia, Tele2 is leading here.

Evaluation of strategies for the development and promotion of services companies identified the following:

1) MTS continues to adhere to the policy of diversifying its business being an innovator in the field of digital, the strategy of the company “3D: Data. Digital. Dividends. In 2018, MTS began to actively develop online services in preparation for passing the EGE. The company entered the distance education market by launching the Smart University platform. With this service you can prepare for the exam in English, in the future it will be replenished with other subjects. Popularization and promotion of a wide range of services, as well as the development of innovations with the aim of improving the quality of life of subscribers and their security, is the basis of the company's development strategy. Therefore, in marketing communications, the company concentrates on working with existing customers and follows a strategy of increasing loyalty through subscriber engagement. For this, combinations of different formats are used, for example, increasing

brand loyalty through the involvement of each person in the value of the MTS brand or is illustrated by examples of how entire industries work and develop together with MTS products.

2) Megaphone continues to actively cooperate with the technology company Mail.Ru Group, which owns the VKontakte, Odnoklassniki social networks, ICQ and TamTam, instant messengers, as well as the Yula mobile ad free service and Deliver Slub food delivery platform. However, in May last year, Megaphone changed the company's development strategy until 2020. Changes were made to the dividend policy and the size of the optimal debt load ratio, as well as the differentiation of Megaphone, Yota and VKMobile brands. In 2018, the company launched a program for quick fare payment in public transport, and in November became an investor and co-owner of the taxi service “Citimobil”, which works as a mobile application to continue active promotion of the service in its own and external communication channels. As well as digital promotion to familiarize users with the service, support and promotion of product offers - development of service processes and sales of new products in contact centers and on self-service channels. The development strategy of Megaphone notes that the company's focus will be to “attract digital customers” and transfer existing users to this category, while increasing the number of customer services in order to increase revenue from them by 2–5% annually. ” (Megaphone presented a development strategy until 2020, 2017)

3) According to customer estimates and expert reviews, Tele2 was recognized as the best operator by the cost of services for the majority of users who are interested in the Internet, calls and messages. Until 2016, Tele2 developed as a discounter, focusing on the lowest price. But in the future, a new business strategy was developed, called the Lifestyle enabler (“assistant in maintaining a lifestyle”). And this model began to imply for Tele2 the offer of the best service at the best price. After such strategic changes, in the beginning of 2017, a new communication strategy was presented until 2021 with the slogan “Tele2. Other rules”. Part of the brand’s advertising campaign is based on opposing itself to other operators, in particular the “Big Three”

4) Beeline is more focused on television advertising and promotion of its products, offering its customers a service such as exchanging minutes for gigabytes.

The calculation of internal and general competitiveness for each cellular operator has a high information value (table 4.). Analysis of the competitiveness of enterprises of communication services was carried out on the basis of expert assessments of factors. Experts here are three experienced users of communication services, who use a five-point scale to assess competitive advantages (Filatov & Kovalenko, 2012).

Table 4. Competitiveness of the largest mobile operators

Competitiveness levels	MTS	Megaphone	Beeline	Tele2	Perfect value
Market share	0, 31	0, 29	0, 24	0, 1	0, 65
Internal competitiveness	0, 398	0, 393	0, 221	0, 252	0, 707
Overall competitiveness	0, 041	0, 038	0, 017	0, 008	0, 153
Relative internal competitiveness Megaphone	0, 987	-	1, 775	1, 559	0, 555
Relative overall competitiveness Megaphone,%	92	-	223	475	24

* developed by the authors, based on expert estimates of RosKomNadzor

The assessment shows that MTS and Megaphone are leading in this market, and Beeline and Tele2 are moving more and more into local markets.

Thus, according to the results of the study, we can conclude that the market for cellular services in Russia is in its saturation stage, which requires a focus on servicing corporate customers and sharpens competition, increasing service levels and quality of service, and ensuring the loyalty of existing customers.

The leading companies in the cellular market in Russia adhere to various strategies, but the dominant one is the differentiation strategy and branding strategy to promote services, the goal of which is to attract new customers, retain subscriber bases, develop long-term customer relationships, and increase customer loyalty.

Conclusion

Based on the results of the study, it can be concluded that the economic situation in the market of services of Russian telecom operators is characterized by a high level of competition, a high degree of concentration and high rates of technological innovations. The growth in the number of subscribers is accompanied by the consolidation of the assets of large operators through the absorption of small ones in strategically important regions and the expansion of the package of services. The ongoing changes in the market for mobile services lead to a change in the strategies for the promotion of telecom operators. Since the growth of the cellular services market has slowed in recent years, operators have associated an increase in sales volumes with the development of “digital clients”, subscribers who monthly consume a large amount of mobile Internet traffic, use mobile applications, communicate in instant messengers, and use the telephone to pay goods and services. If until 2017, the main method of competition between operators was dumping wars, from 2017 there has been an emphasis on promotion strategies for retaining subscribers and developing long-term customer relationships, developing customer loyalty, concentrating on serving corporate customers and improving service levels and quality of service.

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Assessment of The Main Trends in the Development of The Tariff Policy of Telecommunications Services of Market Operators

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Abstract

The relevance of the research topic is determined by the high growth of the telecommunications services market's rates throughout the world, by the spread of its area of influence in related areas, displacing traditional types and forms of service provision. In the face of increasing competition for consumers, operators of the telecommunications services market are increasingly paying attention to the issues of improving tariff policy. In this regard, the purpose of this article is to identify and assess the main trends in the development of the tariff policy of the operators of the telecommunications services market. The study was conducted on the example of Russian companies. The leading methods in the study of this problem were the methods of theoretical and empirical methods, the method of consolidation and generalization of the results of the research, the methods of expert evaluation and complex analysis of problems, the method of preference vectors. The article assesses the state and prospects of development of the Russian telecommunications market, substantiates the most significant factors influencing the tariff and service policies of operators of the Russian telecommunications services market, identifies the main trends in the development of the Russian telecommunications services market. The materials of the article can be used not only by Russian, but also by other operators, operators of the telecommunications services market in emerging markets in determining ways to improve their tariff policy.

Keywords: telecommunication services, competitiveness of telecommunication services, efficiency of sales of telecommunication services.

Introduction

Since 2010, there has been an increase in the number of dissertations and scientific publications devoted to the development of telecommunications services in general, and cellular communications in particular. The main surge of interest in this problem was noted in the studies of Russian scientists in 2010–2012 (Vasilyeva, 2010; Oshanin, 2010; Mityaeva, 2012). In addition, many Russian scientists investigated the competitiveness of these services, including by improving the tariff policy of telecommunications services operators (Lukashova & Losev, 2012; Agalarova & Borisova, 2016; Bekher & Fedotova, 2016; Kaminsky & Lukashova, 2016). At the same time, this market is developing so rapidly that it is necessary to constantly update the research results to take into account all new factors and trends that influence the development of the Russian telecommunications services market.

In the context of the innovative development of telecommunications on both the Russian and international markets, the possibility of extensive growth of companies providing mobile communication services is decreasing. To maintain their position (or expand their business), to ensure the stability of the financial performance of companies operating in the telecommunications market, they are faced with the need to expand and diversify the services provided (Filatov & Kovalenko, 2012). From this point of view, a comprehensive study of the functioning of the provider of mobile communication services, as well as analysis of the main trends and tariff plans of Russian operators in the telecommunications services market, becomes extremely relevant.

The largest segment of this market with a share of 52% is mobile communications. In the period up to 2021, it will grow by 2% per year due to an increase in the volume of mobile traffic and the increasing distribution of M2M services. In second place is a fixed line, providing 21% of the total market volume. Due to the growing demand for high-speed communications, this segment will grow by 4% per year until 2021.

The pay-TV segment, which includes cable, satellite, IP and digital terrestrial TV, may stop its growth, while the fixed telephony market volume will decline by 6% annually and by 2021 will occupy only 10% of the telecom and TV services market.

According to the preliminary data from TMT Consulting, the Russian telecommunications market in 2017 grew by 1.3% compared with 2016 and reached $ 1.62 trillion rubles. The mobile segment increased by 1.5%, and the segment of Internet access - by 3.8%. Unlike the world market, the segment of pay-TV is still actively developing in Russia - in 2017 it increased by 10.5%. At the same time, the fixed telephony segment showed a decline of 9%, and inter-operator services - by 7%. The overall positive dynamics of the market as a whole is due to a small share of these segments in the total market volume - about 17% (Russian telecom is still growing slower than the world, 2018).

If we talk about the number of subscribers, in the mobile segment their number increased by 1.7% compared with 2016 and reached 260 million, in the segment of broadband Internet access - by 3.7% to 34 million, pay television - by 3.4% to 42.6 million, while in the fixed telephony segment it decreased by 10.5% to 28.4 million. Thus, in 2017, the penetration rate of fixed telephony fell to 38%.

As for forecasts for the next 5 years, according to analysts of TMT Consulting, the Russian telecommunications market will grow by more than 1% per year, provided that there is no new round of price competition from mobile operators, the implementation of the Digital Economy program and the development of the Internet things based on 5G networks.

At the same time, the telecommunications services market itself is developing so rapidly that completely new trends are emerging, the leaders of the segments of this market, as well as consumer preferences, are changing. Therefore, there is a need for continuous research on the main trends and tariff plans of Russian operators in the telecommunications services market.

Methodological framework

To carry out this study, the authors of the article used the methods of theoretical and empirical methods, the method of consolidation and generalization of the research results, the methods of expert evaluation and complex analysis of problems, the method of preference vectors.

The methodological basis of this study was the scientific studies of Russian and foreign researchers engaged in the research of the telecommunications services market.

The methodological basis for the study of the economics of companies operating in the telecommunications services market was the work of foreign authors such as (Birke & Swann, 2006; Doganoglu & Grzybowski, 2007; Grzybowski, 2005; Dunnewijk & Hultern, 2007; Koski & Kretschmer, 2005), as well as the works of russian researchers (Matveeva, 2006; Bolodurina & Ogurtsova, 2012; Pakhomova & Preobrazhensky, 2015; Labazanova, 2015; Makarov & Sinitsa, 2017), and others.

Results

3.1. Assessment of the State and Development Prospects of the Russian Telecommunications Market

The volume of the telecommunications market in 2018 reached 1.70 trillion rubles. The growth rate of income was 3.4%, this is the highest dynamics in the last 5 years. Growth was mainly due to the accelerated revenue from mobile communications, showing an increase in revenues for the second year in a row. In addition, the growth rates of broadband access and pay TV markets remained stable. Fixed telephony and inter-operator services continued to decline, but their negative dynamics slowed down somewhat, in addition, their contribution to the total revenue of the industry and the impact on its development rates is decreasing annually. The steady decline in the fixed telephony market is due to the failure of subscribers from this service in favor of mobile communications. The inter-operator market is shrinking in the context of low new demand and lower prices in selected international areas (Filatov et al., 2015).

The dynamics of the mobile market was favorably affected by the initiative of operators in 2017 to “repair the market”, which included the rejection of price competition, the abolition of unlimited tariffs and an increase in the supply of basic and additional services. Despite the new intensification of competition in many regions of the country and the return of no-limit, the positive effect of the initiatives was felt throughout 2018. In addition, significant growth was observed in the segment of corporate clients, primarily due to an increase in revenue from SMS mailings, M2M and other additional services.

As a result, in 2018, the trend to increase the average revenue per subscriber, formed a year earlier, was preserved not only by successfully selling services based on its new 4G / 5G Tele2 network, but also by the Big Three operators. In a saturated market, operators switch from the race for a new subscriber to serving the existing customer base, and we can expect a further reduction in the number of users in subsequent years. This is due to the increase in tariffs carried out by some operators, the growth in the consumption of additional services (VoD, multiroom, deferred viewing, etc.), as well as the change in the accounting methods for revenue by individual players.

A study of the telecommunications services market has led to the conclusion that in 2019, operators may face a number of new challenges. This is due to the fact that the largest segments of the market have reached saturation, in addition, the negative impact of unlimited tariffs will appear in mobile communications, and further intensification of competitive struggle is also possible. Also, operators will not only maintain a high growth rate of the segment of additional services in the mobile B2B market.

It can be assumed with a high degree of confidence that the increase in ARPU will in most cases be achieved in 2019 due to the traditional formula for the industry - more services for big money, that is, customers will be offered more traffic and services to meet their growing needs, primarily in Internet services. Under these conditions, we can expect the market to maintain positive dynamics in the medium term at a level of 2-3% per year. However, the reality of these prospects is affected by a large number of factors and trends existing in this market.

3.2. The Most Significant Factors Influencing the Tariff and Service Policies of the Operators of the Russian Telecommunications Services Market

In general, according to the results of the analysis of data on the development of the telecommunication services market in the Russian Federation, it should be noted that 2018 was the year of the recovery of the Russian mobile communications market after falling over the period 2014-2017 (The Russian cellular market is slowly recovering, 2018). Nevertheless, in the medium term, the market situation retains a negative potential. So, regardless of the market strategy and the dynamics of real wages of the population, pricing in the market with four federal players obviously implies lower margins compared to the previously established oligopolies of the “triplet”. Probably, the first consequences of the aggravated competition have already appeared in the 4th quarter of 2017 and in this respect caused the greatest damage to the margin of Megaphone, as it can be seen from the data in Table 1.

Table 1. The influence of factors on the dynamics of mobile service revenue and margin OIBDA mobile operators in Russia

№	Factor	Nature of influence
1	Dynamics of real wages	In the conditions of a long and significant decline in real wages, Russian households have shown a previously uncharacteristic tendency for them to save on communication services. According to Rosstat, from 2013 to 2017, the share of the corresponding household expenditures decreased by 2% to 3.3%. Consumers switched to cheaper rates and refused from additional SIM-cards.
2	Ruble's	A large share of operating expenses of mobile operators is historically tied to the

№	Factor	Nature of influence
	exchange rate.	dollar rate. In addition, the weakening of the national currency reduces revenues from foreign roaming amid falling foreign tourist traffic, as well as other categories of VAS revenues.
3	Increased competition.	The launch of Tele2 at the key Moscow region for Russian operators had a negative impact on pricing. In fact, the oligopolistic model of competition of the "triple" has made a big step towards monopolistic competition. Combined with the fall in real wages that had intensified by then and the weakening of the ruble, companies in the sector showed a record simultaneous drop in margins.
4	Attempts to diversify.	Reducing margins and strengthening state regulation naturally led to lower profitability of investments. In the mobile market, a trend towards diversification took shape (Megaphone's purchase of control at Mail.ru Group, MTS investment in Ozon and system integration, the development of VEON's own Internet platform). In some cases, M & A transactions strongly unbalanced cash flow and overloaded the company with debts. In particular, against this background, Megaphone refused to pay dividends (Pavlova, 2017).
5	Attempts for non-market pricing.	After a record decline in mobile revenue and a contraction of margin in the second half of 2016, market players began to synchronously change their pricing strategy on the principle of "more services at a higher price", including at archived rates. The first step was the abolition of unlimited data tariffs in early 2017, the second - the increase in prices for the now limited VAS. The actions of the operators coincided with the local recovery of real wages of the population and led to a noticeable acceleration of the growth rate of mobile revenue in Russia, as well as a regular improvement in the margin. Nevertheless, the actions are interested in antitrust authorities and may have a short-term effect due to the large number of players on the market.
6	Refusal from low-margin retail.	The agreement between the operators to reduce the excess number of communication shops has a positive effect on the margin. For Russian operators, the "net outflow" of the subscriber base has historically been 50-60% per year. In this regard, the decline in sales of actually non-performing contracts can significantly increase the margin. However, the length of the concluded "truce" remains questionable.

3.3. The Main Trends in the Development of the Russian Telecommunications Services Market

Analysis of the current situation in the Russian telecommunications services market allowed the authors of this study to identify several main trends in the development of this market (Table 2).

Table 2. Major Trends in the Development of the Russian Telecommunications Market

№	Trend	Socio-economic content
1	Increased population mobility	A generation is growing up in the country, which already practically does not know what a landline phone is, it's used to always be in touch and have not just a device for making phone calls, but a full-fledged mobile computer with which you can work anytime and from any points. With the advent of new-generation 5G networks, these needs will be more fully met. With the help of mobile devices, you can organize video conferences, watch videos in Ultra HD format and share them with friends, as well as work even more quickly and efficiently.
2	Increase of work efficiency and focus on ever more	The need for omnichannel communication with customers and prompt response to their requests leads the business to integrate

№	Trend	Socio-economic content
	complete customer satisfaction	telecommunication services with the company's IT systems in order to obtain data from them as quickly and accurately as possible. By the way, data, or rather, their security and integrity in the context of the continuous expansion of the perimeter of access to corporate IT resources, is another trend in the telecommunications market. Both telecom operators, application developers, and their users are seriously involved in this issue. For many of them, ensuring data integrity becomes a matter of not just ensuring competitiveness, but also the very existence of the business.
3	Phasing out native communications hardware in favor of cloud solutions, especially in the area of unified communications	So far, such a model is most in demand by small and medium-sized enterprises, that want to implement the most modern solutions at their minimum cost and as quickly as possible. However, over time, when the expensive equipment acquired many years ago will finally become obsolete, large companies can join them. In the face of falling revenues from traditional telecommunications services, telecom operators are actively developing other areas - the provision of cloud services, digital content and services of the Internet of things. Their main advantage is the already formed powerful infrastructure capable of providing the necessary data transfer speed, especially with the presence of technologies such as SDN and NFV, as well as a carefully constructed information security system (Molev-Shteyman, 2018). In addition, in recent years, Russian telecom operators have been actively engaged in the construction of data centers, which they will need, including to implement the "Law of Spring", as well as develop cloud platforms.
4.	Operator change	According to Rossvyaz, since the beginning of 2018, subscribers have changed their carrier almost 2.5 million times. The popularity of operator change services with number preservation (MNP) is growing - in 2018, subscribers leave the operator with their own number to a competitor by 20% more often than in 2017. In total, 10 million numbers have been transferred since the launch of MNP in Russia.
5.	The gradual transformation of telecom operators into full-fledged IT companies	In February 2017, Megaphone announced the completion of the transaction to acquire a controlling stake in the Mail.ru Group holding. MTS entered the market of IT outsourcing and system integration with the support of the NVision Group system integrator acquired in 2015. VimpelCom Ltd, which includes Beeline, changed its name to VEON in early 2017 and began to position itself as a company specializing in digital technologies. And Rostelecom announced a new strategy for 2018–2022, under which it intends to switch to a platform-based business model similar to Amazon, Apple, Google, Alibaba, Facebook, AirBnB, Uber and others.
6.	The beginning of a large-scale modernization of the infrastructure of the telecommunications services market of the Russian Federation in	Operators: - modernize their basic infrastructure; - expand communication channels; - introduce additional capacity of data processing centers (DPC); - Launch new VAS services with competitive time-to-market; - allocate in their organizational structure new divisions for the

№	Trend	Socio-economic content
	connection with the implementation of the national project "Digital Economy"	development of VAS-services.

In addition to the trends shown in Table 1, two more trends can be noted associated with the large growth in the activity of cellular operators in the regions of the Russian Federation, resulting in the growth of subscribers in the Russian regions. Also an important trend is the association of the authors of cellular operators, the result of which is already now the presence of holding operators, who actually control more than 90% of all cellular communications in the country.

In general, it can be noted that, taking into account the established medium-term trends, interest in the investments is represented by oversold shares of mobile operators, offering for this reason a high dividend yield. At the same time, it is worth targeting companies with diversification beyond the poorly predictable in terms of regulation and macroeconomic trends of the Russian jurisdiction.

3.4. The Main Measures of Cellular Operators in Russia to Improve the Tariff Policy in Order to Increase the Competitiveness of Their Own Services

Let us further consider the comparative characteristics of the main cellular operators of Russia in terms of the main parameters that represent the greatest value to consumers (Table 3)

Table 3. Comparative characteristics of the main cellular operators of Russia by main parameters (data for 2018) (developed by the authors, based on expert estimates of RosKomNadzor)

Operators	Percentage of voice connection failures and breaks during a conversation, %	Number of not received SMS, %	Average speed of the mobile Internet, (Mbps)	4G coverage in Moscow and Moscow Region,%	Budget Tariff Plans	Favorable tariff plans
MTS	0,8	2,4	10,1	30,9	«SMART»	"SMART Overseas"
Megaphone	0,7	1,7	13,1	32,2	" Turn on! Write "	"Turn on! Communicate
Beeline	15,1	0,0	5,0	28,8	"All for 350"	"All for 600"
Tele2	1,2	1,2	9,4	8,3	"My conversation"	«My Tele2»

As practice shows, any operator has tariffs that are very popular among subscribers. This is due to the fact that such tariffs include the most optimal set of plug-in packages at a reasonable price. The "SMART Overseas" from MTS, "Turn on! Communicate" from Megaphone, "All for 600" from Beeline and "My Tele2" from Tele2 are among the most advantageous tariffs of cellular operators in Moscow (Comparison of tariffs MTS, Megaphone, Beeline, Tele2, Yota, Tinkoff Mobile and Rostelecom without subscription fees, 2018). Comparison of favorable cellular tariffs in the Moscow region is presented in table 4.

Table 4. Comparison of favorable cellular tariffs (developed by the authors, on the basis of expert estimates of RosKomNadzor)

	MTS	Megaphone	Beeline	Tele2

	SMART Overseas"	"Turn on! Communicate"	"All for 600"	"My Tele2"
Mobile Internet, GB	28	15	10	6
Package outgoing minutes, min.	350	600	800	0
SMS package, pcs.	350	0	500	0
Subscription fee, rubles. / Month.	700	600	600	240
Calls in the home region, rub. / Min.	1,5	2	1,5	1,5
Foreign calls, rub. / Min.	5	3	1,5	2

The study made it possible to conclude that the MTS operator was the cheapest to communicate within the Moscow region, but if we talk about affordable communication throughout Russia, Tele2 is in the lead (Comparison of tariffs of cellular operators, 2018). Comparative characteristics of the tariff plans MTS, Megaphone, Beeline, Tele2 are presented in Table 5.

At the same time, it is difficult to compare the tariff policy of the operators, since the monthly fee for the same service can vary greatly, depending on the region (Shilin & Le, 2016). The most profitable telecom operator without mobile Internet and additional services turned out to be MTS, but at the same time, at the average cost of connected services, MTS is the most expensive operator that offers tariffs that can satisfy both the most economical users and those who want to use their phone at a maximum degree.

Conclusion

According to the results of the study, it can be concluded that Russia is the country where the mobile Internet has received the widest distribution. All the leading companies in the Russian telecommunications services market (Megaphone, MTS, Beeline, Tele2) are developing 4G networks that enable high-speed mobile Internet access, and they are actively preparing to launch 5G and 6G networks. Especially among transport companies that actively use navigation systems, there is an increase in M2M traffic (solutions for the Internet of things) in the corporate segment. The demand for big data solutions and cloud services is also growing, which will make it easy to scale up these solutions as the generated data volumes grow.

These companies are not only actively expanding their communications networks, but also are thinking about the qualitative transformation of their infrastructure in order to optimize operating costs, decrease operational expenses and increase efficiency of business.

The main trends in the development of this market, which are identified and substantiated by the authors of the article, show that competition has reached a very high level, therefore, in the future, the success of the activities of telecommunications services market operators will depend on how their tariff policy will meet current market challenges, as well as changes in consumer behavior in different target segments.

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Description of the Development in Students' Communicative Abilities

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Abstract

The study is aimed at the revealing of the peculiarities of students' communicative skills development. As the trial investigation of informative frames of mind among understudies appears, as they grow up and learn at the College, the structure and builds of correspondence and dispositions in correspondence change. The more seasoned the understudy turns into the more steadfast and tolerant he/she is to other people. Likewise the pattern of improvement of informative frames of mind ought to be noted, where the emergency time of arrangement is the center of preparing. Third-year understudies are more tangled, less tolerant and quiet than rookies and fifth-year understudies. Toward the start of preparing correspondence and related demonstrations of correspondence are gone for the arrangement of the social condition, while toward the finish of preparing informative frames of mind are showed as a fundamental component of private and open life. Open demeanors are showed not just so as to acquire an assortment of data, yet additionally as a device for regular daily existence. Understudies understand the estimation of powerful correspondence, regardless of the way that the dimension of contention increments. Hence, the investigation enabled us to arrive at a significant resolution, in which the principle accentuation is done on the need to bring into the learning procedure at the College some specific projects, trainings, courses went for the arrangement of abilities in the open circle, informative demeanors went for improving the procedure of correspondence because of the requirement for this property by the character in the advanced world.

Keywords: communicative skills, development, educational environment.

Introduction

It is impossible to overestimate the role of successful communication in the development of society in the modern information society. The following aspects and spheres of socially significant communication can be distinguished: the role of communicative strategies in solving social conflicts; communicative mechanisms for the formation of positive attitudes in public opinion; successful public communication of socially significant figures (politicians, public figures); ethics in public communication; changing speech patterns of behavior; the role of public relations in the formation of corporate civil liability; the role of mass media.

In the high-tech global world, public communication acquires another important component, namely, professional communication (Sorokoumova, 2013; Cherdymova, 2013; Ju et al., 2017). Professional (as opposed to business) communication is understood as the specificity of communication skills determined by professions, whose essential component is the obligation to enter into communication. Such professions include, first of all, teaching, political activity, management, social work (including medicine), public service.

Considering each of these professions, one should talk about a certain amount of knowledge, skills, attitudes necessary for successful professional communication and, accordingly, successful professional activities.

The problem of the role of social focus and its value orientation are considered in the works of A.G. Asmolov and M.A. Koval'chuk (1977), U.L. Kolb (1961), A.G. Zdravomyslov (1996), I.I. Zhukov (1976), V.A. Yadov (1979), V.A. Yadov (1995), R.A. Kutuev et al. (2018), etc. In the studies of scientists the need is proved and the emotional value component of communicative attitudes is theoretically substantiated, the importance and necessity of axiological communication for the theory and practice of socially-oriented research is proved, the ways for value relations formation in certain types of activity are shown.

The analysis of researches on the problem of development of professional communication shows that the majority of them is based on the idea of socio-psychological communication of G.M. Andreeva (1981), Y.S. Krizhanskaya and G.P. Tretiakov (1987), etc., on the findings of scientists on the psychology of educational activity of A.A. Ruchka (1976), A.A. Leontiev (1997), A.A. Leontiev (1975), A.A. Devyatkin (1998), etc.

In the domestic psycho-pedagogical studies different approaches to the problem of development of communicative units in the universities are demonstrated: with the help of certain communicative tasks (Alekseeva, 1984; Kananishvili, 1994; Uznadze, 1961; Gluzman et al., 2018); pedagogical designing and pedagogical technologies; through the specifics of the pedagogical communication (Leontiev, 1972); professional self-concept; professional motivation; the concept of socio-psychological aspects of training and education; through the definition of key features and style of teaching. These studies can serve as a scientific basis for the development of a holistic concept of development of student' professional communicative attitudes. Scientists classify all previous attempts to define the attitude: "Previous definitions of attitude can be attributed to one of four classes:

1. The author presents and proves his own definitions of attitude. He argues, however, that the definition may not be identical to what is already available.
2. The author considers many variants of other definitions and gives preference to one of them, or proposes a new definition.
3. The author allows for a variety of definitions of the attitude, because of desperate to find a consensus.
4. The author, who tries to translate various definitions of *attitude* into ordinary spoken language and with the help of it to develop the direction of convergence of different directions.

According to the teachings of D.N. Uznadze (1961), human behavior is regulated at two levels: impulsive and volitional.

In the first case, the source of activity is a biological need, which in the presence of actual conditions for its satisfaction forms an actual focus - readiness to act in the direction of meeting this need. The latter one leads to impulsive behavior.

At the volitional level that distinguishes human behavior from animal behavior, the willingness to act is preceded by understanding the complex situation (the act of objectification) and finding an algorithm of action that corresponds to "..the main focus of the individual which is embodied in the life". The focus arising on the basis of comprehension, Uznadze called fixed focus, the system of which gives grounds for directed behavior.

According to U.L. Kolb (1961) the history of *value orientation* category is identical to the history of *attitude* (social attitudes). Some scientists associate the introduction of the concept of *value orientation* in the socio-psychological Sciences with T. Parsons (1997) theory.
In world psychology there is a huge number of works devoted to values and value orientations, their hierarchy is studied. Expressing certain qualities of a person, value orientation is at the same time a means of realization of certain social goals. In most modern studies, values are considered from a socio-psychological point of view; appear as a social phenomenon, as a product of society and social groups' life-activity.

Thus, according to M. Rokich (2009), value is a stable belief that a certain way of behavior or existence is individually or socially preferable before, or along with any other way of behavior or existence in a similar situation. The value system is a stable set of beliefs. Highlighting three types of beliefs: existential, evaluative and prognostic, M. Rokich (2009) refers the values to the last, the third type, allowing navigating within the desirability-undesirability of behavior (operational, instrumental values) and existence (semantic, terminal values).

Communication skills are a synthesis of General psychological, socio-psychological and special-professional qualities of the individual. They are formed in the course of a variety of social practices and the inclusion of the individual, as well as in the course of special training to communicate.

The communication process is provided by acts of communication and interaction of the subjects of the communication process.

When solving the problem of education and training, communication allows providing real psychological contact with students; forming a positive motivation for learning; creating a psychological environment of collective, cognitive search and joint solutions, establishing a positive psychological climate.

Materials and Methods

2.1. The Methods of the Research

The method of unfinished sentences was used in the research process. The proposals were selected in such a way as to reveal the nuances regarding the following aspects of communicative attitudes, grouped by us into several units.

The first unit, B1, combines a priori ideas about communication as a whole and includes such incentive proposals as "communication is first of all", "communication is necessary for" and "communicating with others, we". Since communication can be understood in different ways, and even in the scientific literature there is no single approach, before one begin to analyze the individual attitudes of communication it is necessary to answer the question, what is communication for our respondents.

The proposals included in the second unit, B2 relate to such an important component of the focus as emotional communication. Unfortunately, in this study it is impossible to analyze all the emotions associated with different communication practices, so we focused on the emotional perception of communication "communicating with others I feel" and identifying the characteristics of causing the most positive perception of "I am always happy to communicate with". Interaction with another is often the main feature of the definition of communication. We are primarily interested in practices, conditioning the ability to listen and be heard. What for was proposed quite simple incentives: "to be heard by the others you should" and "to understand another." Psychologists often try to assess the success of communication, its positivity or negativity. At the same time, they tend to interpret positivity as tolerance, conflict-free. In our research, we raised the question of how students themselves believe what is a success in communication. B3 For the solution to this question works the incentive "to be a successful person in communicating means." In addition, it is necessary to find out what practices, according to students, are a manifestation or a means of achieving *success* in communicating. Therefore, unfinished sentences were composed "one can be successful in communicating if" and "one can be successful in communicating only in case of".

Separately, we found it necessary to allocate the study by the method of unfinished sentences of such an aspect as the perception of another B4. "To achieve your goal is possible if in relation to the other you are" – the stimulus reveals the position which is different in relation to the studied subject. Regarding this incentive, we had assumptions that it will help to identify whether the other is a full subject of communication, and whether it is considered as an opponent or ally in achieving the goal.

Unit B5 is set to assess one's own position in communication. How much a person considers him/herself a subject able to influence the course of interaction with others, and by what means one can manage the process of communication is revealed in the sentence "people's relationships can be regulated by". The sentence an incentive by a "person is shown" in this study did not work as it gave too facile a priori representation. Unit B6 p reveals the understanding and causes of *failure* in communication. We have identified practices that hinder the achievement of communication goals by such incentives as "communicating with others is impossible" and "one can offend a person."

In any social interaction it is possible to find prescriptions and norms which are obligatory from the point of view of its participants. Of course, communication, in which students come as sociologists, is no exception. Therefore, the study included sentences in unit B7, identifying priority rules of communication: "People in relation to each other should", "the basic principle in relation to other people is" and "in communication a person should".

For a full analysis of communicative attitudes it is necessary to fix the perception of basic, in our opinion, social positions-the status of another (unit B8): "stranger", "friend", "close person". "When I talk to strangers," "I think I'm a real friend," and "really close people."

The ninth unit B9 is focused on the identification of communicative practices perceived as the most difficult for the individual. "Interacting with others the hardest thing is."

This method was actively used for the study of social psychological phenomena, for example, V.B. Olshansky (1997) used it in the study of social expectations.

S.G. Klimova (1995) used this technique to study the identification and improvement of semantic constructs "one's own" - "alien", "we" - "they" [43, p. 49-63].

G.G. Tatarova (2007), G.G. Tatarova (1997), Burlova (1997) emphasizes that one of the strategies of using the method of unfinished sentences is to identify a priori ideas of people about a particular situation in their daily lives.

2.2. The Experimental Base of the Research

The empirical research was conducted on the basis of Samara University, faculty of sociology. Thus, the study studied the communicative attitudes of students of three groups:

Group 1-1st year students of sociological faculty of SamSU, 14 people.

Group 2-3rd year students of sociological faculty of SamSU, 15 people.

Group 3 – students of the 5th course of sociological faculty of the University, 11 people.

In each group, the survey was continuous. The total number of students studied was 40

2.3. The Stages of the Research

The study of the problem was conducted in three stages:

Stage 1 - development of initial positions on the basis of theoretical analysis of the literature on the subject of research; development of the General concept of research, including methodological principles and the project of development of the research tool.

Stage 2 - development of a research tool to identify the features of communicative attitudes.

Stage 3 - an empirical study of the characteristics of social Sciences student communicative attitudes. A sample was formed, empirical data were collected. Preliminary results were obtained. Analysis and interpretation of the results were carried out.

Results

The communicative attitude first of all reflects the propensity to a certain behavior in a situation of communication, the willingness to see in another a full subject of relations, ideas about the purposes of communication and the possibilities of achieving these goals. We tried to characterize these elements of communicative attitude in our research.

First of all, we tried to describe the readiness for interaction and acceptance of the other.

Table 1. Negative communicative focus of students - sociologists

Indicators	Maximum points (100%)	The received points			Percentage of maximum points		
		1st year students N=14	3st year students N=15	5st year students N=11	1st year students N=14	3st year students N=15	5st year students N=11
Veiled cruelty	20	14,9	14	12,2	74,6	70	61,3
Open cruelty	45	22,6	21,1	24,1	50,3	46,9	53,7
Justified negativism	5	2,5	3,06	2,3	50	61,2	47,2
Grumbling	10	4,1	4,2	4	41,4	42,6	40
Negative communication experience	20	9,6	10,4	7,4	48,2	52	37,2
Total	100	53,7	52,76	50	53,7	52,7	50

Considering the distribution of negative communicative attitude, we note the following characteristics.

Indicators of veiled violence decrease as students grow older. Thus, they reach 74.6% among the first – year students, and 61.3% among the fifth-year students. Therefore, the older the student gets, the less he tries to hide his cruelty. This can be explained by the fact that among the students in more senior courses in comparison with the first course, the process of socialization in the University has already passed, they try not to hide their feelings and relationships, the process of their self-identification is successful and they can openly talk about the problems.

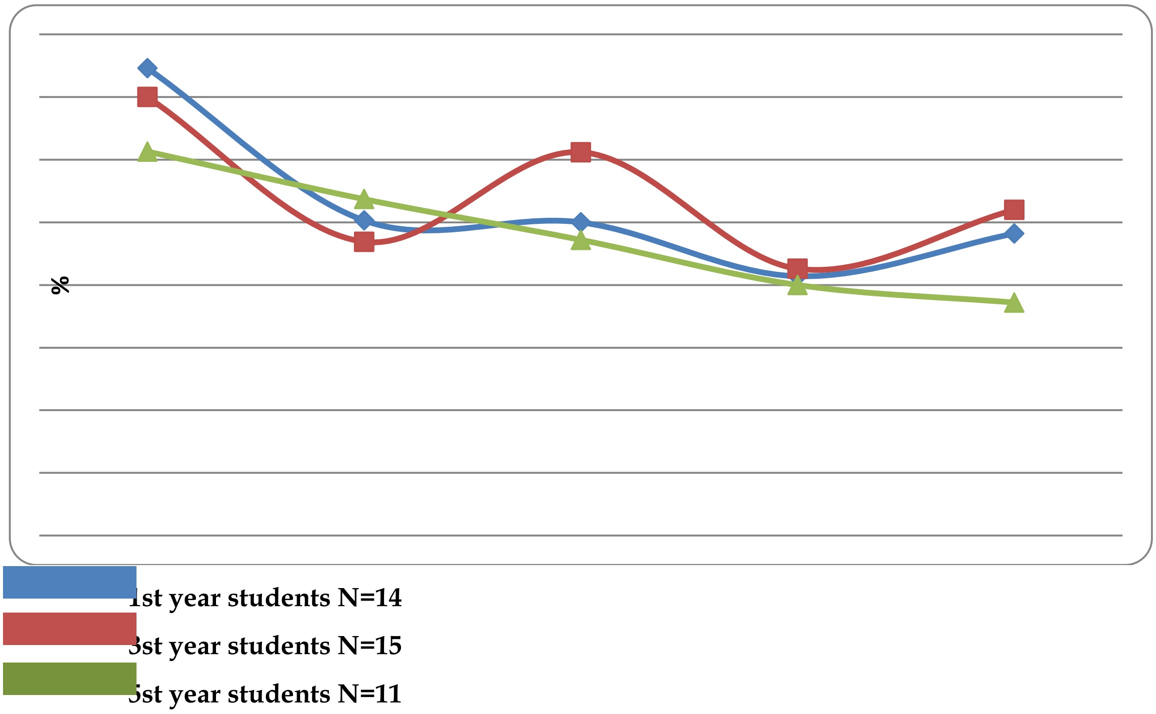

Figure 1. Distribution of indicators of negative communicative focus among students (%ratio)

An important conclusion and proof of the disclosure of *themselves* among the students as they grow up is an indicator of *open cruelty*. We believe that a negative indicator is that half of the students possess this quality. Moreover, it is the least pronounced in the 3rd year students (46.9%), and the most pronounced in the 5th year students (53.7%). Such data indicate the negative impact of social factors of the environment in which students live, namely the impact of the mass media from a negative, aggressive position, as well as the negative consequences of the transformation of socio-economic development of the Russian Federation in the last 15 years.

As they study at the University indicators of reasonable negativism, denial of sustainable concepts, some degree of nihilism are reduced (from 50% to 47.2%). And the 3rd year students show the highest level of negativity (61.2%). This is due to the fact that while studying at the University, students seem to "cool down" to the process of studying they internally calm down, know all the methods and principles that occur during their studies, understand that they are "already learning". Their motto is "from session to session". It was during these years, many of them begin active professional and labor activity, believing that it does not interfere with them, that the main thing is a career.

Thus, the analysis of the research indicators gave us the opportunity to realize the fact that the *critical* period of study for students is the average period at the level of the 3rd year. One should note the fact that as one gains experience, negative attitudes to communication are leveled and more positive experience will appear. This is facilitated by the process of socialization, as well as awareness by the youth of the learning process at the University, the role of effective, constructive communication in interpersonal communication.

One can consider the indicators of reduced tolerance.

Table 2. Indicators of reduced tolerance

focus component			
	1st year students N=14	3st year students N=15	5st year students N=11
Rejection or misunderstanding of a person's individuality.	5,4	5,5	3,8
Using oneself as an etalon when evaluating others.	4,5	3,8	2,7
A categorical approach or conservatism in people estimations.	6,5	5,7	3,4
Inability to hide or smooth out unpleasant feelings when faced with uncommunicative qualities of partners.	7,5	6,7	3,6
The desire to remake, re-educate partners.	4,7	5,1	4,5
The desire to fit a partner for oneself, make it convenient.	6,7	5,8	3,8
The inability to forgive another mistakes, awkwardness, unintentionally caused you trouble.	5,5	5,9	5,7
Intolerance to the physical or mental discomfort of the partner.	5,2	4,6	2,5
Inability to adapt to partners.	5,5	4,7	2,9
In the sum:	61,4	47,8	32,9

Discussions

Interpersonal communication and subject-subject relations occupy a special place in the system of communicative relations. Human egocentrism in an urbanized society of scientific and technological progress can be destroyed, first of all, by the warmth of interpersonal relations, a return to the fundamental principle of society – to live interpersonal communication.

We note that the essence of social communication is mutual understanding between people and the interaction based on it. Communication is a complex, multifaceted phenomenon. It identifies and considers three main components - information (information and communication), perceptive and interactive.

The information component of social communication is characterized, firstly, by the fact that human communication is not a simple *movement of information* between two devices; here we are dealing with the attitude of two individuals, each of whom is an active subject: their mutual informing involves the establishment of joint activities. Second, the nature of information exchange between people is determined by the fact that through a system of signs partners can influence each other. Third, communication influence as a result of information exchange is possible only when the person sending the information (Communicator) and the person receiving the information (recipient) have a single or similar system of codification and de-codification. Fourth, in the context of human communication, specific communication barriers may arise.

Communication skills are formed in the process of education. The process of becoming a versatile personality also includes the requirements of mastering the ability to formulate thoughts correctly and clearly. Communicative competence is developed over the years and is therefore the result of great work.

V.B. Kashkin (2000) identifies a special concept of *communicative personality*; this concept implies a set of individual communication strategies and tactics, cognitive, semiotic, motivational preferences, formed in the processes of communication as the communicative competence of the individual. The communicative behavior of mankind also consists of common moments in the behavior of individuals. There are only separate individuals whose communicative behavior is a single language. But also in the behavior of the individual the properties of natural and social (including communicative) environment are reflected. Communicative personality is heterogeneous, can include different roles (voice, polyphony of the personality), and while maintaining their identity.

There are three defining parameters for a communicative personality: motivational, cognitive and functional. Based on one's communication needs, communication focus is formed, which is accompanied by communicative personality over a certain period of communication (there are various communication tools and tactics).

As we have found, the communicative attitudes of students-sociologists during their studies at the University are gradually changing. The nature of relations to oneself and to the world is complicated, which is caused by socio-psychological changes in the personality, as well as understanding and awareness of the process of effective communication act in the understanding of oneself and another. Communicative focus and communication process becomes a vital condition for the success of socialization in society, which is supported by the requirements of the world of professions, where effective communication skills are already the standards of many professions. Despite the fact that the student's age by age periodization refers to youth, this age allows for a person's mental personality qualities to be quite labile and plastic. Consequently, the role of higher education in the formation of effective communicative attitudes is an integral part of the educational process.

The dynamics of communicative attitudes among students allows us to make the most important conclusion that it is necessary to constantly improve the educational process, allowing developing communication skills and attitudes.

Conclusion

As the experimental study of communicative attitudes among students shows, as they grow up and study at the University, the structure and constructs of communication and attitudes in communication change. The older the student becomes the more loyal and tolerant he/she is to others. Also the trend of development of communicative attitudes should be noted, where the *crisis period of formation* is the middle of training.

Third-year students are more conflicted, less tolerant and patient than freshmen and fifth-year students. At the beginning of training communication and related acts of communication are aimed at the formation of the social environment, while at the end of training communicative attitudes are manifested as a necessary element of private and public life.

Communicative attitudes are manifested not only in order to obtain a variety of information, but also as a *tool* for everyday life. Students realize the value of effective communication, despite the fact that the level of conflict increases.

Thus, the study allowed us to come to an important conclusion, in which the main emphasis is done on the need to introduce into the learning process at the University some specialized programs, trainings, courses aimed at the formation of skills in the communicative sphere, communicative attitudes aimed at improving the process of communication due to the need for this property by the personality in the modern world.

As the study, aimed at the study of the reduced tolerance showed - as they grow older and the individual's socialization takes place in terms of the University the indicators are reduced.

Rejection or lack of understanding of a person's individuality is reduced from 5.5 points to 3.8 points, which indicates the formation of the ability to understand the other, the development of ideas about the "self", individual characteristics, the stage of final forming of ideas about the self of human existence.

As they grow older, student uses less him/herself as an etalon, a pattern of behavior (from 4.5 points to 2.7). This indicates a decrease in the degree of self-centeredness, recognition of other authorities and authoritative opinion.

A categorical nature or conservatism in views about other becomes less, which indicates the departure from the traditional adolescent egocentrism, the recognition of only own self. The concept of *loyalty, tolerance* in the opinion of others becomes important.

Especially noticeable is a decrease in negative tolerance in the field of inability to hide or smooth out unpleasant feelings when faced with non-communicable qualities of partners (from 7.5 points to 3.7 points for students of the last year of study). In this situation, they use the tactics of avoidance and compromise, which can also be explained by the development of loyalty. We believe that such qualities should be especially developed among students-sociologists, who due to their professional activities will have to deal with different people, with different psychological characteristics and manifestations of the psyche.

It should be noted that the student desire to remake, re-educate in the course of the study does not disappear. Moreover, in the third year, these values become more. Such data indicate the presence of mentoring, dictatorial directions in communication, which may be due to the prestige of training in the SamSU.

Also, as well as the inability to forgive mistakes, does not change in the course of students' study at the University, which indicates the difficulty of forming tolerance as a necessary quality of personality of students of the faculty of sociology.

The indicators of intolerance to shortcomings, as well as the inability to adapt to partners as they grow older, are declining, but we believe that it is not enough. These indicators may be lower; however, they indicate that the modern student is intolerant, incapable of empathy.

Thus, we believe that for the development of tolerance during training it is necessary to introduce specialized courses aimed at the development of tolerance, the formation of understanding of the other. Especially important is the taking into account of personality traits in connection with their future professional activity as sociologists.

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Infantilism in Students as the Hurdle in Development of Necessary Adult Personality

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Abstract

Instructive and proficient infantilism is an uncommon, ruinous method for the person's self-acknowledgment during the time spent getting proficient instruction, the attributes of which are negativism in connection to instructive and proficient exercises, extreme requests on the encompassing individuals and society all in all, dynamic or uninvolved restriction to the instructive procedure, the absence of sufficient emotional frame of mind to its arrangement and improvement as a future expert and, as needs be, to the instructive action itself, the absence of designs for self-acknowledgment in the calling and throughout everyday life, and genuine approaches to actualize them, the commonness of tight close to home, narrow minded thought processes and objectives of the preparation and expert exercises. Thus, the creators pf this paper examine the socio-mental attributes of understudy infantilism appearance. It is set up that the investigation of socio-mental qualities of social infantilism of present day understudies is important to improve the productivity of instructive and mingling exercises of colleges, the revision of juvenile, freak practices models, and to settle and grow socially endorsed, relating to the time of adulthood. The materials of the article can be helpful for clinicians, College educators, caretakers of understudy gatherings and are of reasonable significance for the advancement of mental and academic projects went for improving the productivity of understudy juvenile standards of conduct's rectification during the time spent learning at the College.

Keywords: educational environment, infantilism, necessary adult personality, motivation.

Introduction

Since the end of the XX century in the public consciousness of Russians a myth was rooted that higher education is mandatory for all, as it is a necessary link in building a successful career, and sometimes just a categorical condition of employers in hiring. The number of both public and private universities and their branches in different regions has increased dramatically. This allowed satisfying both the reluctance of graduates to leave the usual parental home, in which parents are responsible for everything, and the desire of parents to leave their children at home because of the fear that otherwise they will not be safe and will not be able to properly dispose of their independence.

Psychologists say that the effect of these trends has been the wide distribution of such a socio-psychological phenomenon as age-related increase of childhood. Admission to University after graduation is often no longer perceived as the beginning of the adult stage of life, and psychologically is perceived as a logical continuation of the schooling stage. This leads to the spread of student infantilism. The student retains both psychological and social features inherent in the student, which creates both difficulties in the process of socialization, social adaptation, learning and personal and professional development for the student, and difficulties in the pedagogical and educational activities of teachers (Nazarov, 2015; Gluzman et al., 2018).

V.A. Khriptovich (2015) notes that instead of generation X, who sought to grow up soon, become self-reliant and successful, generation Y has come (the Millennium generation) that is characterized by the late social and civil development and the desire to be forever and to stay young. And varieties of modern infantile individuals appeared: children-boomerangs – living with parents single young people after graduation from the high school; kidult — (eternal children), which carry into adulthood the habits and behaviors typical of adolescents; juveniles characterized by personal-psychological immaturity and a number of other.

Infantilism in General is a social characteristic of the individual associated with the passage of its stages of primary and secondary socialization and social adaptation and is expressed in the differences in the social, physiological and cultural maturation of the younger generation, due to the varying degree of influence on the personality of certain social institutions. Infantilism is manifested in the lack of human desire to learn a new social role and willingness to responsibility, which causes disturbances in its social reality (Abdrakhimova, 2016).

Social infantilism is a negative form of adaptation to the social environment as a result of the immaturity of the emotional-volitional sphere and the weakness of motivational-value-based attitudes to personal development in the process of socialization and social interaction of the individual. It is manifested in the rejection by the personality of new social roles, due to the process of growing up, of passivity in relation to any problematizing situations and shifting responsibility onto others or external circumstances (Degterevskiy, 2010).

G.Z Efimova (2014) argues that the features of social infantilism can be manifested in any person in various spheres of life, but socially significant infantilism becomes in those cases when it manifests itself in vital areas – in professional and socio-political activities, in family and domestic relations and others, or affects several areas of human activity, inhibiting and deforming both their development and the development of the person so that, social infantilism is a type of social deformation of the individual.

Considering the social and moral aspect of social infantilism, A.S. Bakulina (2014) notes that it can have negative features, consisting in a tendency to various kinds of physical and psychological addictions, irresponsibility, deviations in the emotional sphere, and so on, and relatively positive, associated with idealism and hyper-sociality.

A.A. Seregina (2011) notes that the personality infantilism is the undoubted reason for the formation of deviant behavior. Insufficiently developed emotional-volitional sphere is the reason for the lack of focus on the volitional regulation of their behavior, complicated by impulsive, explosive nature, uncontrollability of emotions, and instability of mental States. Dependent (parasitical) life attitudes lead to promiscuity in how to meet their needs. The low level of claims and the need for achievements, inadequate self-estimation are the cause of irresponsibility. The unformed motivational sphere and hierarchy of motives, the predominance of hedonistic motives, the minimum ability to reflexing, analysis of one's own actions and the actions of others, the reluctance to self-determination in both personal and professional pan, the priority of material values over the moral and morality of an infantile personality are a serious risk of its deviant behavior.

One of the main types of student social infantilism is educational and professional infantilism, which is defined as difficulties in adapting students to the conditions of educational and professional environment, manifested in the presence of negative motivational and value-based attitudes towards personal and professional development, in the weak ability to apply professional knowledge in practice, in the low level of independence and responsibility of the student, in a passive life position, in the lack of awareness of the made choice, in the low level of analysis and control of their behavior, in refusing from the help of teachers and family members. Features of emergence and manifestations of this type of infantilism among the students are expressed in a deviation from generally accepted cultural and social norms and in personal disorganization. Educational and professional infantilism manifests itself in following the previously established destructive strategies of social behavior and activity, in a negative reaction to the purposeful educational impact on the part of others, in focusing on new negative examples of personal experience (Apraksina, 2008; Utenkov, 2011).

There is another point of view. Thus, on the basis of their study, E. V. Koroleva, N. G. Ivelskaya and A. L. Chernysheva (2017) believe that the perception of modern students as socially immature individuals is incorrect and not justified. They argue that students are very active in the social field, in educational, labor and public activities. They revealed the majority of students with high degree of social adaptation, a wide range of interests, high responsibility for their decisions, awareness of themselves as active participants and creators of social changes, the desire to achieve their goals, increased interest in everything new both in the social sphere and in the educational and professional spheres. But at the same time, they do not talk about the complete absence of infantilism among students, although they argue that the infantile qualities of modern students do not go beyond the critical indicators and do not prevent them from developing effectively and dynamically.

The above mentioned aspects actualize the study of social infantilism of students in General and educational and professional infantilism in particular, as well as the socio-psychological characteristics of infantile students to determine the targets for prevention and minimization of this socio-psychological phenomenon.

Materials and Methods

2.1. Theoretical methods

The theoretical method of research is the content analysis of scientific works related to the problem of social and educational and professional student infantilism and the criteria - its components, which allows to comprehensively consider the degree of development of this problem and to identify the main approaches to its understanding and the factors that determine the risk of strengthening the manifestations of social infantilism in the student environment.

2.2. Empirical methods

We conducted an empirical study aimed at studying the socio-psychological characteristics of students with different levels of severity of infantilism using the following methods:

-to determine the groups of students with different levels of infantilism, we used the method *Level of expression of infantilism* developed by A.A. Seregina (2006). Since infantile features are inherent in varying degrees to any person, in our study we distinguish low, medium and high level of students' infantilism.

-to study the features at the socio-motivational level, the methods of diagnosis of socio-psychological adaptation of K. Rogers and R. Diamond (Fetiskin et al., 2002) and diagnosis of the motivational structure of the personality of V.E. Milman (Ilyin, 2011) were used.

- to study the characteristics on the social activity level, the questionnaire of initial socio-psychological competence of S.A. Barinov (2007) and technique for self-assessment diagnostic achievement of life goals implementation of the individual of N.R. Molochnikov were used (Fetiskin, etc., 2002).

Results

3.1. Features of social and motivational sphere of students with different levels of infantilism

The average values for the diagnosis of socio-psychological adaptation of students with different levels of infantilism are presented in table 1.

Table 1. The intensity of integral indicators of student social and psychological adaptation with different levels of infantilism severity (average values)

Indicator	High level	Average level	Low level
Adaptation*	93,12	104,31	123,74
Self-acceptance	32,47	28,32	34,99
Acceptance of others*	14,42	19,31	23,02
Emotional comfort*	16,07	25,86	24,53
The desire to dominate*	43,39	35,71	28,41

Internal control*	10,07	12,71	13,94

Note: * - a significant difference of the average indicators (T-student test) between the indicators of students with high and low levels of infantilism (p≤0.05) is established.

As it can be seen from the table, students with a high level of infantilism have significantly lower rates of adaptation, acceptance of others, emotional comfort and internal control, and significantly higher rate of desire for dominance. Therefore, we can say that infantile students are less adapted in society; it is more difficult for them to accept the positions and interests of other people. They are more likely to experience emotional discomfort in various situations and are more exposed to external control, by significant others, are guided by others opinions and shift responsibility for themselves to them. At the same time, they tend to dominate the immediate environment to be able to manipulate, to insist on fulfilling their desires, indulging their weaknesses.

The average values of the diagnosis method of the individual's motivational structure are presented in table 2.

Table 2. Intensity of student personality motivational structure with different levels of infantilism (average values)

Indicator	High level	Medium level	Low level
Life-support*	5,43	6,15	7,38
Comfort	3,92	4,90	3,47
Social status*	4,25	7,13	7,92
Communication	9,91	8,93	8,33
Common life orientation of personality	*5,88*	*6,78*	*6,78*
overall activity	8,37	6,10	11,21
Creative activity*	5,13	5,65	9,12
Social utility*	2,97	4,34	7,25
*Working (learning) orientation of the person**	*5,49*	*5,36*	*9,19*

Note: * - a significant difference of the average indicators (T-student test) between the indicators of students with high and low levels of infantilism (p≤0.05) is established.

Based on the data obtained, it can be seen that students with a high level of infantilism have common life orientation of personality which is expressed approximately to the same extent as students with low and medium levels have. But at the same time, they have significantly lower indicators for such criteria of common life orientation as the desire to independently provide for their life needs and to achieve a high social status by their own efforts. And work and learning motivational orientation of students with a high level of infantilism significantly lower than among non-infantile students. Here, such criteria as creative and social activity are significantly less pronounced. Therefore, for students with a high level of infantilism, success in educational and professional activities through the manifestation of creative and social activity is not the leading motive of life activity, as well as the achievement of life benefits and social status on their own.

3.2. Features of the social and activity sphere of students with different levels of infantilism

The average values of the questionnaire for initial socio-psychological competence are presented in table 3.

Table 3. The severity of formation degree of student initial socio-psychological competence indicators with different levels of infantilism severity (average values)

Knowledge:	High level	Medium level	Low level
the relationship between socio-political attitudes and labor productivity	1,43	1,78	1,92

relationship between the social status of population groups and their attitudes*	3,07	4,45	5,21
the relationship between changes in socio-political attitudes and readiness to act	1,84	1,68	2,35
the relationships between features of situations and social manifestations*	2,97	3,73	5,05
the relationship of mental qualities and social manifestations*	3,34	4,11	5,79

Note: * - a significant difference of the average indicators (T-student test) between the indicators of students with high and low levels of infantilism ($p \leq 0.05$) is established.

From the data presented in the table, we can see that students with a high level of infantilism have much lower knowledge about the relationship between the social status of population groups and their attitudes, the relationship between the characteristics of situations and social manifestations, as well as the relationship of mental qualities and social manifestations. Consequently, they are less aware of how the mutual determination of a person's social status and their social perception, evaluation, awareness and behavior based on stereotypes in a particular social group occurs. It is more difficult for them to imagine how to behave in certain situations, and how their behavior can affect the development of these situations. They have little idea how certain personal characteristics of the human psyche affect his behavior and how they manifest themselves in social interaction, and how interaction and communication in society can form the psychological characteristics of the individual.

Rank indicators on the method of self-assessment diagnostics of the person life goals realization are presented in table 4.

Table 4. Expression of self-assessment of the individuals' life goals realization among the students with different levels of infantilism severity (ranks)

Indicator	High level	Medium level	Low level
Job, career	5	5	2
daily life	3	4	4
physical state	2	2	3
Social condition. Human relations.	1	3	1
Mental readiness. Psychological state.	4	1	5
Family life	6	6	6

Note: since the technique is based on the integrative design of personal self-development in resource and time ratio and priority setting (ranking), the procedure of checking the reliability of the difference in average indicators was not carried out.

The data obtained indicate that for students with a high level of infantilism and low, the importance of the implementation of life goals in the field of social status and human relations is in the first place. But the analysis of the questions included in this unit of technique showed that students with a high level of infantilism received the greatest number of answers to questions related to friendly relations and imposing their opinions on other people. And students with a low level of infantilism have questions related to the interest in the opinion of others, the ability to listen and the desire to develop those people with whom they communicate. But those and other students are about equally concerned about friendly relations. For students with a low level the implementation of goals related to work and career by the importance is on the second place, and for students with a high level – the penultimate. In the last place all students have goals related to family life, which is explained by age and the current trend in the country to create a family in a more Mature age, which can be determined as infantile manifestations – unwillingness to take responsibility for the family and for children, and the desire to become self-sufficient, to take place as a person and as a professional to be able to provide for the family, to create decent living conditions.

Conclusion

In modern society, graduates of higher educational institutions are imposed increasingly higher requirements while reducing the time to obtain appropriate personal, professional and social knowledge, skills and abilities, due to the transition from specialty to bachelor. This problematizes for school graduates, *yesterday's children*, the process of learning, adaptation and socialization in new conditions. The problem of employment of graduates is complicated by the uncertainty of judgments about their prospects, about the future, the lack of a clearly understanding of life scenario and the image of future employment in the specialty obtained at the University, as a result of which they find work in areas which is not related to their specialty and often does not require higher education. This is one of the consequences of the growing trend of social infantilization of young people. Student infantilism becomes an obstacle to the formation of an integral adult personality, its self-realization and self-development, can cause deviant behavior, and, accordingly, requires a comprehensive study to develop effective corrective programs for this negative socio-psychological phenomenon prevention.

Under social infantilism in modern social psychology the backlog of socio-cultural maturation of the individual from the biological one is understood, determined by the violation of the socialization process, arising from the presence of inadequate problem socio-cultural conditions, and manifested in the denial by youth of new social roles and related to them responsibilities and obligations arising in the process of growing up.

The theoretical analysis revealed the main determinants of social infantilism among students. These include:

- from the civilizational worldview: the trend of postmodernism as a leading socio-cultural direction of the modern stage of the society development, the essence of which is a game designed to create a chaotic order of the existing ordered systems, in which there is no place for the value vertical and the meaning of existence;

- on the part of society: first, the situation of the transition stage of society development, associated with a change of ideology, value-normative guidelines and models of social behavior; secondly, the formation of a consumer society, in which the development of personal skills associated with personal, social and professional development, is replaced by an extensive market of services for all occasions that you can just buy;

- on the part of the education system: firstly, the increase in the period of school education leads to an increase in the duration of childhood and to a decrease in the psychological age of modern youth; secondly, the lack of effectiveness of educational and socializing functions in the system of higher professional education leads to uncontrollability of the process of social and professional adaptation of students;

- on the part of the family: a large number of single-parent families or families with one child have led to the spread of hyper-custody, preventing the development of the child's independence and responsibility for themselves and for others;

– from the side of the media: firstly, the promotion of the cult of *immaturity*, *Peter Pan syndrome*, the image of a nymphet or a playboy, the popularization of the image of an easy and carefree life for your pleasure; secondly, the spread of the Internet and network communications forms a model of non-binding communication, during which you can be anyone.

In the course of the empirical study of the characteristics of the socio-motivational sphere, it was found that infantile students have the most pronounced features such as increased social maladjustment, difficulties in understanding and accepting the points of view of others, emotional discomfort. The main motives for their behavior are their own desires and interests, which they carry out through either subordination to external influence, if it corresponds to them, or through domination and manipulation of others, but always shifting responsibility for the consequences to those who helped them meet their selfish needs. The main motivational orientation of behavior and activity of such students is the common life orientation, which consists in maintaining and improving personal comfort in their own understanding, and the working and learning motivational orientation, focus on social and creative activity is expressed much weaker than among the students with a low level of infantilism.

In the field of social activity of students with a high level of infantilism the insufficient level of the initial socio-psychological competence formation is revealed, which is expressed in an inadequate understanding of the mutual conditionality of the social situation of a person and the characteristics of his/her social perception and behavior, a lack of understanding of the behavior correspondence to a particular situation, as well as its possible consequences, as the inability to assess the psychological and emotional characteristics of people and their impact on the specifics of interaction. For them, it is more important to realize their life goals in the field of communication, friendship, and not in the field of learning and professional activities. Like students with low level of infantilism, they do not consider to be important to achieve goals related to family life, due to age and the current trend in the country to create a family in a more Mature age, which can be explained by the fact that infantile students do not want to take responsibility for the family and for children, and students with a low level of infantilism want first to become self-sufficient, to take place as a person and as a professional, to be able to provide for the family, to create decent living conditions for it.

The study of socio-psychological characteristics of social infantilism of modern students is necessary to improve the efficiency of educational and socializing activities of universities, the correction of infantile, deviant behaviors models, and to stabilize and develop socially approved, corresponding to the period of adulthood. The materials of the article can be useful for psychologists, University teachers, curators of student groups and are of practical importance for the development of psychological and pedagogical programs aimed at improving the efficiency of student infantile behavior patterns' correction in the process of learning at the University.

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Student Identity and Various Procedures of its Development

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Abstract

It is resolved that from the socio-philosophical perspective, the comprehensive idea of the picture suggests its understanding as a multidimensional, mechanical, conflicted informative and administrative marvel, which has a representative nature, emerging because of the observation by the individual or gathering of people of coded message, adding to the completion in their brains and sub-cognizance of the required intentions of conduct including the systems of ID, self-recognizable proof and self-introduction. The picture of the understudy has comparative qualities, yet in addition has various explicit highlights. Its assorted variety is dictated by the way that it is framed in the field of contact and interpenetration of the social condition of society and the particular social condition of a specific College. Innovative nature lies in the way that its arrangement can happen unexpectedly through the abstract observation and assessment of the objects of the encompassing reality during the time spent self-advancement, and through focused mental and instructive impact during the time spent preparing and training. Uncertainty is showed in the way that the arrangement of the understudy's picture can be joined by an adjustment in the officially natural individual quirks and attributes, and the presentation of new ones either through their genuine installing into the structure of the character, or through the formation of a dream of their quality. The open and administrative quintessence of the understudy's picture is that its arrangement during the time spent reflection adds to the development and improvement of the understudy's character from one viewpoint, and on the other – during the time spent picture correspondence changes the picture of the world among the picture beneficiaries. Enough shaped picture adds to the fruitful socialization and successful expert movement of the understudy later on.

Keywords: Identity, student image, development, social and philosophical view.

Introduction

The study of both the personal image of the student and the students in General is actualized nowadays due to the entry of the world civilization into a new formation – the information society, when information becomes one of the main resources for well-being, and one of the important means of achieving the goal in both personal and public life. Real communication is increasingly replaced by virtual ones, in which the main subjects of communication are not so much the people themselves as the images that, on the one hand, they create themselves, on the other hand – images associated with existing stereotypes, and the third – the images formed in the minds of one side of communication in relation to the other (Kutuev et al., 2017; Ju et al., 2017; Gluzman et al., 2018). In the field of such communications, in order to achieve success, it is necessary to understand the basics of creating an adequate image of the individual, social group, any organization or tangible and intangible objects (for example, goods or services). And such student knowledge, skills and abilities are very important to form, as they stand at the beginning of their adult life, their professional path, where they should be effective professionals and successful people. It is also important to form a positive attitude in society to the institution of higher education in General, to the specific higher education institutions, to the student youths as a specific social group, in order to return them to prestige, which was largely lost in the period from the early 1990s to the end of 2010-ies due to the global crisis in all spheres of life of our society and the state and the change of social priorities.

The category of image concentrates in itself ontological elements for reflection of the image content, epistemological elements in the sphere of its cognition process, elements of active action in the field of management of its formation processes. In the individual and public consciousness the attitude to the image is increasingly fixed as to a certain value, which determines the success of life in General and professional activities in particular (Zherebnenko, 2008).

Various aspects of the overall image of students are fixed in the public consciousness and shaped in stereotypes. What is the image of a specific or generalized student what kind of positions represent the image of a student of a particular University influence largely on the process of engaging prospective students, student participation in future projects, the status of the University in the system of higher professional education.

A student in Russian society throughout the history of higher education in Russia has always been a figure that attracted public attention. The image of students always accumulated the latest, often opposition to the existing image, ideological and cultural priorities of a particular historical period. In modern society, the student's image reflects the existing disproportions of the socio-cultural plan, such as a decrease in respect for educated people due to the priority of monetary and material criteria of values, a traditional protest of Russian students against the prevailing socio-political and economic conditions through vivid manifestations of informal, marginal subcultures (Petukhova & Klein, 2014).

Image is very important when applying for a job. First, the novice specialist needs to make a resume that reflects the characteristics of his/her strengths and weaknesses, life position and interests, that is, his/her image as a whole. Secondly, in the process of interviewing a novice specialist will have only a few minutes to provide the potential employer with the most favorable information about his/her business professional competence and personal qualities. The formation of the image of the graduate, the future specialist is also important because the popularity of the University depends on public opinion about its graduates. In addition, the image of the future specialist affects the formation of the professional image of his/her supervisor (Alemasova & Guseva, 2010).

Graduates are a reserve of future social, political, economic and intellectual elites of the Russian state; they are imposed high expectations in promoting the effectiveness of its comprehensive development. In accordance with the modern requirements of improving the quality of the humanitarian component of any professional education, the importance of forming the image competence of students increases (Pak & Yablonskikh, 2016).

Literature Review

2.1. Understanding the Phenomenon of Image in Modern Russian Social Philosophy

In social philosophy, the understanding of the object image as a combination of symbolic and real has been systematically considered within the framework of social ontology. In the phenomenology of the new time, the image was associated with the empirical or rationalistic activity of the imagination of active cognition subject. From the point of view of empiricism, the image is the result of sensual impressions, a print, and a copy of the original object, which is grasped by the mind and remains in consciousness after the termination of impressions. From the standpoint of rationalism, the image is a human thought and a fragment of the infinite world of ideas. The image is an object of imagination in the absence of the original object, which is either a reproduction (memory) or production (creativity) on the basis of the former contemplation of this object. The image of an object is not a vague idea, but a consciously organized form of special attitude, which allows us to talk about its real existence (Azarenko, 2015).

In the philosophical understanding the image is represented as the determination of perception object essence (of things or phenomena) to the otherness. In the image is the identity of the perceived entity and its other existence, implemented as a semantic identity (image, picture) and the actual (an incarnation of the essence in the otherness, sensitive thing). In the process of perception, the consciousness of the perceiving subject acts as an alien for the object of perception. In this case, the image is the result of the identification of the object of perception and non-existence, given as meaning at the expense of the perceived object, its sensual way. The image of the object essence is absolutely adequate to its reality. At the same time, the absolutely incomprehensible essence of the perceived object in the process of self-determination *in itself* manifests itself in Eidos, and Eidos in the process of self-determination *in another* manifests itself in an adequate image, and in some reflexing. These reflexing become concepts (templates) of sensory perception of the object (Taran, 2006).

In philosophy, there are two versions of understanding the image. The first-the image of the object gives a certain idea about it, the idea of one about the other by means of another (sign, symbol), that is, it is a representation after the direct presentation of the object, a representation at the time of its absence. The image of the object gives the illusion of its presence, replaces it. The second-the image not only States the absence of the object, but makes the object to be present at its absence. The image is formed through an intermediary, for example, a writer or a storyteller, but the mediator himself has no power over this image that arises in the mind of the reader or listener, who never directly perceives the object itself. The object in the image is not an object image (Kerimov, 2015).

In modern social philosophy, there are a number of definitions of the image concept:

- the image is not only a product of consciousness, but also something that is formed in a social form as a sign, or even going beyond the boundaries of consciousness, as a simulacrum, and is a force that generates changes and differences (Azarenko, 2015).
- The image is a form of visual representation of information structurally corresponding to the object expressed in it and experienced by a person as a really existing object (Abrarova, 2010).
- the image is a set of sensory signals similar in content to the original object and which are experienced by the subject as the object itself (Rakhmatullin, Semenova & Khamzina, 2012).
- Images are phenomena that synthesize the results of sensory perception and rational cognition in itself. They arise as a result of attempts of practical implementation of theoretical ideas in human activity. In the triad *scientific theory – its transformation – practice* the middle link is the birthplace of the image of the theory functioning in practice and without it the practical realization of the idea is impossible (Yusupova, 2014).

The construction of the image occurs only when the human Self refrains from metaphysical thoughts, judgments and the possibility of a thing existence outside the consciousness which is perceiving it, from the perception of the world as objectively existing (phenomenological era). Then a person begins to look at life as an awareness of the world, and accepts him/herself as a pure Self with a pure stream of reflections. All stereotypes and predetermined positions in relation to the surrounding world and surrounding people are deprived of significance. The world acquires meaning and existential significance from its transcendence, from opposition and interaction with other people, phenomena and artifacts. The image is formed and makes sense for a person in the unity of perception and experience (Shnyreva, 2007).

2.2. Understanding the Phenomenon of image in Modern Russian Social Philosophy

Despite the fact that in the scientific literature, very often the concept of the imagery and the image are used as synonyms, some scientists say that between them in the socio-philosophical aspect, there are fundamental differences: the imagery is the secondary one and the image is primary one relatively to the object; the imagery is passive, and the image has a great impact on the recipient; the imagery is complete and amorphous, and the image is specific and practical; the imagery arises naturally, and the image is formed artificially, the imagery reflects the object holistically, and the image – only the outside. In the modern sense, the image is not just a imagery, which is based on emotional perception, but is a full-fledged information product, purposefully created taking into account objective laws and processes, and becoming more a sphere of scientific activity than art (Doronina & Trubnikova, 2010).

Image is a universal category applicable to any object that is the subject of social cognition. One of the founders of the national imageology V.M. Shepel (2002) defines the image as the appearance or halo of a particular individual, organization or community of people, created purposefully by the media, interested social group or individual efforts of the individual to attract attention. He considers three understandings of image: pragmatic - as a means of achieving a person's specific goals (the American version), personological – as a way to attract attention (the European version) and developing – as conditions for externally fixed internal self-realization of the person (the Russian version).

The phenomenon of image is an immanent property of social existence in phylogenesis and ontogenesis. It is a symbolic system reflecting the totality of social relations and the characteristics of a particular individual. The binary biosocial nature of man is the cause of objective and subjective patterns of image existence. Image is an axiological system that performs the function of a translator of socially significant information. Once this function of the image is recognized by the person, the process of its formation becomes conscious and the image becomes one of the means to achieve the goal (Cheremushnikova, 2002).

Philosophy refers to the image as a phenomenon of reality, which are an area of social cognition and a universal tool of this cognition. Image can be possessed by any object or subject of social cognition. Philosophers understand the image in trinity: a model and a tool of cognition, a form of social management and image. In the General understanding in philosophy there is an understanding of this phenomenon as a stereotypical, emotionally reflected, individual, revealing the internal content, formed in the consciousness of the image recipient, which is a secondary information structure in relation to the perceived real object. At the socio-philosophical level, the concept of image is closely related to spirituality, morality, ethics and aesthetics, which are important in the practical sense as criteria of means and technology of its formation (Simonova, 2012).

In cultural studies, the ontological essence of image is determined by its ability to display the most important aspects of human existence, to form value attitudes and norms of behavior of the individual as a result of the internal resonance of consciousness structures with the symbolic content of the image. The image is the embodiment of the totality of the discourses of the social subject representing its axiological position and optimizing the system for its communications. Image is part of a model of reality that reflects social expectations and allows us to interpret the world within the boundaries of stereotyped significances and meanings (Kuzmina, 2012). In social psychology, from the standpoint of the theory of social representations, the image is interpreted as a specific kind of social representation and as a way of knowing social reality. Image, like any social representation, possesses a communicative nature, collective character, exists in the mass, not individual consciousness, and depends directly on the cultural, historical and social context. It is a dynamic formation, its attributes can be transformed, modified both depending on changes in the image carrier, and on changes in group consciousness. Image performs the regulating function of individuals' behavior (Dagaeva, 2011).

2.3. Understanding of Modern Student Image in Russian Humanities

The image of a University student is a socially significant characteristic of the future specialist associated with the social, personal and professional success of the graduate in various areas of the dynamically changing reality of post – industrial society. The formation of the student's image is determined, firstly, by the social order for qualified specialists, secondly, by the quality of image-forming activity in the educational process of the University and, thirdly, by the student's desire to create and design his/her image, focusing on socially acceptable and professional values of the innovative society (Pak & Yablonskikh, 2016).

The image of the student is an integrative set of presentations, which are represented by verbal or nonverbal signs, expressing personal-individual, socio-psychological and significant for learning and professional activity qualities, the determinants of which are the conscious meaning of professional activity and external requirements, rules and regulations related to this activity (Simonova, 2014).

O.A. Zherebnenko (2014) defines the image of the student as an integral characteristic of the individual, including the synthesis of external characteristics and internal qualities that contribute to the effectiveness of educational activities. The image of the student develops due to the personal need for self-cognition, the level of reflection, awareness of the need to create one's own positive image, and depending on the characteristics of the conditions and content of training. Structural-dynamic model of the student image consists of three levels: constitutional (appearance, gender, age, and temperament), personality (motivational, cognitive and activity-based components of the individual) and social (the status of the University, faculty and the social role of the student and his/her future career) (Zherebnenko, 2014).

The subjective image of a student is defined as the image of his/her developing personality in the form of a system of subjective representations, impressions, opinions formed in the process of perceiving him/her as a subject of educational and professional activities, and as an object of active social interactions. The subjective image of a University student is the result of social perception, has social significance for the object perceiving it and appears when the image carrier (object) enters into social interaction, that is, from the object becomes the subject of its direct or indirect perception (Mukhametzyanova et al., 2016).

There is also such a notion as a professional image of a student, which is defined as a conscious external manifestation by the person of socially significant inherent qualities of the profession. L.I. Savva and E.A. Gasanenko (2015) perceive professional image as a generalized, existing in the mass consciousness the image of a specialist in a specific field of activity, which includes certain values, skills, attributes and qualities and in a certain way influences others. It is formed depending on the requirements for each individual profession, and its main properties are dynamism, awareness, activity and credibility. The functions of a professional image are divided into two groups: value functions (personal uplifting function and feature of comfortization of interpersonal relationships) and process (the adaptation function and the function of shading the negative personal characteristics).

Results

Research in the field of personal image, its essence, formation, functioning, impact on the individual and other people are interdisciplinary and are at the junction of subject areas of social philosophy, sociology, social psychology, cultural studies, pedagogy, Economics.

From the point of view of the socio-philosophical approach, the image is presented in the form of a holistic unity of emotional, ethical, aesthetic and axiological components of its structure. Image plays an important role in the awareness and construction of social reality, performs a meaning-forming function and acts as its specific cultural code in a particular period of development. Image technologies make it possible to activate this code. At the same time, having an image representation of the world and of him/her, a person builds a system of relationships with others and projects his individual social reality. Image is also a tool for forming a harmonious picture of the world on the basis of existing values and norms, as well as for creating pseudo-reality, replacing true values with artificially constructed stereotypes. Image provides a person with identification, self-identification and self-presentation in society.

Therefore, from the socio-philosophical point of view, the holistic concept of image includes understanding it as a multidimensional, technological, ambivalent communicative and managerial phenomenon, which has a symbolic nature, arising as a result of the perception by the individual or group of persons of coded message, contributing to the actualization in their minds and subconscious of the required motives of behavior including the mechanisms of identification, self-identification and self-presentation.

The image of the student has the same characteristics, but also has a number of specific features. Its diversity is determined by the fact that it is formed in the field of contact and interpenetration of the social environment of society and the specific social environment of a particular University with their characteristic maps of the world, values, norms, characteristics of behavior and communication that can both correspond to each other, complement each other and contradict each other. Technological nature lies in the fact that its formation can occur as spontaneously through the subjective perception and evaluation by the student of various material or intangible objects of reality in the process of self-development, and through targeted psychological and pedagogical influence in the process of training and education. Ambivalence is manifested in the fact that the formation of the student's image can be accompanied by a change in the already inherent personal peculiarities and characteristics (strengthening of positive, professionally significant ones and weakening of negative ones from the point of view of the target audience, for example, future employers), and the introduction of new ones either through their real embedding in the structure of personality, either through the creation of illusions about them. Communicatively managerial essence of the student image lies in the fact that its formation in the process of reflection contributes to the formation and development of the individual student on the one hand, and on the other – in the process of image communication has an impact on the opinion of the student about the others that changes him/her and their view of the world, and contributes to the successful socialization and effective professional activity of the student in the future.

Conclusion

The study of the essence and formation of the image of modern students is relevant due to the fact that the modern socio-economic and socio-political conditions of development of Russian society put before higher professional education the task of not only training a competent specialist, but also the formation of personality, the perception of the image of which corresponds to the image of a modern professional in various fields of activity. In the perception of Russian society, the image of students throughout its existence was perceived, on the one hand, very positively, it showed the intellectual potential of our country both in the times of the Russian Empire and in Soviet times. On the other hand, the image of students has always been associated with rebellion, freedom of thought, with the accumulation of new progressive ideas, sometimes in opposition to the existing state ideology and state structure. After the collapse of the Soviet Union, when liberal-democratic ideas became widespread and the economy became market-oriented, those who were able to learn how to earn a lot of money quickly without having higher education became popular in society, and the prestige of students as a specific social group fell sharply. The prestige and quality of higher education fell, as it became possible just to buy a diploma. Now there is an urgent need to return to higher education and students their high social status, which actualizes a comprehensive study of the phenomenon of the image of students and students. Socio-philosophical understanding of the image phenomenon of the modern student as a future professional is also important because it becomes one of the important factors of human competitiveness as a personality and as a professional in all spheres of life activity, and as a social construct, emerging and manifested in the process of social perception and interaction, can be understood through the use of philosophical methods that will allow to study it taking into account new realities.

The article concludes from the socio-philosophical point of view that the socio-philosophical understanding of the image is based on the priority of the subjective over the objective, manifested in the process of transformation of implicit models (symbols) into explicit ones (images), common in the ordinary consciousness of society, their mythologization, and Vice versa. It is established that in recent decades the concept of image is considered from several points of view: as a manifestation of personality, as a means of achieving the goal, as a way to attract attention and as an externally fixed condition of internal self-realization. Image is a concentrated expression of cultural, value and mental meanings inherent in a particular society.

It is determined that from the socio-philosophical point of view, the holistic concept of the image implies its understanding as a multidimensional, technological, ambivalent communicative and managerial phenomenon, which has a symbolic nature, arising as a result of the perception by the individual or group of persons of coded message, contributing to the actualization in their minds and sub-consciousness of the required motives of behavior including the mechanisms of identification, self-identification and self-presentation.

The image of the student has similar characteristics, but also has a number of specific features. Its diversity is determined by the fact that it is formed in the field of contact and interpenetration of the social environment of society and the specific social environment of a particular University. Technological nature lies in the fact that its formation can occur spontaneously through the subjective perception and evaluation of the objects of the surrounding reality in the process of self-development, and through targeted psychological and pedagogical influence in the process of training and education. Ambivalence is manifested in the fact that the formation of the student's image can be accompanied by a change in the already inherent personal peculiarities and characteristics, and the introduction of new ones either through their real embedding into the structure of the personality, or through the creation of an illusion of their presence. The communicative and managerial essence of the student's image is that its formation in the process of reflection contributes to the formation and development of the student's personality on the one hand, and on the other – in the process of image communication changes the image of the world among the image recipients. Adequately formed image contributes to the successful socialization and effective professional activity of the student in the future.

The materials of the article are of theoretical and practical value for the development of educational and methodical complexes on social philosophy, sociology, social psychology and pedagogy, as well as programs aimed at the formation of a positive and congruent image of the student to improve the effectiveness of his/her social, professional and personal adaptation, building the path of his/her successful professional development.

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Describing the Missionary Activities of Zyrians (Komi)

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Abstract

The missionary activity among the Zyrians (Komi) with the point of their Christianization was at first connected with the book and the book word. Zyryane turned into the principal nationality in Russia, for which the letter set was composed and the main interpretations of Standard writings were made. The ensuing time of book minister movement did not bring the normal outcomes, since it was completed without considering the eccentricities of the language, culture and conventions of the general population, a mind-blowing states action. Along these lines, the creators of this paper uncover a few plots of evangelist and instructive exercises among non-Russians.

Keywords: missionary activities, language peculiarities, Zyryane

Introduction

The missionary activity of the Russian Orthodox Church among the non-Russian people of the Russian Empire has a long history. Being a multifaceted, certain activities were carried out in different directions, including schooling and within its framework - religious education and book translation.

Missionary schools, designed to train missionaries from local residents, translators, employees of the administration, were elementary type educational institutions for religious missions (Adamenko, 1998). The organization of such schools has become one of the leading missionary activities.

The use of school instruction and the book word for missionary purposes has a long history. Christian enlighteners Cyril and Methodius, as is well known, compiled the Slavic alphabet, made translations of theological works and used them to propagandize Orthodoxy among the Slavic people (Makurin, 2002). Enlighteners in the Slavic lands had pupils and followers. Preaching Christianity and following the example of their mentors, they also turned to the book word (Adlykova, 2003).

The emergence of missionary schools is connected with the history of Ancient Russia. As the Kazan historian of the Russian church, K.V. Kharlampovich (1905), "The Enlightenment of the Pagans with the Christian faith and its reasonable connection with the school of enlightenment of the younger generation (a combination of propaganda of missionary ideas and, moreover, in the language of foreigners, school and book propaganda) is not a new idea. From the time when Christianity appeared in Russia, it was already used at St. Vladimir and his son Yaroslav the Wise, who started schools that had not only a narrow, professional character, but also a broad, missionary one".

However, the given plots were single and not typical. Therefore, we associate the emergence of the first missionary schools in Russia with the name of the Bishop of Perm, Stephen (1901), who spread

Orthodoxy among the Zyryans (Komi). School and book education yielded results. In the region, completely populated by pagans, conditions were created for the creation of an Orthodox diocese, and local clergy cadres were trained (Knyazeva, 2000). But the main thing that should be noted in the activities of Stefan Persmsky (1901) is a careful attitude to the history, culture, traditions and customs of the people, among whom missionary activity was carried out, which brought positive results (Mavlyutova, 2001).

Under successors st. Stephen Christianity spread in the Perm region among the Zyrians and Voguls (Mansi), Stephen's successors in the Perm department - St. Gerasim and sv. Pitirim - have done a lot for the Christian enlightenment of Zyrians. St. Gerasim, according to sources, was killed by the newly baptized Vogulic, and sv. Pitirim died during one of the raids of the Voguli (Rasov, 2002).

The service in the Zyryan language was performed up to the 19th century, however, information about the book missionary activity during the 15th - 18th centuries. We do not have. At least, they could not be found. Most likely, the missionary activity after Stephen of Perm (1901) was limited to the preaching activity and the violent Christianization of the Zyrians (or attempts at violent Christianization).

Methodology of Research

The missionary activities of the Russian Orthodox Church and the religious education of the foreign population in the Russian Empire have long attracted the attention of researchers. General issues of missionary activity received coverage in the studies of M.P. Svishchev (1997), V.Yu. Sofronov (1998). The study of the spread of Orthodoxy in the field of ethnic groups in the Russian state was carried out by A.M. Adamenko (1998), G.G. Gabdelganeeva (2016), V.V. Makurin (2002) etc.

Results

The next stage of the missionary work is associated with the beginning of the nineteenth century. In the late 1790s - early 1800s. the Holy Synod obliged the seminaries on the ground to begin translating liturgical writings into foreign languages. Seminarians from the representatives of the indigenous peoples of the regions were involved in translation activities. As part of this activity, several brochures were prepared and published, including the prayer “Our Father,” a short catechism, and others (Katsyuba, 1998).

Surely, within the framework of the above-mentioned prescription of the Holy Synod, a Zyryan grammar known as “the first printed grammar of the Komi language” was compiled and published. Today "Zyryansk grammar, published from the main department of schools" is considered a rare edition. It is called the Flerov grammar. However, the compiler of the grammar was, according to V.S. Ikonnikov (1891), a student of the Vologda Theological Seminary, Menzensky Zyryanin. Grammar was compiled on the orders of m under the guidance of and with the participation of seminary teacher A.Flerov, this grammar was acquired by the famous Russian statesman and bibliophile Count N.P. Rumyantsev, with whom Metropolitan Eugene was on friendly terms (Ikonnikov, 1891).

In the future, the book and translation activities for missionary purposes continued by the Russian Bible Society. Without touching upon the history of this association and its goals, we will note the colossal work associated with book translation and publishing (Sofronov, 2007). Through the efforts of the Russian Biblical Society in the period to 1823, 57 branches and 232 cooperation committees were established in different regions of the Russian Empire, and the total number of the latter reached soon 289. In addition, in a short period of time, the association published 655,486 copies of books in 26 languages and peoples Russia, bought and received as a gift 49346 copies of books in 15 languages (Shirokov, 2004). The numbers are impressive. They testify to the successful implementation of a focused missionary policy, carried out taking into account Russian specifics, and the book served as the main instrument of this activity.

In total, missionaries published 704831 copies of Holy Scripture in 41 languages. Among them are first translations in 12 languages: Russian, Kalmyk, Karelian, Mongolian-Buryat, Mordovian, Samogit, Turkish (Armenian letters), Tatar, Tatar-Turkish, Tatar-Orenburg, Cheremiss and Chuvash (Scherbich, 2007). The society prepared the Gospel of Matthew for publication in Zyryan dialect (the book was published in 1823), the Gospel was translated into Votskoye (Udmurt), Samoyedy, Kirghiz, Ostyak, Vogul, Mongolian-Buryat dialects. As we see, not only publishing, but also translational activity of missionaries, which was carried out taking into account geographically-geographical, national-ethnic, confessional and other features, was very broad (Fedorov, 1999).

Despite the continuation of translation and publishing activities, the end of the merger was near. By the decree of Emperor Nicholas I, who came to the throne, the activities of the Russian Bible Society were suspended, which was facilitated by the top leadership of the Russian Orthodox Church (Kreidun, 2008). Over 13 years of its activity, the Russian Bible Society has translated and published the books of Holy Scripture in 14 new languages. Among them are the New Testament and the first 8 books of the Old Testament (the Pentateuch of Moiseyev, the Book of Joshua, the Book of Judges of Israel and the Book of Russia) in Russian, the New Testament in Serbian, the Old Testament in Tatar, the Bible in Tatar-Turkish and Tatar Orenburg dialects, the New Testament in Turkish (in Armenian letters), the New Testament in the Chuvash, Mordovian, Mari and Kalmyk languages, the New Testament in the Mongolian-Buryat dialect, the Gospel of Matthew in the Karelian language, the Gospel of Matthew in Zyryan (emphasized by us .M.) And Novobolg rskom languages (Tresvyatsky & Morozov, 2006).

The biblical society became the largest missionary association in Russia in the first quarter of the 19th century, the purpose of which was the religious enlightenment of the peoples of the empire through a book that was viewed as the main tool in spreading Christianity among the "gentiles" (Sofronov, 1998). Another important aspect of missionary activity in relation to our topic is the translation of biblical books into the languages of the non-Russian peoples of the empire, including the Zyryan language, which ensured the use of publications by the population, at least at first. However, in general, such publications, as shown by subsequent years, had no success. The missionaries did not take into account that the population, by virtue of its backwardness, perceived the translations intended for it rather abstractly. In addition, the national traditions, faith and beliefs of the peoples among whom Christianity was spread were strong (Tresvyatsky, 2006). Thus, in relation to this period, we can speak of the failure of the mission, in this case connected with the activities of the British Bible Society.

3.1 Limitation

Questions of Orthodox missionary among the peoples living in North-Western Siberia, the book dedicated to G.Sh. Mavlyutova (2006), “Missionary activity of the Russian Orthodox Church in North-Western Siberia (XIX - early XX century). The author in this work carefully traced the history of the fate of the Oberskaya, Kondinskaya and Surgut missions in the above internality, North-Western Siberia, his beliefs and traditional way of life.

Conclusion

Thus, missionary activity among the Zyrians (Komi) with the aim of their Christianization was initially associated with the book and the book word. Zyryane became the first nationality in Russia, for which the alphabet was written and the first translations of Orthodox texts were made. Thanks to the activities of Stefan Permsky, Zyrians were taught to read and write, were engaged in the correspondence of essays, thereby creating the bookishness of their people (Chumakova, 2008). The subsequent period of book missionary activity did not bring the expected results, since it was carried out without taking into account the peculiarities of the language, culture and traditions of the people, the conditions of their life activity. Some progress in the spread of book-writing culture is observed in the second half of the nineteenth and early twentieth centuries. However, this is a topic for special study.

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Explanation of Donation: Advantages and Downsides

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Abstract

Donation as a social practice is simply starting to frame. Right now, gift as a social practice is a dissipated, divided activities that are precipitously imitated by individuals. Just a couple of actualize gift as a social practice. For this situation, we are discussing dynamic blood givers, that is, individuals who consistently give blood as per an individual timetable, and through which blood gift exists on a lasting premise. There are fears and doubt of individuals in the field of gift, bringing about close to home boundaries that go about as an obstruction to the start of the act of gift among potential benefactors. The absence of instruction programs and the normal publicity and the nearness of General antagonistic useful foundation and the modest number of instances of individuals, who utilize the gift for transplantation of organs, invigorate the rise among the general population of individual boundaries that thus lessens the quantity of benefactors who give blood on an imminent premise. The creators of this paper distinguished the primary social practices of gift. It was recognized by the creators three reasons that urge individuals to be incorporated into the act of gift: the requirement for cash, the longing to help, there was a need to support a relative, and just one motivation behind why individuals are excluded in these practices – dread, which is amazingly hard to adapt to.

Keywords: donation, donation practices, advantages and disadvantages, donors.

Introduction

Donation as a social practice is not the subject of close study of researchers. However, there are a number of papers devoted to the study of donation problems and a number of individual papers on social practices. A.Ya. Ivanyushkin et al. (1998), S.V. Petrov (1999). Since the phenomenon of donation arose in medicine, scientists and specialists in the field of medicine are primarily engaged in its study. There are various medical publications that publish the results of research on the development of donation. Among these publications it is worth to mention the journal of Bulletin of Transplantology and artificial organs, as well as a number of works published in it.

The team of authors: S.V. Gauthier, Ya.G. Moisyuk, O.S. Ibragimova (2009, 2010) – in their work describe the trends in the development of organ donation and transplantation in the Russian Federation for the period from 2006 to 2009. E.P. Volynchik et al. (2009) in their work analyze the quality of life of people after kidney had been transplanted. P.Ya. Filiptsev, Yu.Ya. Romanovsky and R.B. Akhmetshin (2009) in their work raise the issue of using the donor potential of people dying in the intensive care unit, analyze the problems and prospects of its use. The following group of authors T.G. Mikhailichenko et al. (2010) in their work reflected the study results of the psychological status of people who after organ transplantation acquired the disease associated with the transplanted organ.

M.G. Minina (2010) analyzes the organization of organ donation in the territory of the Russian Federation. The team of authors S.K. Sergienko et al. (2010) make a review of modern ideas about brain death, its clinical manifestations and the basic principles of donor accompany – maintenance of breathing and blood circulation, preparation for explantation (organ removal). Other researchers: E.N. Bessonova et al. (2011) describe the experience of creating a waiting list for transplantation of one of the donor organs, namely the liver on the example of the city of Yekaterinburg. E.A. Klyueva, E.V. Spirina and E.B. Zhiburt (2010) as the aim of their research put forward the study of donor satisfaction with donation and motivation to donation among men and women, as well as among people interested in obtaining material benefits and uninterested in obtaining material benefits, taking into account socio-demographic characteristics. V.V. Volkov and O.V. Kharkhordin (2008) contributed to the development of the theory of practices to discover the relationship of practical actions and language. O.V. Kharkhordin (2001), analyzing discourse as a configuration of practices introduced in the scientific turnover a new concept of *discursive practice*. Discursive practices are understood as a set of anonymous historical rules that establish the conditions for performing the functions of utterance in a given era and for a given social, linguistic, economic or geographical space. H. Garfinkel (2007) to study the practical action introduced into scientific use the term *ethnomethodology*. In his work he turns to the study of everyday practices, which he also calls explanatory ones. Individuals carry out practices by means of routine actions, in familiar situations on the basis of knowledge and skills of behavior in these situations, that is, show *competence* and take it as a given. K. Marx and F. Engels, (1970) defined practice as a material, sensory-subject, goal-setting human activity which possesses as its content the mastering and transformation of natural and social objects and which makes the universal basis, the driving force of human society and cognition. Marx also highlighted the structure of practice, consisting of the following elements: need, purpose, motive, subject, means to achieve the goal, and the result of the activity – through which one can learn practical activities. P. Bourdieu (2001) understands under the practice all that the social agent does him/herself and what he/she meets in the social world and which he/she considers as a derivative of hábitus. The very same habitus is a fairly broad term. P. Bourdieu (2001) defines it as, firstly, a system of stable and transferable dispositions, secondly, a system of cognitive and motivating structures, and thirdly, the ability to freely (but under control) generate thoughts, perceptions, expressions of feelings, actions. Habituses function as principles that generate and organize practices and representations.

Materials and Methods

2.1. The Methods of Research

The study of donation is based on the methodology of qualitative approach. Two methods of study were chosen for the study of donation as a social practice: the method of unfinished sentences and semi-formalized interview. The method of unfinished sentences is used as an incentive material for interviews. V.V. Semenova (1998), I.F. Devyatko (2003), G.G. Tatarova (1999), G.G. Tatarova and A.V. Burlov (1997), S. Kvale (2003). In accordance with the purpose and objectives of the study, the target selection of informants is made. The study involved two groups of informants: real donors and potential donors – aged 18 – 35 years.

The study used two methods - the method of unfinished sentences and semi-formalized interview (Elmeev & Ovsyannikov, 1999; Merton, Fiske and Kendall, 1991; Veselkova, 1994, 1995; Ju et al., 2017; Gluzman et al., 2018).

The method of unfinished sentences is a projective technique, the purpose of which is to reveal the subjective, unconscious meanings of the Respondent in relation to something. The idea of this technique is quite simple. The method of unfinished sentences is that the Respondent is asked to complete a series of sentences. This method is most often used as an additional. In this study, the method of unfinished sentences also was used as an additional, namely, acted as a stimulating material for subsequent interviews. For the survey, informants had developed eleven propositions, identifying the knowledge, opinions, and attitudes towards donation

Research problem:

To determine the level of informative nature of informants:

Knowledge of the concepts of *donor, donation*;
Knowledge of the conditions for acquisition of the donor status;
Knowledge of donor rights and obligations (laws, benefits);
Knowledge of places for blood donation (real and potential);
Knowledge of types of donation (except blood donation);
Knowledge of the potential dangers of donation.
To find out the reasons why people become/do not become donors;
To find out whether informants are ready to give / accept a donor gift, why / under what conditions;
To find out whether informants believe that donation is necessary for society, why;
To find out whether informants believe it is necessary to develop the sphere of donation;
To find out the problems faced by donors;
To find out what the attitude of informants to donation is;
To find out what hinders the development of donation;
To find out if there are differences in the answers between the selected groups of informants.

2.2. The Experimental Base of the Research

The empirical research was conducted on the basis of Samara University, faculty of sociology.

2.3. The Phases of the Research

The study of the problem was conducted in three stages:

Stage 1 - development of initial positions on the basis of theoretical analysis of the literature on the subject of research; development of the General concept of research, including methodological principles and the project of development of the research tool.

Stage 2 - development of a research tool to identify ideas about donation among the students.

Stage 3 - an empirical study of the idea about the donation among the students. A sample was formed, empirical data were collected. Preliminary results were obtained. Analysis and interpretation of the results were carried out.

Results

In the unit dedicated to the phenomenon of the donation, the following questions are included: what is the donation and what types of donation except blood donation are known for informants; the risks associated with the donation, according to informants; whether they consider it safe, voluntary, or imposed on; is the informants' attitude positive or negative to the donation; what are the pros and cons of organ donation that can be called by informants. The answers to the question what is donation can be combined into two semantic groups.

The first group includes the answers of informants who emphasize that this is a conscious act of human sacrifice of their organs or blood and its components for another person. For example, the following wording of the response of one of the informants - "donation is a case when a living person gives his/her organ or blood to another in need, or a dying person signs an agreement on the consent to donate their organs to the *donor Bank;* sometimes this decision is made by his/her relatives".

The second group included responses that emphasized that donation was an act of assistance but did not indicate what kind of assistance. For example, the following wording: "donation is when people help each other", "donation is when you are not afraid to help others". However, answering an additional question – what kind of help is it – the informants said that the help consisted in the sacrifice of one's organs or blood and its components for another person. In such a situation, logically, the following question arose- why did some informants, whose answers were within the meaning assigned to the second group, giving a definition of donation, focused only on the fact that this was an act of assistance, without indicating its nature, knowing what it was manifested in? This question was asked to respondents. The answers were quite simple and were reduced to the following phrases – "I see it so", "for me the main thing that people help each other". Such answers were received, perhaps because it is really difficult to explain, perhaps because among the informants were avid altruists with high morals, for whom the act of assistance was really important, regardless of its nature.

Since the study involved two groups of informants-real and potential donors, it is worth noting the existing difference in their responses. In the group of real donors, all informants in the response emphasized the act of donation of organs, blood and its components. And in the group of potential donors, the answers were divided; some of them emphasized the act of providing assistance, and some – the act of donating organs, blood and its components. Most likely, this distribution of responses is due to the fact that real donors are already sacrificing themselves, so the act of sacrificing organs, blood and its components comes to the fore. Why there is a division of responses in the group of potential donors, one can only assume that the emergence of the second type of responses was related to the values or attitudes of individual respondents.

It should be noted that not all respondents were able to give three examples, basically the answers contained either two or one example – "...inconveniently... but there is a sperm Bank...and there is an alternative, that is, a woman can donate an egg cell" or there was a definite answer "sperm". It is necessary to emphasize the fact that many people know about the possibility of donation of germ cells (eggs cell, sperm), and not everyone knows about the possibility of bone marrow donation.

Another feature that should be reflected was the fact that many informants calmly talk about egg cells donation and feel discomfort, which is expressed either in words or intonation, speaking about the sacrifice of male germ cells. Perhaps the feeling of such awkwardness was the reason that some informants did not answer the question, although this does not exclude the fact of ignorance of this kind of information.

Comparing the two groups of informants with each other, it should be said that the informants who did not answer the question were part of potential donors. However, the distribution of responses received did not differ among the groups; in other words, responses containing three, two or one example was present in both the potential and the real donor groups.

Answering the questions posed, our informants constantly emphasized the role of voluntariness in the practice of donation, implying that each person decides to whom (a stranger or a loved one), when and how (what to donate: blood, organ) to help.

Despite the existing freedom of choice, there are ambiguities in the practice of donation. We are talking about situations in which a relative can provide donor assistance to a person, who is under pressure to make decisions, and then there is a natural question – is voluntary donation in such a situation? The informants were described this situation and asked the appropriate question. Content answers of informants differed from each other, but in General they were reduced to the following opinion: if you can help a relative, you should not think about it, you just have to help, and you should not think about voluntary nature of your actions although, if the relatives in a bad relationship - all depends on the nobility of the one who can help. It can be concluded that the fact of voluntariness has a certain distant nature and depends on the relationship between the donor and the person in need of donor assistance (recipient). In other words, if the donor and the recipient are unfamiliar, the option of voluntariness is likely to be implemented, but if the donor and the recipient are in good kinship or friendship, then voluntariness is transformed into altruism. If, however, between the relatives there are bad relations or the degree of intimacy of friends is not great, there is a situation of voluntariness here again.

In the group of real donors, donation is considered safe, arguing that the specialized agencies use sterile equipment and make tests to detect diseases. For example, the following statement can be given: "I believe donation is safe because only sterile devices for blood transfusion or its components are used in blood donation". However, informants from this group do not deny possible health complications. Speaking on the donation of blood and its components, that is, the probability that a donor may faint, nausea or headaches can appear, but because of blood donation takes place under strict supervision of doctors from all symptoms of that kind donors can get rid of. If we talk about organ transplantation, then, according to informants, everything depends on the human body, regardless of whether the organ was transplanted or removed, because in their opinion transplant operations are performed by competent doctors, in sterile conditions with proven donor organs.

The answers in the group of potential donors differ sharply from the responses of the informants from the group of actual donors. First, there is an opinion that it is not safe, for example, there were such formulations as "you cannot be completely sure of everything", "I do not think it is safe." Secondly, despite the fact that informants justify the safety of donation through advances in medicine, for example, "progress in the field of medicine allows you to do it" or "blood is checked for diseases and organs for compatibility", they allow the possibility of medical errors. Speaking about the risks associated with donation, informants of this group noted the possibility of infection as a donor through non – sterile equipment, and infection of someone who will be transfused blood, for example, the following statement can be given - "blood is checked only for the main disease, and if a person is sick with something that is not checked then there is no information about it." Also, the informants talk about frequent cases of infection, about which they have heard from television programs (which are not specified).

The next task, which was set before the informants, was to find the pros and cons of the existence of donation. The number of pros and cons of each Respondent is different, someone could name more, someone less, many of them are the same, and one must say that the difference in the answers among the two groups of respondents was in relation to the cons of donation. Among the advantages of donation, respondents often noted the possibility of self-realization and a sense of pride in helping those who were in need, as well as the possibility of obtaining monetary compensation. Among other advantages, the respondents mentioned-the opportunity to receive a donor gift, the opportunity to save lives, the opportunity to receive the necessary treatment. It was interesting to find out from the informants whether they considered it was necessary to reward donors for their assistance. On this occasion there were different opinions, for example, the followings – "in a good way-no, it's a good thing, and the money is given to at least it made people do it... our world is Mercantile... unfortunately...", "it is necessary to pay only to those who constantly gives blood", "it seems to me, it is necessary to create system of social guarantees because it is necessary to thank somehow the people bringing benefit". Despite the fact that in answering this question there were different points of view, informants agree with the fact that donors should have certain social guarantees, benefits.

This study involved real donors, who found out why they were involved in the practice of donation. We also learned that the primary information about blood donation they received from relatives, friends, and colleagues and eventually in a specialized institution (hospital, blood transfusion center). It was logical to find out what sources of information would be used by potential donors if they decided to join the practice of donation and where they would go to donate it. According to the survey, the following answers were received: "first, I would look on the Internet on sites dedicated to donation, for example, yadonor.ru and everything else will be told to me in the blood transfusion center", "I would ask friends of donors or ask questions in a group of donors in contact", "I would immediately go to the transfusion center, there everything would be learned".

Informants identify three main sources of information about donation – donors themselves, the Internet and blood donation specialists. As for the place of blood donation, the answer was unanimous – the center of blood transfusion.

Discussions

A person who has the status of a donor has additional rights and responsibilities in accordance with his / her status. What are the rights and responsibilities of the donor (blood), according to our informants? In this case, it makes sense to consider the responses of informants by groups, as the involvement of real donors in donor practices, distinguishes them with a greater degree of awareness than potential donors. Speaking about the rights of a blood donor, informants from the group of real donors consider first of all, the right of monetary compensation, telling in detail how much one can get for the delivery of blood and its components. For example, the following statement can be given– "after blood donation, the person receives a sum of money in the amount of 108 rubles to food, as well as about 200 rubles for blood donation, 700 rubles for the delivery of plasma and about 1000 rubles for the delivery of platelets, and in blood donation more than 40 times, or 20 :40 blood and plasma and more, 60 plasma and more, it is about 8 years of the donation, the person can receive the title of "Honorary donor", but it's under the condition that the person will donate blood or its components free of charge, i.e. he will receive 108 rubles to food, but it's nothing compared to the saved life of an absolutely stranger or native person".

Informants talk about a number of social benefits provided by the state to donors. Some informants turn to history and say that over a long period of time social benefits to donors have not changed. For example, here is the following statement – "in Soviet times, a person who gives blood, received a number of pleasant social benefits, compensatory time off, food stamps, money, and with regular donation, quite feasible for a healthy body — the title of "Honorary donor", the right to free travel and a number of other bonuses. In the new Russia, almost all the benefits to donors that existed in the USSR remained, and the need for donor blood did not become less." According to the informants of this group, the duty of blood donors is one-to monitor their health. The same view was expressed by informants from a group of potential donors. Also, according to some informants, the donor should provide donor services as soon as necessary. However, with regard to donor rights, the knowledge of these informants is rather superficial. They know about the monetary compensation for blood donation, but what is the amount of this compensation they do not know. Also, informants assume that there are certain social benefits, but what they cannot say.

The benefit of donation is mostly in the possibility of self-realization, in the sense of pride and satisfaction for helping people in need, in the participation in saving the lives of many people. The effect of satisfying a person's need for self-realization is much higher than satisfying a person's need for money.

Thus, the donation brings benefits to man in moral and emotional terms. In people's minds, donation, as a rule, is one of the varieties of forms of altruism, that is, unselfish help.

Conclusion

Thus, according to the results of the study, the following conclusions can be formulated:

Informants are familiar with the concept of donation and donor, they relate them to common definitions, and importantly, the answers of informants do not differ from each other. An important point is the fact that all informants emphasize the voluntary nature of donation and the altruism manifested in it.

Informants are familiar with the basic possibilities of donation, namely what organs and tissues can be donated or obtained, and with the potential dangers. But the knowledge of our informants on this issue is incomplete and fragmented and informative nature is higher among informants included in the practice of donation.

According to the results of the survey, there were three reasons for stimulating people to be included in the practice of donation – the need for money, the desire to help; there was a need to help a relative, and only one reason why people are not included in these practices – fear, which is extremely difficult to cope with.

Speaking about the problems of donation, first of all we think about people who sacrifice themselves for the benefit of others, that is, donors. However, we can say that the involvement in donor practices is twofold. The person may engage in the practice of organ donation is not only due to the fact that he becomes a donor, but due to the fact that he becomes a man who received a donor gift, for the donor always sacrifice for someone else. And it would be unfair to speak only about donors in such a situation, since the person receiving the donor gift also experiences certain difficulties, which cannot be ignored.

We can talk about the existence of some distance in the desire to provide or receive donor assistance. That is, the closer a person is to us, the more we are ready to give or receive (willingness to donate an organ), if a person is not familiar to us, then we can share with him only what can restore the body, for example, blood.

Despite a number of negative aspects and awareness of the dangers of donation by informants, in General, they positively assess the sphere of donation and consider it necessary to further develop and improve it.

Informants are aware of the need for the existence and development of the sphere of donation, but are not ready to be involved in donor practices. A rational assessment of the phenomenon of donation shows only that people understand the need for its existence and with the favorable development of this sphere they will begin to support it. However, when it comes to presenting yourself as a donor or a person who needs donor assistance, the informants have internal contradictions.

Donation as a social practice is just beginning to form. At the moment, donation as a social practice is a scattered, fragmented actions that are spontaneously reproduced by people. Only a few implement donation as a social practice. In this case, we are talking about active blood donors, that is, people who regularly donate blood in accordance with an individual schedule, and through which blood donation exists on a permanent basis.

There are fears and distrust of people in the field of donation, resulting in personal barriers that act as a barrier to the beginning of the practice of donation among potential donors.

The lack of education programs and the regular propaganda and the presence of General negative informative background and the small number of examples of people, who use the donation for transplantation of organs, stimulate the emergence among the people of personal barriers that in turn reduces the number of donors who donate blood on a prospective basis.

The low interest of the state in the development of this sphere, the lack of a solid, clear and unambiguous legislative framework, largely inhibits the formation of donation as a social practice.

There are fears and distrust of people in the field of donation, resulting in personal barriers that act as a barrier to the beginning of the practice of donation among potential donors. The lack of education programs and the regular propaganda and the presence of General negative informative background and the small number of examples of people, who use the donation for transplantation of organs, stimulate the emergence of people's personal barriers that in turn reduces the number of donors who donate blood on a prospective basis. The low interest of the state in the development of this sphere, the lack of a solid, clear and unambiguous legislative framework, largely inhibits the formation of donation as a social practice.

Donation in our country is just beginning to develop, so it is a wide field of opportunities for study. Practices involving both donors and recipients can be explored. Direct experience of donors is the number of donations (blood donation), feelings, intentions, motives, goals. It is interesting to study the lives of people who received a donation, especially if this gift was an organ – how a person lived before there was a need for donor assistance, what a person felt when he learned about the need for transplantation, what difficulties he/she faced up in the process of treatment, how life changed after transplantation. It is interesting to study donor dynasties, that is, families where the acquisition of donor status is a tradition. Depending on the objectives of the study, different methods can be used to study donation: questionnaire survey, interviews, various projective techniques, to obtain more detailed information, a combination of different methods is necessary.

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Multifaceted Communication Competency Advancement in International Students: Fixed Nature of Cultural Model

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Abstract

The investigation affirms the hypothetical and down to earth significance of academic substantiation of social paradigms as a perpetual condition for the improvement of culturally diverse connection skills of a global understudy in the instructive space of the College. It is demonstrated that the cutting edge image of the world, changing affected by worldwide relocation forms, from new positions uncovers the highlights of this issue in secondary school, requiring fast, innovative and compelling arrangements from all subjects of the instructive space. Over the span of the investigation, the significance of reexamining the instructive states of the procedure of global understudies preparing and their reorientation from the data and psychological bases to the hypothetical and efficient reason for the execution of culturally diverse collaboration abilities in uncommonly composed states of the instructive space of the College is resolved. Based on the got outcomes, the benefits of character decided, prototype lattices of culturally diverse communication of a global understudy in the instructive space of the College are characterized: self-ruling, restorative collaboration and merging conduct are resolved. The elements of lattices' advancement is described by signs of individual mimicry's structures, between coordination of universal understudies with instructors, individual understudies to solidifying conduct, joined by the development of grids of social originals. The networks in this procedure are the consequence of the complexation of social and worth parameters of the instructive space and the examples of social paradigms of a worldwide understudy going into collaboration with it. In such manner, this article sets up the highlights of hypothetical and deliberate way to deal with the projection of significant worth images of social prime examples of a worldwide understudy on the improvement of diverse association abilities in the instructive space of the College.

Keywords: Multifaceted communication, competency international student, the fixed nature, monitoring, algorithm.

Introduction

1.1. Relevance of the Research

The modern picture of the world, dynamically changing under the influence of globalization, has affected not only the forms of cultures, but also the types of their perception and interpretation by student Youth. As a result, global homogenization, interpreted by them as the unification of the material sphere of cultures, revealed differences both in the historical dynamics of values and in their hierarchical structure and caused a crisis in their understanding. It is proved that the predominance of the globalization type of culture, as a multi-culture, becomes for the student's personality, to a greater extent, an internal expression of territorial changes. Under these conditions, the appeal to the cultural archetype as a way of preserving one's own belonging to the unique national culture of the native society is a natural response of the student to global challenges. It is proved that these trends indicate, the strengthening of the role of the archetype as a permanent (ever – ending) symbol (image) of national culture in the trans-territorial communication and in the process of formation of a new cultural landscape on the one hand (Mamonova, 2013) on the other hand, determine the behavior of international student in cross-cultural interaction in educational space of the University, providing him/her with all necessary resources for comfortable learning (Vdovushkina, 2009; Galsanova, 2011; Koshetarova, 2010). The established trends are present at all levels of the educational process and are manifested as an indispensable condition for the success of international students in the assimilation of the current and future educational goals and objectives, for the effectiveness of the personal and professional development (Giddens, 2004; Crane, 2002; Madsen, 1993; Robertson, 2002). In the course of the study, the importance of rethinking the pedagogical conditions of international students' training process and their reorientation from the information and cognitive bases to the theoretical and methodical basis for the implementation of cross-cultural interaction competencies in specially organized conditions of the University educational space is determined. On the basis of the obtained results, the advantages of personality-determined, archetypal matrices of cross-cultural interaction of an international student in the educational space of the University are determined:

– Autonomous interaction. It manifests itself in the form of personal mimicry, adjusting to the conditions of a new society. Students are involved in the processes of communication and behavior, according to the existing standards in the University. At the same time, they preserve their own cultural identity and demonstrate the rejection of the values of the new environment. There is no cross-cultural interaction between students who come into contact. International students remain isolated from the influence of the dominant society;
– Correctional interaction. There is a gradual awareness process of the inappropriateness of demonstrative behavior and the values' rejection of the educational space and the new society, the understanding of such behavior as a sign of bad manners. At this stage, there are changes in socio-cultural patterns of student behavior. There is a *corridor* for dialogue of cultures in cross-cultural interaction and mutual coordination of international students with teachers and fellow students;
– consolidating behavior. This is the origin of the matrix-the result of the complexation of cultural and value parameters of the educational space and the patterns of cultural archetypes of an international student entering into interaction with it. The matrix contributes to the development of cultural identification of students with new values based on the preservation of their own ethnic and cultural identity. As a result, the basic values of the student's personality change. In the process of borrowing the values of the new environment, the structure of archetypal value matrices is modified. Without violating the integrity of cultural belonging, the new symbols allow reaching the level of cross-cultural interaction based on universal values. At the same time, students rely on the competence of self-identification with the values of the educational space as a micromodel of a new culture; their consciousness opens to new meanings and values of the surrounding space (Galsanova, 2011).

In this regard, the priority attention in this article is given to the establishment of theoretical and methodical approach to the projection of cultural archetypes' value symbols of an international student on the development of cross-cultural interaction competencies in the educational space of the University. The article reveals the structure and content of the concept of cultural archetype's *permanent nature* of a foreign student; the structure and content of cross-cultural interaction competences of an international student in the educational space of the University are defined. On the basis of the research results the pedagogical algorithm of projecting the value symbols of cultural archetype on the development of cross-cultural interaction competences of an international student is substantiated and its effectiveness is proved with the help of motivational, cognitive, operational, personal criteria.

1.2. Analysis of the Literature

Scientific – methodical ideas and insights of philosophers, sociologists, psychologists, educators, Methodists (Allakhverdov & Allakhverdov, 2014; Bolshakova, 2010; Vdovushkina, 2009; Galsanova, 2011; Zabiyako, 1998; Koshetarova, 2010; Crane, 2002; Madsen, 1993; Robertson, 2002), devoted to the development of General cultural competence of international students in educational space of the University, constitute the methodological basis of this study. Of particular importance for the study of the problem of research are the works of K.G. Jung (2004), thanks to his theory of the collective unconscious, the concept of archetype is actively used in modern research. K.G Jung (2004) stressed that the term *collective* indicates the *universal nature* of this layer of the unconscious in the psyche of the individual, the identity of this layer in all people. Archetypes as *collective patterns* in Jung's theory are endowed with specific properties: non-representability, as the ability to form the possibility of representation, which is given a priori; affectivity of nature: since affective situations are typical, resulting in the formation of the same archetypes;

ambivalence nature, because they are derivatives of the dual nature of the human psyche (fear and awe, horror and delight – feelings experienced in connection with archetypal images); archetypes are not relics of the past, they play a regulatory role, perform compensatory functions, enable adaptive instinctive actions' performance. In his research, Jung K. defined the role of archetypes in determining the fate of not only an individual, but also entire societies and States. In his opinion, all the most powerful ideas and representations of humanity can be reduced to archetypes (Jung, 2004). The polystylism of cultural forms, values, norms, behavioral imperatives, manners of goal-setting presuppose the emergence of an intercultural neutral space that removes the contradictions of interacting cultures, expands the diversity of cultural styles and ways of their presentation and interpretation. According to Jung K., cultural archetype is a step into the past, a return to the archaic qualities of spirituality, but the strengthening of the archetypal can be a projection into the future too, providing individuals with opportunities for adaptation to foreign cultural external zones. In the psychological and pedagogical literature the leading idea of priority of creating safe educational space of higher education institution for development of cross-cultural interaction competences of the international student is traced. Many researchers (Vadutova, Kabanova & Shkatova, 2010; Gladush, Trofimova & Filippov, 2008; Dementieva, 2008; Domorovskaya, 2007; Savchenko, 2010) on the basis of the results obtained note the changes of adaptability in different ethnic groups of students depending on the level of formation of cross-cultural interaction competences in educational space of the University. To date, the study of a foreign student's adaptation, due to the cross-cultural interaction of the value symbols, of the national culture's images as a leading strategy for improving the educational space, have special significance (Gladush, Trofimova & Filippov, 2008; Crane, 2002; Robertson, 2002; Fursa, 2012). In recent years, in pedagogical studies devoted to the problems of cross-cultural interaction of an international student in the educational space of the University, much attention is paid to the cultural models of archetypes, the methods of their organization and application are proposed, the advantages of use are identified, the requirements for design are determined (Galsanova, 2011; Kolcheva, 2015; Zabiyako, 1998). In the course of the study, despite the extensive bibliography, the presence of productive areas and approaches to the development of intercultural interaction competences of an international student in the educational space of the University is established; the questions of creating new forms and models, new resources of implementation remain open. The leading role in this process is played by models of cultural archetypes of the student, the permanent values of which are the matrix of available experience, the use of which depends on the process of intercultural communication. In this regard, the need to determine the theoretical and methodical approach to the projection of the archetype's value symbols on the development of cross-cultural interaction competences of an international student in the educational space of the University is still relevant. The solution to this problem determines the purpose of the study.

Results

2.1. Discursive Content of the Notion Permanent Nature of Cultural Archetype

It is established that cultural archetypes are more ready-made, historically formed representative cultural forms, symbols, models that allow explaining the available experience of a person; it is the ability to form the possibility of representation, which is given a priori. K. Jung's statement, comparing the archetype with the axial system of the crystal, reshaping the crystal in solution, acting as a field distributing the particles of matter, became popular. Actually it just needs to be distinguished from the image, as a synonym of which Jung used the terms *archetype* and *elementary image* (Jung, 2004). It is proved that initially the concept of cultural archetype in scientific research is used as a methodological approach in the study of art, as the main situation, character or image, constantly present in human life, because a person cannot live without archetypes, as without nature, and the human community does not live without rites and traditions. In modern literary studies there is an understanding of archetype as a universal plot or prototype, fixed by myth and passed from it to literature and other types of professional art. Since literary experts themselves mark the second nature of literary archetypes in culture, other researchers define the archetype as the main force, character or image that is present in the life of a person constantly (Bolshakova, 2010). According to the definition of A.Yu. Bolshakova (2010), cultural archetypes are: 1) the most stable in historical changes and determining the structure worldview of the individual, nation, people, meta concepts of culture; 2) the invariant core of human mentality, changing in accordance with the specific historical situation, in the resistance to it and in adapting to it. Considering the archetype as a meta concept of culture, it is possible to establish its properties:

- invariance of the archetype. It suggests a mental expansion of the primary model, which determines the variability of its incarnations in culture and peculiar evolution;
- Convolution. The original form of the archetype's existence as a cultural symbol to keep in minimized form extensive and significant texts. Every cultural archetype has this property;
- Binary nature of the structure. It forms antinomy archetypal models (dying/rebirth, good/evil, etc.). This feature of the archetype is based on the psychological views of K. Jung, who discovered the ambivalent nature of the archetype of the collective unconscious;
- There are passive and actual layers in the structure of cultural archetype. Actual one differs by historicity, national color, as it is determined by the cultural context. Passive acts as an invariant kernel, forming a *through* image-type (Bolshakov, 2010). In the science of the XX century the concept of archetype became widespread and interdisciplinary due to extraordinary geopolitical and migration processes. K. Jung noted that the archetype is stable and has the ability to repeat throughout history wherever fantasy freely operates. Archetypes, preserved in the form of collective unconscious inherent in each individual, are the result of centuries of our ancestors' experience. They are inherited in the same way as the structure of the body is inherited. Archetypes define the identity of the General structure and sequence of images that pop up in the mind in the awakening of creative activity, so spiritual life bears the imprint of the archetypal nature. K. Jung, exaggerating the role of archetypes, saw them as a formative beginning, present in the psyche of each person. He was convinced that archetypes structure the understanding of the world, of themselves and other people; they manifest themselves with special clarity in mythical narratives, fairy tales, dreams, as well as in some mental disorders. The set of archetypes is limited; they are the basis of creativity and contribute to the inner unity of human culture, make possible the relationship of different eras of development and mutual understanding of people.

Archetypes in this sense are hypothetical; represent a kind of model that allows explaining the available experience. Within each ethnic group archetypes acquire their own form (archetypal ones are and the cross, and mandala). Archetypal ones are *eternal images* (Christ, the Virgin Mary, Muhammad, and homeland, Life, Good and Evil). Each nation, refracting the archetype through its lifestyle and the picture of the world, gives birth to the most characteristic of their spirit images and ideals. The ethno cultural archetypes are represented by the historical and socio-cultural experience of the people and their spiritual orientations. It is proved that the use of the established characteristics in the creation of cultural archetypes' semantic constructs of an international student as a set of symbols, images and ideas that exist in the realities of culture and are expressed in value matrices, is applicable in determining the behavior of the student in the everyday situation of a particular cultural environment, and in extraordinary situations.

2.2. The Structure and Content of Cross-Cultural Interaction Competence Package of an International Student

The dominant characteristics of cross-cultural interaction competences of an international student, based on the symbols and ideals of the archetype, as a permanent condition for the preservation of national identity and identity of the culture of the individual, are: motivation for their assimilation, as a willingness to use; possession of the necessary knowledge; experience of application in standard and extreme conditions as an activity-based aspect; value attitude to the object of the application; emotional regulation of the process and the result of the application. The established characteristics have a supra-professional character and are present in any activity, but in relation to the development of cross-cultural interaction competencies, they show specificity due to the values of cultural archetypes and the implementation of the principles of cross-cultural communication, self-organization and self-transformation. In this innovative process the competencies of inter – cultural communication, value-semantic orientation, self-improvement, social interaction are applied. It is determined that the structure of intercultural interaction competences is differentiated on the same grounds as the values of cultural archetypes on the key ones (they are implemented on a universal, common for all archetypal models the content of values), cross-cultural (they are implemented on the content of cultural values, universal for the set of archetypes), cultural (they are formed within the boundaries of a particular cultural archetype). The established differentiation determines the composition, structure and content of cross-cultural interaction competences inherent in a particular archetype:

- Personal competence, are focused on the person as a personality, the subject of activity, communication: competence of value-semantic orientation; competence of civic consciousness; competence of integration (structuring of knowledge, expansion, increment of accumulated knowledge); competence of self-improvement, self-organization, self-development, personal and subject reflexing;
- Communicative competence related to human and social sphere interaction: competence of social interaction; social mobility; competence of communication (oral, written): construction and perception of the text, cross-cultural communication, interaction with others;
- Personality – activity-based competency: the competency of the educational – cognitive activity; the competency of the operational – practical activities; competency of information technology; adaptation competency; remedial competencies.

The structure and content of the competencies established and conditionally grouped in the course of this research possess the properties of meta-subject, interdisciplinary and subject character. Meta-subject level involves social and professional knowledge, skills and personality traits of an international student – future specialist, which have a universal character. The interdisciplinary level is based on interdisciplinary communication, modeling solutions that require collective interaction, the development of competencies for the rapid assimilation of non-core disciplines. The subject level is mediated by the content of the studied disciplines and at the same time the content of competences mediates and modifies the cultural values of educational knowledge.

Designing the competences of cross-cultural interaction of an international student, based on the symbols and ideals of the archetype, as a permanent condition for the preservation of national identity and identity of the culture of the individual, requires a well-thought-out structure, determining the objectives, determining the relevance of the study for all participants, the social significance of the relevant methods, including experimental work, methods of processing the results. These competencies are fully subordinated to the logic of development of cross-cultural interaction competences and have a structure, approximate or completely coinciding with the values of cultural archetypes.

2.3. Pedagogical Algorithm of Projecting the Value Symbols of Cultural Archetype on the Development of Student Cross-Cultural Competencies

It is established that the development of cross-cultural competence of an international student, based on the values of the cultural archetype, is a pedagogical system based on a variety of interrelated elements: goals and objectives, laws and principles, content, organizational forms, methods and tools, technologies, criteria of readiness of the system to implement the process of development of competencies and indicators of readiness of an international student to specific types of interaction in the educational space of the University. The algorithm for the development of cross-cultural competencies on the symbols and ideas of the cultural archetype based on the relationship between motivational, cognitive, operational and personal levels is justified (Vdovushkina, 2009; Zimnyaya, 2003; Kolcheva, 2015; Khutorskoy, 2003).

The *motivational level* assumes the primary formation of the international student's motives that cause activity and determine its *direction* - interests, motives, abilities, needs, views, positions, attitudes.

The *cognitive level* involves the acquisition by the person of knowledge, the development of intellectual abilities and abilities to apply the knowledge in practice.

The *operational level* is focused on the formation in international student of the necessary package of competencies.

The *personal level* is based on the formation of personally significant competencies necessary for the realization of the values of cultural archetype in cross-cultural interaction in the educational space of the University.

The experimental verification of the established approaches shows that the scientifically grounded implementation of the algorithm for cross-cultural competences development based on the symbols and ideas of cultural archetype is effective if the basic archetypal matrices are used in the creation of semantic constructs of student's behavior in the educational space of the University:

– at the motivational level - as appropriate motives, needs and goals of cross-cultural interaction; understanding of the personal and social significance of the results of activities for him/herself and ethno-cultural society; world views on the personal responsibility of activities; intentions and attitudes to educational activities; social preferences and expectations of the future professional activity; the position of a person of national culture in relation to him/herself (recognition of him/herself as a person of national culture, the desire for self-development and self-improvement as a future professional);
– at the cognitive level-as a reflection: 1) completeness, depth, stability and systematized nature of knowledge about the socio-economic and socio-political situation in their own country, in the host country, in the professional sphere, awareness of its specifics and the main development trends, the tasks set by their own state to each citizen; 2) requirements of this type of labor activity to the personality of the future specialist; 3) formation of special knowledge about the features of professional activity: corporate culture; psychology of interaction with fellow students, about human values, professional and ethical standards and rules of communication and behavior; abilities and readiness for further self-education in cross-cultural interaction;
– at the operational level - as the formation of competencies: 1) *General professional* (to define strategic goals of activity and to organize their realization; to analyze efficiency of the carried-out activity; to distribute functional powers and responsibility; to develop system of the current and operational control; to operate collective and to activate participants in the course of the solution of objectives; possession of methods and receptions of forecasting of changes in the processes occurring in external and internal environments); 2) special (to use knowledge of *cognitive* processes' mechanisms in activities, for example, to improve the simulacrum of PR campaigns and advertising; to apply business communication *skills* in professional activities; to find optimal strategies of behavior in conflict situations; to apply the skills of effective *goal-setting* in the planning of activities; to highlight the main patterns of behavior in the planning, organization, motivation, control);
– at the personal level - as a willingness to implement: 1) moral qualities (diligence, perseverance, organization, discipline, responsibility, commitment, independence, inner freedom and self-esteem, self-discipline); 2) Professionally significant skills (commitment and ambition, determination, courage, swiftness, energy and perseverance, intuition, endurance and *self – control*, ability and willingness to risk); corporate skills (*communication skills*, culture of interaction with colleagues, clients, investors, team building culture).

Variants of behavior of the international student in extraordinary situations of cross-cultural interaction competencies realization corresponding to values of cultural archetype are proved.

Option 1. Familiarity with the environment:
– Difficulties of language communication;
– Climatic surprises;
– Problems with the wardrobe;
– Problems with transport;
– Change of hour rhythms.

Option 2. Analysis of educational space:
– Social and living conditions;
– Psychological climate in the interethnic study group;
– Communication with representatives of other countries and daily training activities;
– Attitude to group norms, goals and values;
– Development of behavioral tactics corresponding to the group requirements and expectations.

Option 3. Analysis of living conditions:

- Adaptation to campus life;
- Adaptation to the norms of behavior in society, in the study group;
- Adaptation to the requirements of educational activities;
- Difficulties of getting used to another way of life;
- Difficulties of getting used to another climate;
- Difficulty getting used to a different kitchen
- Difficulties in relationships with others;
- Difficulties with the absence of relatives.

Option 4. Identifying opportunities for cross-cultural interaction.
Option 5. Identification of personal and socio-cultural barriers.
Option 6. Determination of priority personal qualities necessary for cross-cultural interaction with others:

- forecasting the goals of cross-cultural interaction;
- Definition of socially significant competencies;
- Status in the study group, by place of residence;
- The commitment and level of ambition.

Option 7. Formation of optimistic expectations.
Option 8. Determination of the directions of search for new opportunities in cross-cultural interaction in the educational space of the University.
Option 9. Correction of cross-cultural interaction competencies.
Option 10. Creation of new symbols of cultural archetypes based on the integration of national value matrices with values of other cultures.
Option 11. Search for new opportunities.

Conclusion

The study confirms the theoretical and practical importance of pedagogical substantiation of cultural archetypes as a permanent condition for the development of cross-cultural interaction competences of an international student in the educational space of the University. It is proved that the modern picture of the world, changing under the influence of global migration processes, from new positions reveals the features of this problem in high school, requiring rapid, creative and effective solutions from all subjects of the educational space. In the course of the study, the importance of rethinking the pedagogical conditions of the process of international students training and their reorientation from the information and cognitive bases to the theoretical and methodical basis for the implementation of cross-cultural interaction competencies in specially organized conditions of the educational space of the University is determined. On the basis of the obtained results, the advantages of personality-determined, archetypal matrices of cross-cultural interaction of an international student in the educational space of the University are defined: autonomous, corrective interaction and consolidating behavior are determined. The dynamics of matrices' development is characterized by manifestations of personal mimicry's forms, inter-coordination of international students with teachers, fellow students to consolidating behavior, accompanied by the emergence of matrices of cultural archetypes. The matrices in this process are the result of the complexation of cultural and value parameters of the educational space and the patterns of cultural archetypes of an international student entering into interaction with it. In this regard, this article establishes the features of theoretical and methodical approach to the projection of value symbols of cultural archetypes of an international student on the development of cross-cultural interaction competencies in the educational space of the University. The article reveals the structure and content of the concept of *permanent cultural archetype* of an international student; the structure and content of the competencies of cross-cultural interaction of a student in the educational space of the University are defined. Based on the results of the study, the pedagogical algorithm for projecting the value symbols of cultural archetype on the development of cross-cultural interaction competences of an international student is substantiated and its effectiveness is proved with the help of motivational, cognitive, operational and personal criteria. This problem as a research area is not limited to the solution of the goals and objectives. The substantiation of the model of integration of the traditional educational process's cultural archetypes with the matrices of the cultural archetype's values of the innovative (virtual) educational process is important for the formation of the personality of an international student.

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Antinomic Dialectics as a Methodological Tool for Solving Paradoxes of Love in A.S. Makarenko Juvenile Pedagogy

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Teaching to love, teaching to recognize love, teaching to be happy – means teaching to respect yourself and teaching human dignity.
Anton Makarenko

Abstract

The problem under study is urgent due to existent contradiction between the growing need for the development of an adequate heuristic tool for studying the educating problems of the younger generation, on the one hand, and ignoring the rich positive experience of Makarenko juvenile pedagogy, on the other. On a broader, ontological basis, the study is relevant due to the polymodalization processes of the all aspects of human activity and human existence, which in its turn call for the development of an integral multidimensional human. The multidimensional human is oriented to the plurality recognition of truths and ideas about the world, capable of solving the growing shaft of problems, devoid of one-dimensional and unambiguous direction.

The paper is aimed at scientific identification and legitimation of antinomical pedagogy. On this basis its tool opportunities are disclosed using A.S. Makarenko experience for solving love conflicts-paradoxes in juvenile educational environment.

The main approach to study is an antinomic principle. This allows us to consider opposites as necessary equal components of a certain holistic process (phenomenon) and suggests ways of adapting to them.

The following results are obtained in the study. Firstly, the essential, substantive and instrumental characteristics of the antinomic dialectics are established and scientifically substantiated. Secondly, mechanisms for realizing its methodological potential in Makarenko educational system. Thirdly, some problems and perspectives of the study of antinomy as a pedagogical and educational phenomenon are indicated.

The materials of the article can be useful in modeling, designing and developing modern younger generation education systems, and also as a heuristic tool for studying the problems of development and improving antinomical pedagogy.

Keywords: Antinomies, antinomic dialectics, antinomical pedagogy, juvenile (adolescent-youth) pedagogy; the pedagogy of love; teacher as a top manager.

Introduction

Philosophers consider antinomy as "... a contradiction formed by two judgments (inferences, laws), each of which is recognized as true" (Gritsanov, 1999). Thus, the semantic dominant of the category under discussion is a contradiction. Consequently, there is reason to believe that antinomy and dialectics correlate. Dialectics is a science of contradictions, the unity and struggle of opposites, the universal laws of the development of nature, society, human and thought (Frolov, 1991).

This, in a sense, leads us to legitimize the existence of antinomic dialectics. In addition to its dialectic filling, antinomic dialectics includes as its heuristic basis the principles of similarity in difference and difference in similarity, and antinomies. According to the first principle, relation of opposites is not dialectical negation of each other, but is harmony and similarity (Malakhov, Filatov, 1990). The second principle complements the first one. In addition to recognizing the equality and equivalence of polarities, it suggests ways of adapting to them.

In their totality, these principles express the essence of the so-called "balancing thinking" (Yarkina, 1992), which forms the heuristic foundation of the antinomic dialectics. However, as it will be seen from below, the antinomic approach does not completely reject the ubiquitous law of the hierarchy (as for example, two-factor approach). Figuratively speaking, one of the opposites, as a rule, is more equal.

The concept of "antinomic dialectics" is by no means the invention of the author of this article. We refer to the article by Gaidenko (1988) "P.A. Florensky antinomic dialectics against the identity law". The interesting is that this work especially emphasizes the statement of P.A. Florensky about the moral, ethical and, to some extent, even the love side of the antinomic dialectics issue. According to Gaidenko, the entire Florensky antinomic dialectics is based on the conviction that the rejection of selfishness and self-assertion presupposes a rejection of the identity law. It is further asserted that the love to the other, according to Florensky, demands the renunciation of the identity law, the abolition of it. This is supported by the thesis (Florensky, 2017) that the of *identity law* is a synonym for egoism, callousness, lack of love and the skoptsy mind, while *antinomy* is synonymous with altruism, love, faith and creativity.

The intentions of antinomic dialectics are applicable to the modern education. For example, the its direct pedagogical consequence is the concept of a holistic school, developed by German scientists (Winkel, 1988). Its core is the proposition that the universe has paradoxical antinomic properties, suggesting the coexistence of opposing and mutually exclusive ways of being - randomness and necessity, order and chaos, activity and rest. This allows to more accurately deal with such issues as, for example, relationship between the individual and the collective. It contributes to the recognition of the need to build a qualitatively new system of interrelations between organizations and their environment, nature and human down to their subject-object fusion. The latter is determined by the comprehension of the integrating sense of nature as an indivisible triad consisting of the subject, the object and the integration process that takes place between them. Ultimately, this leads to the realization of the idea of a person's global openness to nature, to taking into account all aspects of life in all its diversity in educational activities, to the realization of the need for global cooperation and co-creation of human and nature, a person and a person, and a person with himself (Yarkina, 1992; Chapaev, 2005).

The heuristic power of Makarenko's antinomic dialectic fully manifested itself in his concept of love. If we look at the consolidated subject index, presented in the last volume of A.S. Makarenko collected works on page 550, we will see that love is not a passing word, but a very significant category that permeates the entire structure of his educational system. In this respect, Makarenko's response to one of the questions asked him when speaking at the Kharkov Pedagogical Institute is characteristic: ‘I decided to write a love book, because I involuntarily became an expert in this matter (Laughter in the hall), although I came to this persuasion at the most recent time that love is not at all an influx or a chance, nor an accident, but this is an ordinary case that needs to be organized. Therefore, educating good organizers, you thereby ... bring up good lovers’ (Makarenko, 1958, Vol.5, pp.297-298). As they say, no comments. A.S. Makarenko distinguishes four types of love: love for the home country, love for parents, love of parents, love properly, concerning relations in juvenile environment.

We included the phrase "*paradoxes* of juvenile pedagogy” in the title of the paper. At first glance, it may seem a bit dubious to use it in the topic. *Paradoxes* look somewhat frivolous alongside such an important and at the same time mysterious category as the antonymic dialectics. But this is only at first glance. Paradoxes are by no means lightweight and not far from the concepts of "antinomy" and "dialectics".

Both in Russia and abroad, not infrequently the concepts of "contradiction", "paradox" and "antinomy" are considered synonymous (Getmanova, 1998). From this we also started when considering the paradoxes of love and the ways of their resolution in the A.S. Makarenko system. As for the notion of A.S. Makarenko "juvenile pedagogy", then in this case we proceeded from the simplest interpretation of it as a direction in pedagogy, designed to solve the tasks of raising children from about 12 to 18 years, which coincides mainly with the age of the pupils of Makarenko. Speaking about “juvenile pedagogy”, we mean only that, but nothing else.

2. Methodological Framework

2.1. Research methods

In the study, to different extents, the following methods were used:

- hermeneutic (interpretation, comprehension, understanding);
- analysis and synthesis, concretization and generalization, universalization and unification, transformation and modification, idealization and extrapolation;

- method of a system purposeful construction of new theoretical concepts, synthesized from a set of elements of knowledge of a different nature;
- method of analogies, based on the dialectics fundamental laws generalization for processes of a different nature;
- thought experiment;
- the method of double entry of basic components into the system (Lednev, 1989).

The general methodological basis of the research were

- dialectics, which is 'the only method capable of seizing living reality as a whole' and 'the law of coincidence of contradictions' (Losev, 1990);
- the principle of global connections and unity of the world; the theory of total-unity (Solov'ev, 1988, 1990, Florensky, 2017);
- Sorokin (1992) idea of a significant component;
- the concept of the integrity of the spiritual organism (Kireevsky, 2003).

Works in the field of general and pedagogical culturology, educology (Benin, 2004; Benin, Frolov, 2014; Bibler 1990; Zagvyazinsky, 2016; Zborovsky, 2000) have heuristic value for the research. When writing the article, we also took into account the instrumental potential of the pedagogical methodology (Bordovskaya, 2001, Atutov, 1985; Novikov, 2002; Korolev, Gmurman, 1967).

2.2. Research stages

The study was conducted in three stages.

At the first stage, the search for methodological approaches to the study of the problem was carried out. As a result, the concept of research was built.

At the second stage, the historical and pedagogical material on the problem was studied. As a result, the approaches to its evaluation were worked out.

At the third stage, the data of the studied material were stratified, generalized. As a result, conclusions were drawn.

3. Results

In accordance with the stated problem, we have considered the paradoxes of love and the ways of their solution in the Makarenko juvenile (adolescent-youth) pedagogy. Here they are:

3.1. The first paradox. *Love is a biochemical process and is caused by the action of hormones such as dopamine and oxytocin* vs. *Love is a socio-cultural phenomenon.*

Using antinomic dialectics tools, based on the recognition of equal rights and the equivalence of polarities, A.S. Makarenko dismisses the disjunctive approach to the problem solution. According to the disjunctive approach, one of conflicting sides is recognized as true ("either … or …" view). He puts in this arsenal a conjunctively oriented additional approach. In accordance with this approach, contradictory judgments do not mutually exclude each other, but cause coexistence with each other ("both ... and …" view). Thus, a tolerant attitude to both sides is maintained.

To some extent, such approach correlates with the two factors (heredity and environment) theory (Zinchenko, Meshcheryakov, 2003). But in this theory of convergence of these factors, the heredity dominance role is assumed. While A.S. Makarenko, not ignoring the significance of the biological (hereditary) factor in love, he believes that the sexual act 'can not be isolated from all the achievements of human culture, from the conditions of a person's social life, from the humanitarian path of history, from the victories of aesthetics' (Makarenko, 1958, vol.5, p. 220).

Moreover, according to A.S. Makarenko, the ability to love can be enjoyed by people endowed with a sense of civic responsibility for the fate of the society in which they live. "If a man or a woman does not feel like a member of society, if they do not have a sense of responsibility for his life, for his beauty and reason, how can they fall in love? Where do they get respect for themselves, confidence in some value of themself that exceeds the value of a male or a female?" From this the conclusion follows that "sex education is primarily the education of a culture of social personality".

Spiritual and social component of love, in the terminology of P.A. Sorokina (1992) is its significant component expressing the inner meaning of phenomena (processes, things). Without it, the national flag turns into a piece of matter, Beethoven's ninth symphony - into a certain number of waves of different length and amplitude, consciousness - into the aggregation of electrons and protons, and the love relationship is reduced to coition.

In general, Makarenko is building a kind of love triad: biological love, spiritual love, sociocultural love. Moreover, Teacher Makarenko goes beyond the two-factor binom. In addition to heredity and environment, there is upbringing. Of course, if you wish, you can embody upbringing in the environment. But the environment is inert, conservative, not immobile.

Education is a focused process of human development. This allows us to separate it into a line in the structure of human development factors. In this case, we get the formula:

$$D = (H + Env) \times Ed,$$

where D is development, H is heredity, Env is environment, Ed is education.

Clearly, love is, so to speak, a self-determination of the person. But for this very reason love simultaneously is a social phenomenon, carrying in itself the reduced specific features of HOMO SAPIENS and features of the representative of a certain society (group, nationality, class, etc.). Otherwise, we will deal with the "love" of a male or a female, as A.S. Makarenko said. And, to think, are people often right in their militant selfishness?

Located at the intersection of the universal (superindividual) and personal (individual) lines of being, a person simultaneously acts as a collective and individual subject. As a collective subject, a person seeks to merge with other people, not stopping at the loss of his- or herself, "the deadly sister of ignorance" (Roerich, 1992).

Is not Leo Tolstoy (1985) right, writing in his diary: “Egoism, i.e. life for oneself, for one person, is madness”. E. Fromm (1990, 1993) has a similar view that there is the same question in all cultures at all times: how to overcome separation, how to achieve unity, how to go beyond the limits of one's own individual life and gain unity", and the higher man's power manifestation is "giving" (Chapaev, 2005).

3.2. The second paradox. ***Love is a spiritual essence incomprehensible to the human mind*** **vs.** ***Love is "an ordinary affair that needs to be organized"*** (Makarenko, 1958, vol.5, p.298). When analyzing the position of Makarenko to solve this dilemma, one can get the impression that he secretly sensed some difficulties in a holistic awareness of the problem, allowed elements of a bifurcated perception of the phenomenon.

On the one hand, he elevates love to understanding it as a transcendental and metempirical phenomenon. As transcendental phenomenon, love, as Makarenko says, expresses the basis of human existence, the peak of human's spiritual development. As a metempirical phenomenon, love, in his opinion, is on a par with such "transcendentals" as goodness, perfection, the kingdom of heaven (ibid., p.519). The transcendental and metempirical elevation of love reaches such heights that it becomes inaccessible to a verbal description. In the "Book for Parents" there is a scene in which the heroine of the narrative says: "I do not know how to say this: I love you. I can not say it... It's so strong. She looked at me, and it was the look of a woman who fell in love" (Makarenko, 1957, vol.4, p.219-220).

On the other hand, the almost mystical elevation of love Makarenko very organically combined with the understanding of love as a pedagogical fact included in the general system of educational relations, which contain, as it’s known, organizational moments. Being a rationalist and social technologist, he is sure that "our behavior must be the behavior of knowledgeable people who know how people, know the techniques of life ...". Spirituality and ethics without knowledge and without organization are impossible. To the fullest extent, this refers to love: "We must be able to love, know how to love" [6, p. 453].

The great teacher-realist Makarov (1958, vol.5, p.300), perfectly understanding the intricacies of human nature, could not agree with the point of view that "at school a person under 18 can not love, because he is at school ..." (let us remember the popular quotation “this can not be, because it can not be”). No, says Makarenko (1958, T.5, p.299), "... it is not only possible but necessary, it is necessary to teach love. Strange as it may seem, but there is such a science ... "

A.S. Makarenko (vol.5, p.300) not just admit to necessity to "teach love," but also sets the parameters for this teaching: "Both girls and boys need to be told about the responsibility for each day lived, for every piece of feeling, because for all you have to pay ... ". Teaching to love "means teaching to recognize love, teaching to be happy, which in turn means teaching to respect oneself, teaching human dignity" (Makarenko, vol.4, p.220).

"Responsibility" is not an occasional word in the text. Responsibility in the higher understanding for Makarenko meant the teacher's responsibility for the fate of the person: the educator should always ask himself whether to dare or not dare to develop certain standard or individual qualities in his pupil.

In this specific case, the word of responsibility is used due to pupils of Makarenko. When organizing the "affair of love," he dealt with girls and boys, who knew a lot in their lives, including in the love field. Among them there were former rapists, and former prostitutes. In the report to the chairman of the state political administration of Ukraine, he writes about the difficulties of working with former prostitutes, who have now become communes of the commune named after them. F. Dzerzhinsky, stating that the activation of such girls "is very difficult due to their backwardness and already established habits and inclinations, early sexual development and the phenomena connected with them ..." (Makarenko, 1957, vol. 3, p. 459).

Add to this teenagers and young men who are familiar with the "experience" of sexual violence and even without a rich imagination, you can imagine what kind of bedlam the commune would have reformatted to, in the absence of an effective pedagogical system, where the problem of love was taken very seriously. Certainly, it would have turned out into a "good" “flash-house”.

It should be emphasized here that during the years of Makarenko's activity in the colonies for juvenile offenders, the joint education of girls and boys was strictly forbidden. It would seem that this is a radical solution to the problem of "flash-house". But Makarenko (1957, vol.2, p.100), on the contrary, believed that such an approach was fundamentally wrong: "As in any normal family, girls and boys live together, and this does not cause any complications. Any healthy children's society can perfectly develop under these conditions”. Again, we are faced with a paradoxical situation, now man-made, created by Makarenko himself. And in this act, he again confirms his dialectical-antinomic choice, which does not tolerate single-line solutions.

3.3. The third paradox. ***"Teaching love" is "analysis of narrowly physiological questions" of love*** **vs.** ***“Teaching love is the education of a great and deep feeling, adorned with the unity of life, aspirations and hopes*"**

A.S. Makarenko (1957, vol.4, p.413) in this case either does not leave the vale of "balancing thinking", focused on finding areas of common in opposite judgments (as well as in phenomena). Declaring that " teaching love" should be conducted "without too open and essentially cynical analysis of narrowly physiological questions," he is at the same time far from the pharisaical attitude to the problem. Responding to criticism of his assertion about the admissibility of consideration of even "about sexual love" with children, Makarenko (1958, vol.7, p.189) notes: "Comrade A. Boym blushes and shyly turns away: you can read "Romeo and Juliet", but sexual love ... what a passage! Is it possible that Comrade A. Boym ... does not know that "Romeo and Juliet" tells about sexual love, that platonic love does not appeal to these two heroes. After all, I did not call for the development of a topic about sexual intercourse, but namely, about love”.

Yes, love is sacred and inviolable; it is the intimate value of the human soul. A.S. Makarenko quite agree with such a premise. But this is true when love is viewed in a light of personal relationships. Therefore, in the colony, where, despite the adopted law prohibiting internal love relationships, the words "they are in love" were magical and before them the most ardent "guardians" of this law were powerless, which were, as A.S. Makarenko recognized them, ‘lads’. The law is a law, but he often had to report on the board, to the displeasure of many lads (sometimes he was even deprived of the right to speak): "They’re really in love, there's nothing you can do" (Makarenko, 1957, vol.2, p.101, p.103).

In a light of social relations, love becomes part of the social environment, which also affects love. But the problem is, how it affects. The Makarenko’s commune "... in resolving the sexual problem did not take the path of direct suppression and remained within the boundaries of communal forms of collective influence" (Makarenko, 1957, vol.3, p. 459). It's evident from the fact of family formations within the commune (see below).

The system of joint education affected the most positively the education of the right relationship between the young men and the girls. It contributed to the formation of positive experience of social behavior in general and the development of social skills in relationships with people of the opposite sex, which to a large extent served the purposes of raising a family man. Ultimately, a holistic strategy for the evolvement of a person, who respect positive socially significant values, was implemented.

4. Discussions

Dialectical and antinomian ideas permeate the entire body of the pedagogical system of A.S. Makarenko. The well-known expression "pedagogy is the most dialectical science" is not just a beautifully formulated idea, but an original symbol of the faith of the teacher Makarenko. In his attitude to dialectics, he is similar to the outstanding Russian philosopher A.F. Losev (1990), who considered dialectics to be the only method capable of "grasping living reality as a whole". Let us discuss three statements that testify the dialectical and antinomical core of A.S. Makarenko pedagogical system.

1. **The person and the collective are in a constant development mode.** A brilliant expression is found in Makarenko's concept of promising lines for the development of the collective. A.S. Makarenko formulated the law of the movement of the collective, according to which the collective must constantly move forward, to achieve more and more successes through overcoming difficulties and contradictions that fill the living space of pupils.

In a sense, A.S. Makarenko, as it seems, agrees with the aphorism of the German Social Democrat E. Bernstein "Movement is everything, the final goal is nothing." However, the antonymic thinking of the great teacher could not be satisfied with such unambiguity. The Makarenko law of "collective movement" is simultaneously the law of personality movement. Yes, the structural, technological and relational (communicative) features of the collective are being improved. But the " collective movement", development process, does not become the absolute criterion of Makarenko pedagogy.

This "movement" has a very specific goal - particular person's joy of tomorrow. The joy is "the true stimulus of human life ... Therefore, to educate a person means to cultivate long-range ways (to build a trajectory of personal development?). The joy of tomorrow will follow these ways (Makarenko, 1958, vol.5).

Developing the "joy if tomorrow" idea, A.S. Makarenko (Ibid., p.74) distinguishes a close, medium and distant perspective. Mastering these perspectives, the person comprehends the hierarchy of goals. First you need to organize the joy itself, bring it to life and put it as a reality. Then, it is necessary to persistently transform the simpler forms of joy into more complex and humanly meaningful. Here is an interesting line: "from the primitive satisfaction by some gingerbread to the deepest sense of duty."

2. The system organically does not accept the stereotype approach (while its opponents often act armed with a set of all discourse stereotypes), which tends to absolutize any technology, any technique. It is obvious for Makarenko: the choice of a pedagogical tool depends not on the deductive-dogmatic premise, which proves the special value of an approach, but on the specific education conditions, on the individual characteristics of the pupil. Therefore, the "collectivist" Makarenko (1958, vol.5) is able to comment on the collective impact that "sometimes it will be good, sometimes it will be bad." So it is with the individual effect: "sometimes it will be useful, and sometimes it will be harmful."

3. The system founds its solution to the problem of the collective and individual antinomy. The foundations of this antinomy are contradictory judgments, stated by A.S. Makarenko (1958, vol.5, p.469): "Some say: "The collective as a reality does not exist. Only the personality is real. " Others say: "The individual as something independent in social reality does not exist. There is only society." This collision is the genetically grounded basis of antagonism between individualistic and collectivist approaches in the history of education, which is such thoroughly cultivated, by the way, today.

Solving the personal-collectivist dualism problem, A.S. Makarenko, in fact, advocates the principle of indivisible and unshared unity of the individual and the collective. By individual education he means finding identity and development of personal abilities and orientations, not only in the field of knowledge, but also in the field of personality. He is tormented by the question: "Is a soft, malleable, passive temper prone to contemplation, reflecting the world in form of internally non-bright and non-aggressive analysis, should be broken, rebuild or improved?" "Am I really supposed to drive every individual into a single program, standard and to achieve this standard? Then I must sacrifice individual charm, originality, a special beauty of personality, and if I do not sacrifice, then what kind of program I would have! "(Makarenko, 1958, vol.5, p. 118).

Are there many teachers who thought so deeply about the question: what, in fact, what right do I have to interfere with the life of another person? Most often, the teacher, by default, considers himself worthy, and having the right to do it. Even advocates of personal-oriented education do not make an exception here, because "... education can be called, where the student is not the subject of educational interaction, but the object of more or less sophisticated pedagogical influence" (Gusinsky, Turchaninova, 2000).

Makarenko did not immediately got the answers to the above questions. For years he groped for answers. It took him almost ten years of titanic practical and intellectual work until he could confidently say: we need a common standard program and an individual correction to it. Such qualities as courage, honesty, diligence, collectivism, citizenship should become standards. A corrective is necessary with an orientation to inclinations, abilities, talent. A.S. Makarenko (Ibid., P.119) believed that the teacher has the right to interfere in the movement of character, in order to follow the inclinations of personality, to direct it to the side most needed for it. But with such a Solomon solution, the need for an appropriate dialectical method arises, "which, while being general and unified, at the same time enables each individual person to develop his own features, preserve his individuality" (Makarenko, 1958 p. 353).

The principle of the inseparable and un-confluence unity of the individual and the collective is antinomical in nature. It gave made A.S. Makarenko possibility to create an educational system on the principle of parallel action: in the pedagogical process, changes occur primarily due to the growth of the importance of self-management components in it, while minimizing didactic, instructive moments.

Speaking in modern terms, the teacher plays a role of a top manager, who decides the most important, strategic tasks, while less significant of them are delegated to individual members or organizational structures of the collective. In this context a well-known principle of the Eisenhower matrix occurs to us. It suggests professional, in terms of managerial science and practice, distribution of tasks depending on the degree of their significance.

At a certain stage of the development of the collective a qualitative leap in its development takes place. On the one hand, the self-management component in the organizational organism of the collective sharply increases: at its mature stage of development of the collective, each of its members makes demands to itself. Self-management becomes the need of members of the collective and a necessary condition for its existence. On the other hand, it is thanks to the increased importance of the personal component in the management of the team that a self-developing educational system is created that can exist under changed conditions. Even when, for one reason or another, the "top manager" is excommunicated from her, and moreover, when the new "bosses" are working against her. So, after the departure of Makarenko from the educational institutions that he organized, despite the disorganizing actions of the leaders who replaced him, it took a lot of effort and time to destroy this well-organized system in them.

At a certain stage of the collective development, a growth spurt takes place. On the one hand, the self-management component in the organizational body of the collective sharply increases: at its mature stage of the collective development, each of its members makes demands to him- or herself. Self-management becomes the need of members of the collective and the necessary condition for its existence. On the other hand, as a result of the increased importance of the personal component in the team management, a self-developing educational system is created that can exist under changed conditions. Even when, for one reason or another, the "top manager" is excommunicated, and moreover, when the new "bosses" are working against it. So, after Makarenko left the educational institutions that he organized, despite the disorganizing actions of the leaders who replaced him, it took a lot of effort and time to destroy this well-organized system.

Let us briefly discuss A.S. Makarenko (1958, vol.5, p.421) statement that "many attitudes towards love, friendship, loyalty, honor have not yet been balanced and become normative." Is it possible to develop regulations on love, honor? A.S. Makarenko admitted such a possibility. But what did he mean here? First of all, the need for public recognition of these categories. This is, in fact, about the thirties, it was very complex and contradictory, and somewhat antinomic period. By no means all considered love and honor, as well as concepts close to them, as worthy to be applied in a new society. Repeatedly, rejection of the past culture relapsed, which were especially typical for the 1920s ("Let us burn Raphael, trample on flowers of art ").

The issues such as "Is jealousy, and even love, a remnant of capitalism or not?" were discussed most seriously. A.S. Makarenko had to participate in such discussions. But it is remarkable that agreeing formally with some arguments of supporters of the idea of "remnants of the past" (which is, by the way, not over yet: one "big" Russian official was not so long ago going to fight "Soviet" bureaucracy), he actually softly but persistently corrected them. A.S. Makarenko (1958, vol. 5, p. 450) in the spirit of his time writes that "the phenomena of a relaxed ethic of "goodness" contradict our revolutionary movement, and we must fight this relic." However, after that he immediately takes the arrows to the other side: towards solving the real problems of the present life, and not yesterday. The proximity to practical life, to simple common sense, solution of pressing practical problems are crucial, in Makarenko's opinion, for the successful society development, but not an endless criticism of the so-called "remnants" of the past.

They considered the notion of honor as a remnant of the past. Surely, Russian 'white officers' used to say "This is an honor!" when there were no 'red officers' yet. And in 1937-38 A.S. Makarenko is working on the story "Honor". For which he got hard time from critics. But the teacher bravely defended himself, and not only defended himself, but also counterattacked. In his article with the self-explanatory title "Against stereotypes" (1938) A.S. Makarenko insists that "our criticism has long ago discouraged writers from bravery and active penetration into life . ..., people, who are equip with nothing but stereotypes, play roles of critics ... "(Makarenko, 1958, vol.6, p. 416). The stereotypes prevent writers from showing a multicolored picture of the life of Soviet society. "There are 170 million individualities in our Union, completely different, unique, each is exceptional in its own way" (Ibid., P.418).

In that article A.S. Makarenko (1958, vol.6, p.419-420) sharply opposes the theory of conflictlessness, proceeding from the metaphysical understanding of the unity of the Soviet people. He states that "on the contrary, a characteristic feature of our life is its conflict nature." Life in the Soviet Union, according to the teacher, "is built on the ***dialectical principle of movement and improvement***." Accordingly, he concludes quite in dialectical style: "The secret and charm of our life is not in the absence of conflicts, but in our readiness and ability to solve them." In accordance with the criterion adopted by the critics, A.S. Makarenko pointed out bitterly: "... the notion of honor is an officer-gentry concept" (Ibid., P.430). With this he could not reconcile as he could not reconcile with rejection of love. And just as he confirms his position with deed. In the first case, he writes the book "Honor" (in 1937!). In the second case, as we saw above, he in practice, in the conditions of a special educational institution, proves the necessity and possibility of organizing "affair" of love.

5. Conclusion

1. There are teachers-romantics, teachers-conceptualists. A.S. Makarenko is a teacher-realist, like Janusz Korczak, who is close to him in spirit and deeds (Korczak, 1990). Janusz Korczak was extremely respectful for Makarenko's word and deed. As a teacher-realist, Makarenko aspired that the educational community, entrusted to him, would, to the utmost degree, integrate real-life situations, the infrastructure of natural forms of human existence.

Educational collective is a family, as a result, it should be endowed with all its attributes, including such a characteristic as different gender composition. Such a "life" philosophy is consistent with the dialectical and antinomic methodology. First of all, because life itself is antinomic: it is intertwined with a variety of phenomena and processes, which are often as much opposite to each other as to how much they are interdependent. A.S. Makarenko did not put border posts between his educational and life processes.

Education and life are inseparable from each other for all their differences. The commune enters life, life enters the commune. So, the commune took it for granted to help the inmates adjust their family life, provide them with work, apartments and initial assistance. This type of assistance had not only a material side, but also an educational one. "The appearance of these family formations on the commune's territory has cooled many people, since it proved that love is associated with real responsibility" (Makarenko, 1957, vol.3, p.460).

2. A.S. Makarenko is an innovator, a creator, and therefore very often he walked off the map and contrary to the instructions coming down from above. You can imagine how he risked, taking responsibility for co-education. But Makarenko would not have been Makarenko, if he hadn't kept his eye on the ball. It is always difficult for such people. And it turned out that he was fired from his job, almost for anti-socialist methods of education. And after decades he got a lot for socialist education. Unfortunately, his compatriots stood on top of this case. The "fault" of Makarenko and the misfortune of his opponents lies mostly on his paradoxical multidimensionality (Morgun, 1989) of the perception and creation of the human world.

His critics view the world, including Makarenko's world, from the only one point, often from that one which gives them advantages at the moment. Others view Makarenko's world dualistically, lumping everything under a general umbrella, hoping there is some "harmful" element in it. Then they start searching, or rather, quote phrases, and even individual words, at random. It results in 'cabbage soup', in the first case, or confusion (or kind of 'a cock and bull tale'), in the second case.

It is worthy to note that in search of overly ideological statements of Makarenko, his opponents do not notice that the degree of their own ideology is much higher than the ideology degree of the person they criticize. For all their activities are focused on the solution of a purely ideological task, which is mainly, to debunk the socialist component of A.S. Makarenko educational system. In other words, this is not about education, but about fighting, as they used to say, for ideological purity. That is why people from the other disciplinary spheres often study Makarenko. It is hard to imagine a person as a teacher who, as far as one can understand from a very uneasy text, reproaches Makarenko that *there is nothing in his writings that would evoke such unconcealed hatred, contempt , indignations - neither bandits in the corrective labor colony with whom he had to work for many years, and who repeatedly destroyed what he created, not even their customs, to which he treated with understanding* (Dobrenko, 1987). The piquancy of the situation is that the quoted author even whitens, idealizes Makarenko. This can be seen from the fact that Anton Semyonovich did not treat all actions of pupils with "understanding", he was often outraged by their behavior and even there was a case when he strong-armed. The teacher admitted to that (Makarenko, 1957, vol.1).

A.S. Makarenko, within the framework of his pedagogy of life, has solved the real tasks of education, determined by the needs of society, and, as specialists find out, not only of the socialist society. By the decision of UNESCO in 1988 A.S. Makarenko along with John Dewey, Georg Kershensteiner, Maria Montessori was ranked among the teachers who determined the way of pedagogical thinking in the twentieth century.

As for Makarenko's ideology, it should be noticed, it was natural. The fact is that education does not form a person in general, but a person *in* a certain society and *for* a certain society. Accordingly, the goals of education can not be adequately understood in society as long as they are separated from the certain situations in which each age group is, and from the social system, in which they are formed (Mannheim, 1994).

3. Education, as the ancients used to say (they assume, generals who did not lose a single battle, used to say it), is the most difficult thing. But there was definitely no teacher who would achieve a 100% result. Not always A.S. Makarenko succeed, he did not hesitate to admit it.

Different things happened. There was even a dead child. A colony mother Raisa killed him and hid him in a basket for dirty laundry. She was sentenced to eight years probation, and they offered to take the criminal girl back to the colony. A. S. Makarenko agreed with this. But he did not envisage the reaction of other colony girls. Soon he heard from them: "Eject Raisa from the colony, otherwise we will get her off ourselves." What did A.S. Makarenko do? Secretly from other girls he got Raisa a job. Once, having met him by chance in a few years, she said that she was "all right". She said finally: "Thank you, you did not let me sink then. As I went to the factory, I forgot bygones" (Makarenko, vol.1.1957, pp. 119-120). A.S. Makarenko did not let people "sink", but he saved people, rising them up from the very lowlife. But he was took down. "Sinked" then. There are those who wish to "sink" him today. But he again and again "rises up" and continues his eternal voyage through the waves of the obstinate and endless ocean, the name of which is pedagogy, in which Makarenko's pedagogy of love occupies a worthy place.

6. Recommendations

The paper may be recommended to scientific and practical education workers, undergraduates, post-graduate students; to people involved in educational policy; to representatives of business circles; to all who are interested in the present and future of our education and upbringing.

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Designing Behavioral Models Of Integrated Circuits For Voltage Switching Converters Used In Automzated Testing Systems

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Abstract
The work is concerned with development and application of behavioral models as parts of automated measurement systems to test integrated circuits (IC) of high-frequency voltage switching converters with the aim to automate measurement process, search and use methods for controlling junction-case thermal resistance in the most rational way. A description is provided of an alternate implementation of test equipment and an algorithm for determining thermal resistance, which applies a reference behavioral model in the process of automated testing of integrated circuits. Modelling of integrated circuit LM2596 is made, taking into account heat emission and mutual effect of crystal temperature on external electrical characteristics inherent in the general behavioral model. The results were obtained, coincident with experimental data and transistor level SPICE-model, and dependencies reflecting the effect of crystal temperature on microcircuit operation were found. A method for automated control of controlling junction-case thermal resistance is suggested. It is customized in terms of speed of performing measurements and is suitable for use in microelectronic industry. Its limitations and application area have been defined. Potential use of behavioral models as a source of reference data during testing electronic components is presented.
Keywords: automated test equipment, controlling parameters ofmicrocircuits, voltage switching converters, behavioral model, VHDL-AMS, thermal resistance.

Introduction

A need for considering and creating behavioral models of electronic components, and, from a wider point of view, of any technical objects, has currently become more and more pressing. This is due to the fact that, when applying traditional approaches to the use of models in electronic development application (EDA) system, there are certain difficulties and often inconsistencies between functional requirements imposed on them and the volume of available computational resources. The main problem lies in constantly seeking a compromise between computational complexity of the model and its adequacy to real physical processes. Thus, a developer faces the choice: either to create a “full-fledged” model of each component that reflects all variety of physical interactions (electromagnetic, thermal, mechanical, etc.), or deal with many particular models depicting only one aspect of their application in EDA. For example, there might be electrical characteristics of circuits in SPICE-models [1] for analyzing circuit operation, or electrical characteristics of buffer (interface) parts of components’ models in IBIS-models [26] to be used for controlling integrity of signals (Signal Integrity). Implementing this approach results in the need for developing in a number of cases more than ten particular models for one electronic component. All these models are independent, and in most cases they cannot be combined for the purpose of, for example, examining the effect of environment temperature on the modes of integrated circuit operation. It would be possible for a general complex model that simultaneously includes several physical areas.

There is a known approach to modelling, based on the combined use of fundamental systems of mathematical physics equations, geometry of an object of interest, and finite-element method, implemented in software applications Comsol Multiphysics [27], ANSYS [28], etc. This approach allows to obtain rather adequate multi-physical models of certain components. High requirements for developer's competence in mathematical physics methods, which is rare in everyday engineering practice, have been a challenge here on the one part, and computational complexity of such models, on the other part. The last is inherent in all approaches associated with numerical solution of differential equations' systems. It is difficult to compute adequate models obtained thereby, hence, the problem often lies in creating models that already contain several dozens-hundreds of components, while the requirements of EDA users for the number of components in the projects are constantly rising, and customers of electronics design solutions want to see complex models of devices, which involve thousands and several orders more elements in one circuit.

Applying theoretical approach to synthesizing models of the real technical objects indispensably implies mandatory abstraction and idealization of their properties. Evidently, these processes may considerably change description of the modelled system, and it would lead to distortion of the modelling result, and the obtained result would not serve as an answer to the problem to solve. In due time, these aspects were demonstrated by A.A. Samarskiy [2] and Y.Z. Tzypkin [4]. Abstraction and idealization are usually not applied when implementing experimental-statistical approaches. More adequate models might be obtained based on experimental data, should these approaches be better developed.

Time for designing is crucial in microelectronic and other technical industries. Design, fabrication, and testing have become increasingly complex and expensive. To reduce time and labour costs spent for development, behavioral IC models are utilized. Such models describe features of integrated circuit as a whole, and specify appropriate input and output signals of the system, through simulating its operation.

Behavioral model (BM) reproduces the required behavior of the original system in question. Here, it is supposed that there is an unambiguous correspondence between behavior of the original physical system and the implemented model [25]. It implies, in its turn, that such a model exactly predicts the future states of the system based on the current and past states' data.

Implementing the behavior-based approach in research work is related to the need for obtaining data to make further system-oriented analysis, which enables to take into account physics that underlies the external behavior and to receive therefrom proper cause-and-effect, mathematical, logical, and other associations.

Another way to apply behavioral approach is to simulate the systems made of multiple elements, for example, complex electronic, microelectronic, and electrical circuits. It has been made possible, since the amount of computational resources required to implement a specific behavioral model of the circuit component is several orders less than that needed for the similar model described using differential equations, or SPICE-model.

"Behavioral model of the system specifies, at what cost the required functionality is attained, and what data are used to provide it. Thus, a behavioral model is directly based upon functional and information models of the system" [29].

High-frequency voltage switching converters (VSCs) have been widely used in secondary power sources, inherent in virtually all products of electrotechnical and radiotechnical industry, namely, in computers, TVs, various automated devices, and systems. As much as several dozens of such microcircuits are in electrical equipment of present-day technical facilities. Failure of one IC may have deadly consequences, that creates a need for organizing a continuous inspection testing of such products. Besides, a problem of computer-aided inspection of parameters of the integrated microcircuits shall be solved during various stages of their fabrication (on wafer, after packaging, etc.) This work deals with solving the problem of identifying a reasonable approach to making and applying behavioral models within IC's testing equipment through the example of microcircuits of high-frequency controllers of voltage switching converters, and in controlling thermal resistance of integrated microcircuits.

Junction-case thermal resistance of semi-conductor device is the major parameter that specifies its quality of manufacture. This parameter defines the value of overheating (over temperature) of active area of crystal as related to package temperature. Low-quality crystal-to-package bonding may result in exceeding allowable temperature of the device, accelerating degradation processes and inducing defects in the device structures, and, as a consequence, in failure of semiconductor device under operating conditions. It is known that failure of microcircuits that contain power components is due to the following main reasons: 20% –

effect of external climatic factors, 20% – mechanical effects, 60% – disturbance of thermal regimes. Overheating of crystal in semiconductor device directly depends upon its thermal resistance. Temperature of crystal is used to calculate reliability and estimate lifetime of semiconductor devices. Reliability of devices deteriorates exponentially as temperature increases. As a rule, 10 – 15 ° C increase in temperature may reduce product lifetime by more than 50%. Therefore, it is necessary to measure the precise temperature of crystal, when semiconductor device is functioning under rated operating conditions.

Junction-case thermal resistance is a parameter of not only reliability, but of the degree of quality inherent within technological process for fabricating semiconductor devices. Hence, determination of thermal resistances of semiconductor devices constitutes one of the basic problems of final inspection when fabricating semiconductor devices and incoming inspection when fabricating radio-electronic equipment.

There are transistor keys within the structure of high-frequency voltage switching converters' (VSCs) microcircuits that commutate currents of up to 10A and more. It can cause microcircuit overheating. There are standards regulating control over junction-case thermal resistance of power transistors, and there are proper methods basically suitable for controlling junction-case thermal resistance of VSC microcircuits, however, since the number of microcircuits' terminals is limited, usually there is no access to basic terminals of transistors.

Analysis of VSC microcircuits' structure shows that there is a *p-n*-junction (diode) between some terminals, which properties may be used to control temperature of the junction and of the whole crystal when defining junction-case thermal resistance of these microcircuits.

Reviews of literature

Behavioral models of integrated circuits are created to solve various problems: functional analysis of the supposed device architecture [5, 21], verification and debugging of the designed software (drivers) [21]. Prior to developing behavioral model, it is necessary to elaborate it in detail. The more detailed the model is, the more time is required to develop and implement it. However, the less detailed the model is, the less applicable it becomes in the process of designing an electronic device: a very simple model may be utilized only to solve some certain local problems.

Use of behavioral models to describe ICs is analyzed in works [3, 21]. Thus, work [3] suggests a compromise, when a functional model is developed without regard for time delays with additional unit-arbiter. The last distributes these delays into input and output signals, simulating real operation of the device. This solution allows to use the developed model both for functional analysis, and for verification purposes via turning on or turning off a unit-arbiter.

In work [21], BMs of integrated circuits, used for various purposes, contain coupled models of such functional units, included into BM, as, for example, comparator circuit, amplifier, oscillator, etc. This method enhances effectiveness of using models for solving local problems, however, it requires relatively more time to develop them.

Work [12] describes in detail behavioral models and their application in analogue, digital [9], analogue-digital [16, 24] devices. Modern PCs enabled to simulate these models, using complex algorithms that involve millions of calculations in a short time. A technology of modelling allowed to simulate impact of direct, and alternate current, and transient processes in the large integrated circuits (LIC). Noise research [17], frequency [10], and statistical analysis [23] are also possible. Structures of integrated circuits may be optimized at the expense of BM through the use of sensitivity analysis.

So called SPICE-models [6, 15] of devices are used to study parameters of a device (for example, direct current transfer ratio (β), saturation voltage (Usat) and saturation current (Isat) for bipolar transistor). Models of devices, implemented in SPICE, are usually complex. For instance, standard model of field-effect transistor has three detail levels. The simplest Shichman-Hodges model is based on quadratic equations. It makes sense to use it, when there are no strict requirements for modelling accuracy. The second level model is based on the more accurate analytical expressions. The third level model is semi-empirical and uses combination of empirical and analytical expressions. To determine parameters of these expressions, the results of measuring characteristics of real semiconductor devices are used.

The second and third level models take into account the second level effects, such as channel length modulation. It may be expedient to use the third level model when analyzing circuits with vertically structured power MOSFETs. It, in its turn, usually requires much more time for modelling and greater memory when modelling of complex systems.

Equations for devices are usually embedded into simulator and are available for a user. Ebers-Moll equation, usually used in SPICE simulation programs, is an example of using such equation as a simulation of direct current bipolar transistor operation.

As with digital projects, the size of modern analogue or mixed circuits in terms of the number of elements applied therein, nowadays is too large to continue their modelling in SPICE-oriented systems. The main problem here lies in limited computational resources available, required to simulate circuits that have multiple components. Several thousands of even logical equations cannot be effectively simulated neither using automated, nor analytical means. In practice of digital design, a proved fact is that circuit design solutions for functional units with more than a thousand of logical elements become inacceptable. However, modern integrated circuits contain millions of logical elements, with ever increasing complexity. There is a similar tendency in analogue circuitry engineering: models of analogue elements as opposed to logical ones, described by algebraic equations and delays, require for description an application of differential equations, numerical solution of which needs orders of magnitude more computational resources.

To solve the problem of interest, macro-modelling was proposed and introduced in EDA as a higher level tool for abstraction. It was also implemented in SPICE simulators. Macro-models were invented in 1974. Pre-determined components (controlled sources, resistors, condensers, etc.) are used to specify macro-model behavior. Functionality in macro-models is defined by a mathematical relationship, maintained through sources of controlled voltage and current. This method may be helpful in adding and subtracting voltage/current using sources of parallel current and series voltage sources. Division and multiplying are made through the use of resistors. Differentiation and integrating are performed using condensers and inductors. Such macro-models are easily applied, when describing simple behavior, that involves only basic relationships in the model [12]. However, when accuracy is too high and there are many details, and behavior becomes complex, it could be challenging and, sometimes, impossible to develop an operable macro-model.

Analogue behavioral modelling uses a hardware-description language for describing behavior of a device. Such type of modelling enables a user to describe behavior of the device as a function of physical variables (voltage, current, time of modelling, etc.). Such types of models as HDL and SPICE are sometimes intermingled since SPICE equations constitute behavior models as well. However, equations of components in SPICE are directly embedded into simulator, whereas behavioral simulator will contain equations for devices in HDL. HDL simulators may be as precise as SPICE simulators. However, SPICE simulators are used for modelling at the level of simple electrical device components, which sometimes provides them with higher accuracy in modelling certain devices.

Various methods for modelling analogue behavior may be added in SPICE simulators, which enable to use polynomial-controlled sources, modify simulator code to add new models, or create macro-models. Polynomial method is used when creating behavioral models of devices. Relationships between their parameters may be described by various curves. The problem here is that the curve needs to be reconstructed, whenever any of the device components changes in the process of creating thereof. Adding new model in SPICE simulator is labor-intensive, since the main simulator code for models of devices is often very complex. Macro-models may become complex, when mathematical behavior is synthesized by electrical components with non-linear relationships between parameters (for example, using diode). Since models on HDL languages are separate from simulator, in general, any algorithmically describable behavior might be modelled. In analogue behavior modelling, not only modelling of the device electrical parameters' behavior is possible, but modelling of temperature and capacity as well. A disadvantage of this behavior model is that currents and voltages (direct and alternate) may be determined only at the model input and output. However, while creating a model, it is possible to immediately derive an electrical value of interest inside the circuit to output, for further debugging and understanding, if the newly created model is

appropriate. Thus, to optimize the design of electronic device, it is necessary to keep in mind all possible ways of applying behavioral model when developing thereof.
The most well-known and popular general methods of developing behavioral models are nowadays as follows:

- Control-flow charts;
- Event-driven process chain diagrams;
- Use of UML;
- Use of functional diagrams.

Construction of control-flow charts has been regulated by a number of national standards, for example [30]. This method is very well-known, being one of the most common in the practice of creating texts on various programming languages, including those used to develop BMs. The important advantage of this method is that it is illustrative and simple in translating description from the flow-charts' language into the program text on the language of implementing behavioral model (VHDL, Verilog, SystemC, etc.)
Event-driven process chain (EPC) is a type of diagrams and descriptions, widely used for modelling, analyzing, and re-organizing business-processes. It can also be used to model behavior of parts of the system, when implementing its functions, and may serve as an adequate replacement for traditional flow-charts.
"A diagram of the process (function) in EPC notation is an ordered combination of events and functions. Initial and final events, participants, performers, accompanying material and information flows may be defined for each function, and its decomposition into lower levels may be done" [29].
The process of modelling using EPC complies with classical principles of modelling: decomposition and hierarchical ordering. Decomposition, displayed on certain diagrams, shall be made for functions, likewise predetermined processes on flow-charts.
Unified modelling language (UML) (Object Management Group) has currently been a common standard in developing object-oriented systems. Development of UML began in 1994 by Grady Booch and James Rumbaugh working in Rational Software company. Ivar Hjalmar Jacobson joined them in autumn 1995, and in October of that year a Unified Method preview version 0.8 was released. Since then, several versions of UML specification were released [31].

Control-flow charts and UML are best suitable for modelling traditional systems based on structural approach principles and characterized by clear separation of functions into basic steps (procedures, operators, actions, etc.) taken according to a certain sequence (as per algorithm). EPC- and BPMN-diagrams are quite suitable for modelling event-oriented systems, where taking an action or several actions depends on events occurring within a system. Furthermore, the above methods and methodologies may be used not only for behavioral modelling, but for functional modelling as well. The elements inherent therein, which allow to reflect conditions of taking particular actions (logical symbols), enable to better understand logics and sequence of executing system functions.
National standard [32] is the basic Russian regulatory document specifying the method of controlling junction-case thermal resistance of power diodes R_{thjc}. It presents two alternatives for determining thermal resistance of diodes, each of which also involves two stages. The first stage in both options implies determination of temperature-sensitive parameter – temperature relationship. The second stage involves determination of difference in crystal and package temperatures in a variety of ways. Junction-case thermal resistance is defined as a relationship between difference in crystal - package temperatures and heating power in steady-state rated operating conditions.

It is advisable to use direct voltage u_F for diodes or on-state voltage u_T for thyristors and symmetrical thyristors as a temperature-sensitive parameter. Crystal temperature T_J is defined by the device calibration curve. Semiconductor device is calibrated in thermostatic regulator, when gauge current flows with no effect on thermal equilibrium.
A concept of thermal resistance requires acceptance of such simplified assumptions, as one-dimensional heat flow, which may inaccurately simulate three-dimensional heat conductivity in a real device. Actual devices contain material and boundary layers with thermal resistances and heat capacities producing complex heat flow.

Labour-intensive methods of measuring thermal resistance recommended by standard [32] are applicable only to single diodes in laboratory conditions. They shall not be used for automated control in conditions of series manufacturing.

It is also important to emphasize standards [33] [34]. Pursuant to them, semiconductor device is heated by heating capacity impulse. *p-n*-junction temperature $T_J(t)$ is measured in the process of heating an object until reaching steady state. To measure $T_J(t)$, heating capacity regularly switches off for a while (for several ones or tens of microseconds) and a temperature-sensitive parameter is measured, namely, voltage drop within *p-n*-junction when direct current is small. Transition thermal characteristic (TTC) $T_J(t)$ serves to determine thermal resistance components that correspond to certain layers of the object composition or structure. Information about thermal parameters of an object shall be obtained within one time scanning period, usually not exceeding several hundreds of seconds, when not more than 2000 total number of temperature readings (200 readings per decade). TTC measurement accuracy is related to quantization error of analogue-to-digital converter and influence of transient thermal and electrical processes, while semiconductor device is switching over from heating mode to measurement mode. To more precisely identify thermal parameters by TTC, A. Poope and V. Szekely proposed so called device of structural functions [19, 20].

To reduce impact of electrical transient processes, linear modulation law shall be applied, when impulses of heating current with specified amplitude and constant repetition interval are passed through diode. Duration of these impulses is altered linearly. In-between heating impulses, direct voltage within *p-n*-junction is measured, when current is small. It allows to reduce influence of electrical transient processes, since here the velocity of changing junction temperature is measured, not its absolute value. However, due to slight gradient of change in average heating capacity, this method produces low accuracy of measuring thermal resistance and does not allow to determine components of thermal resistance.

In recent years, methods have been actively developed, which are based on analyzing frequency-based thermal characteristics, i.e. relationship between amplitude / phase of change in junction temperature $T_J(\omega)$ and frequency when a device is heated by capacity altering according to harmonic law $P(t)=P_0+P_m\sin\omega t$. These methods [1–5] allow to measure thermal resistance of single layers of semiconductor device structure: crystal, crystal-holder, solder layer, or conductive adhesive, and package base. Computations of amplitudes and phases of the main harmonics of heating capacity and temperature of *p-n*-junction allow to determine module of transient thermal resistance (thermal impedance) and shift of phases φ between temperature of *p-n*-junction and heating capacity. Then, relationship between thermal impedance module and heating capacity modulation frequency $Z_{thjc}(\omega)$ is identified, and thermal circuit parameters are defined. By analogy with electrical circuits, thermal impedance is considered as complex number $\underline{Z}_{thjc}= Z_{thjc}e^{j\varphi}$, real component of which defines thermal resistance $R_{thjc}=Re[\underline{Z}_{thjc}]$.

Proceeding by thermal diode parameters' analogy with parameters of electrical circuits, comparison may be made of TTC $T_J(t)$, determined as per standard [34], with time circuit characteristic $h(t)$, and thermal impedance $\underline{Z}_{thjc}$ may be compared with complex frequency characteristic $K(j\omega)$. Then, relationship between thermal impedance module and frequency of heating capacity modulation $Z_{thjc}(\omega)$ will be similar to $K(\omega)$, an amplitude-frequency characteristics of electrical circuit.

The discussed thermal characteristics of diode differ in the type of argument of the analyzed junction temperature relationship: time or frequency. They are of interest when examining dynamic modes of diodes' operation. However, thermal impedance R_{thjc} is more often used. It shall be defined in a steady-state thermal mode. It is given in reference data of diodes and integrated circuits of high-frequency VSCs.

Significantly different methods for determining thermal resistances of semiconductor devices are suggested in a number of works, for example, measurement of thermal parameters of digital integrated circuits with the use of temperature dependence of signal propagation time [1]. Potential use of the time of delay in signal propagation as a temperature sensitive parameter, when measuring TTC of digital integrated circuits, is presented. This time changes over a wide range and depends on temperature. The need for measuring short intervals of time with picosecond accuracy hinders application of this method. Aside from that, this method may not be used for automated control over thermal parameters of VSC integrated circuits. In light of the above, an original approach is implemented by the authors to application of behavioral models for controlling thermal impedance, along with electrical parameters.

Methodology

Generally, for having fully observable or mathematically properly described system, implementation of behavioral model is possible in any algorithmic or object-oriented language of programming, or, from a wider point of view, in any rather developed language at all, both described by formal grammars, and natural one as well. The last follows from our everyday practical experience. Therefore, in our work it is reasonable to narrow down an area of the system concept to an integrated microcircuit, taking into account practical objective of the work: to obtain compact behavioral model suitable for use in EDA and automated testing equipment. The authors developed an automated measurement complex for testing microcircuits of high-frequency voltage switching converters. Integrated microcircuits are represented by down and down/step-up voltage switching regulators with up to 5A output current.

The complex hardware is made using National Instruments [36] equipment. It includes:

– modules PXIe-4139 (sources/meters);
– module PXIe-4142 (four sources/meters);
– module PXIe-5114 (analogue-to-digital converter);
– module PXIe-2567 (64-channel module for controlling external relays);
– module PXIe-6230 (timer/generator and control over external devices using logical signals);
– module PXIe-1078 (PXI chassis);
– module PXIe-8821 (controller 2,6GHz intel Core i3 - 4110E dual core processor);
– test-adapters with contact devices for various types of integrated microcircuits' packages;
– chip prober connection unit to control parameters of devices directly on silicon wafer.

Complex (tester) facilitates measurement of a number of static and dynamic parameters in several sub-ranges, and control over external devices (probe, grade sorter, heat/cold chamber).

Since measured parameters are temperature-dependent, and tests are conducted in a wide range of temperatures, an approach is suggested that allows to minimize the volume of preparatory reference information (RI) containing maximum allowable values of measured parameters. It is possible due to refusal of using tables of values of standard technical data for each potential set of environmental conditions and type of tests. Such refusal is possible since behavioral model of the tested device is utilized as a source of RI. BM allows to describe in compact form any external impacts, conditions, and possible responses of the integrated circuit in question.

Behavioral models may be created using high-level language of describing VHDL hardware (Very-High-Speed Hardware Description Language). This work used VHDL-AMS language, described by standard IEEE 1076.1 [13]. This language enables to describe mixed behavioral models (AMS, or Analog and Mixed Signal), to implement description of multi-discipline models. Use of VHDL-AMS allows to describe physical interconnection of electrical and thermal parameters of integrated microcircuits of voltage switching converters [7, 8, 11, 14, 18].

To increase velocity of computations, it is suggested to minimize designed complete electrical diagram of IC by organizing analogue component only for electrical interfaces by specific IC outputs. It is suggested to specify external thermal influence through additional model interface with no physical analogue as a particular IMC output. Connected to the above interfaces functional model shall primarily be described algorithmically.

Integrated circuit LM2596 [37] produced by Texas Instruments, has been chosen as an example for analyzing. Internal structure of this integrated microcircuit, pursuant to the published reference data, is presented in Fig. 1.

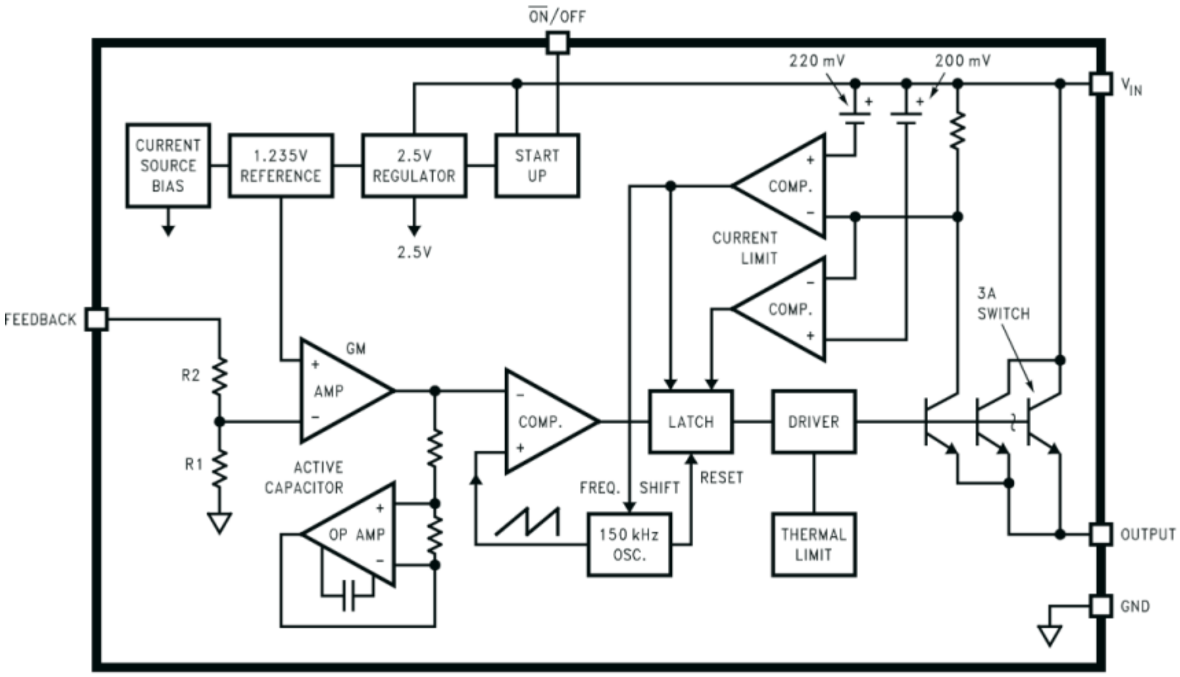

Fig.1. Functional structure of LM2596 integrated microcircuit

For this integrated circuit of Texas Instruments company, a macro-model was developed in PSPICE language, which has been used to verify behavioral model. Functional circuit of model comprises functional units:

- commutation output key based on idealized key with temperature-dependent parameters of its differential resistance and saturation on-state voltage;
- error amplifier module implemented based on unit with transfer function described using the Laplace transform;
- units of limiting input and output signal of error amplifier;
- unit of functional generator of saw-toothed and strobe signal;
- units of limiting integrated circuit operation by current and temperature.

Each unit is implemented on VHDL-AMS language, likewise the entire functional system presented in Fig. 2

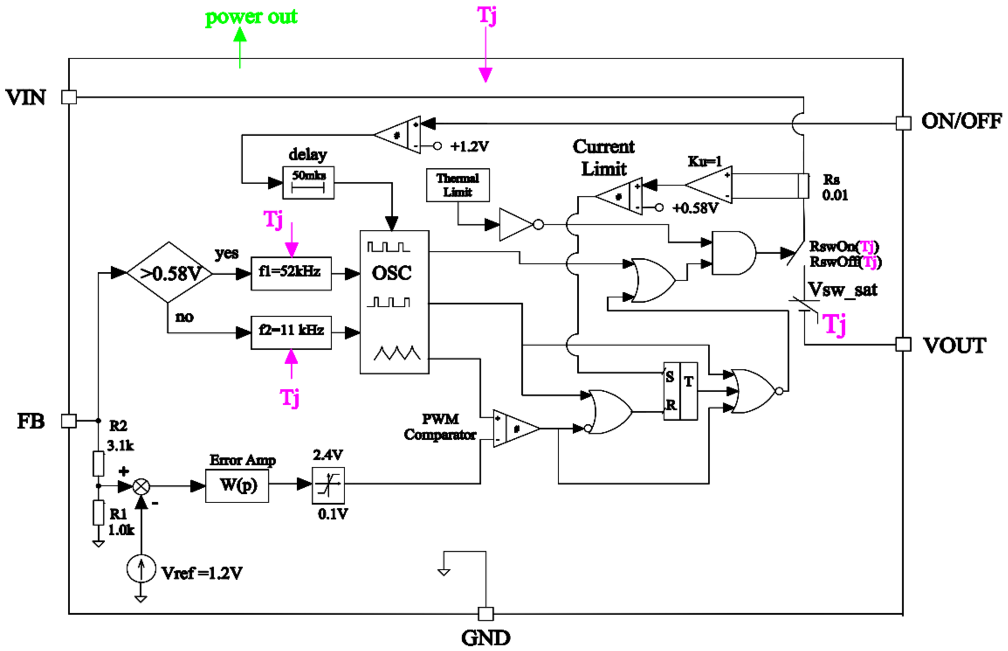

Fig.2. Functional structure of behavioral model

Results

To practically debug and generate behavioral model, SystemVision Cloud Mentor Graphics [38] simulation environment was used. It is accessible as a public Internet-service. The model structure is presented in Fig.3.

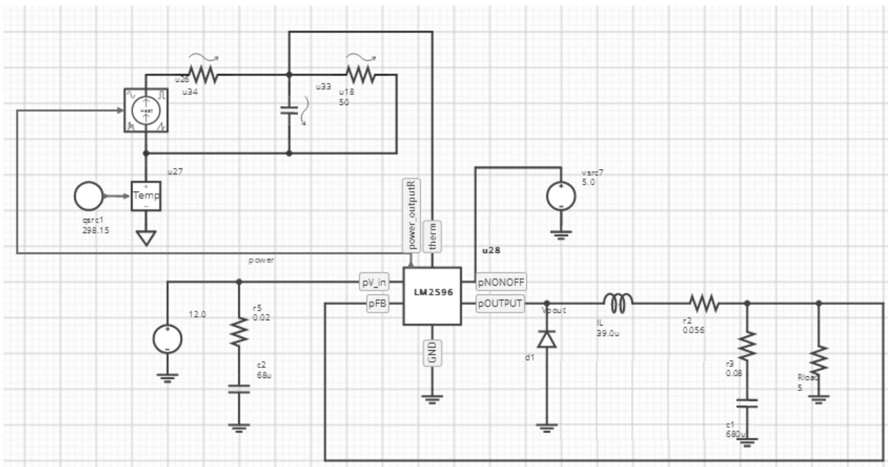

Fig.3. VSC model in SystemVision environment

To verify the obtained model, numerical experiments were made [22], through including the newly created BM into circuit presented in Fig. 3, as well as comparison of the obtained results with the data of technical description of the discussed integrated circuit.

Time-wise diagrams of output voltage, inductor current, when converter starts-up, are given in Fig. 4-7. The obtained results are in good agreement with the results obtained using SPICE-models and experimental data, obtained by means of the above-mentioned experimental unit.

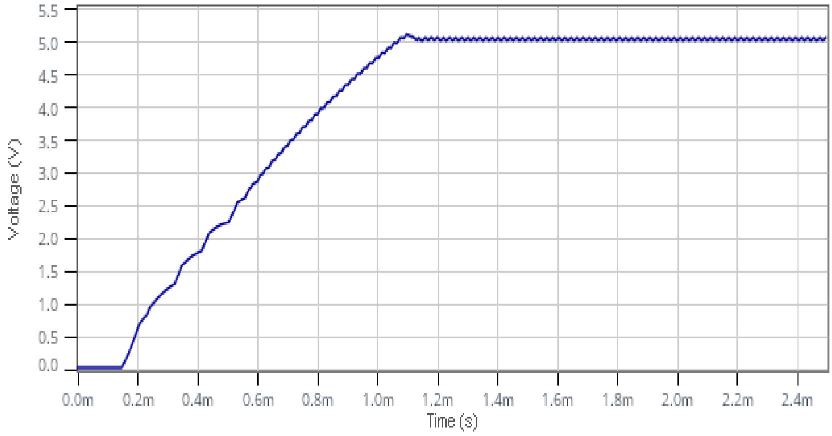

Fig. 4. Graph of VSC load voltage at startup

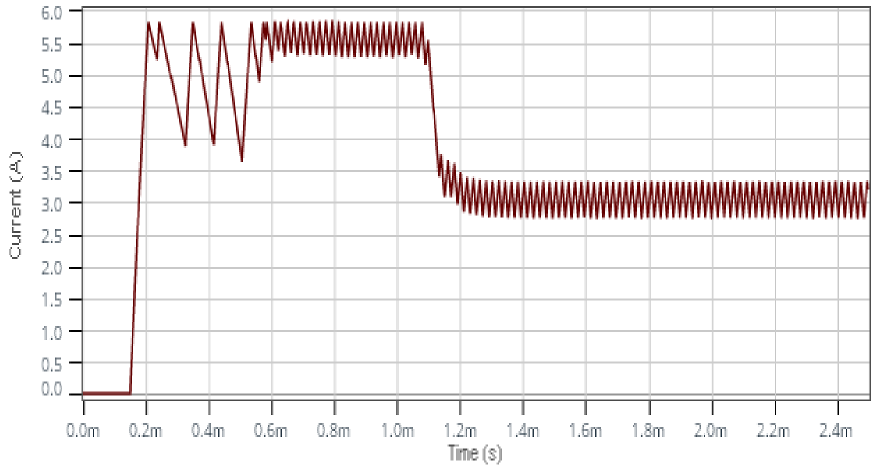

Fig. 5. Graph of VSC inductor current

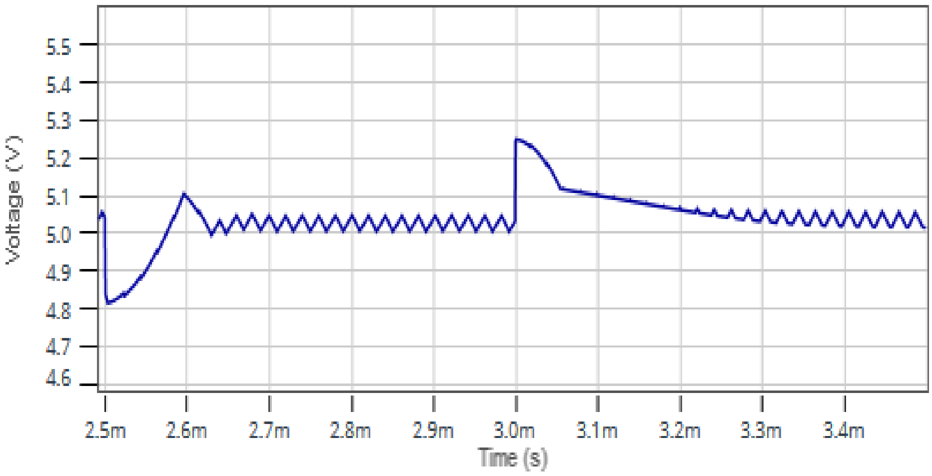

Fig. 6. Graph of VSC load voltage when load is transient

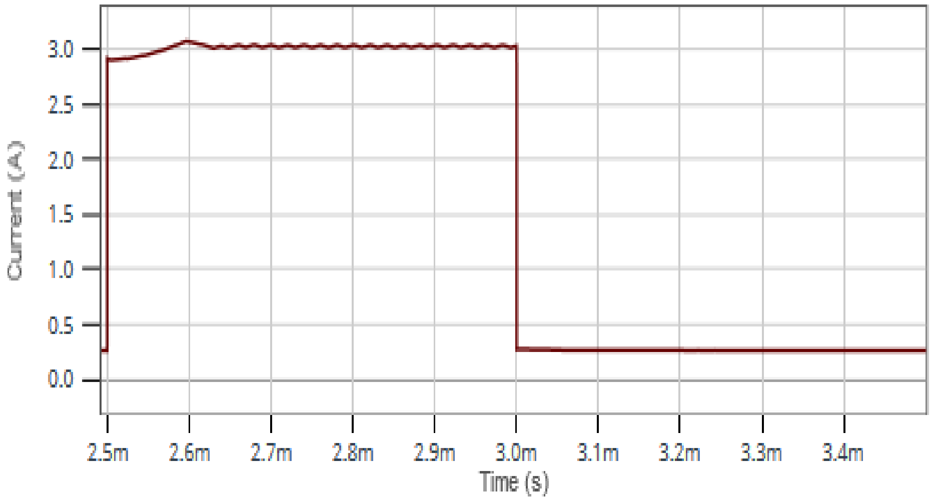

Fig. 7. Graph of VSC load current when load is transient

The result of temperature impact on parameters of converter may be assessed, controlling voltage at the Vout circuit output. A segment of this time diagram is given in Fig. 8. Considering that circuit input voltage, supplied to VIN output, is 12V, the difference between it and maximum values of VOUT voltages amounts to the value of residual voltage drop on the power key of integrated circuit. A change in this voltage and commutation period under the influence of temperature may be seen in Fig. 8.

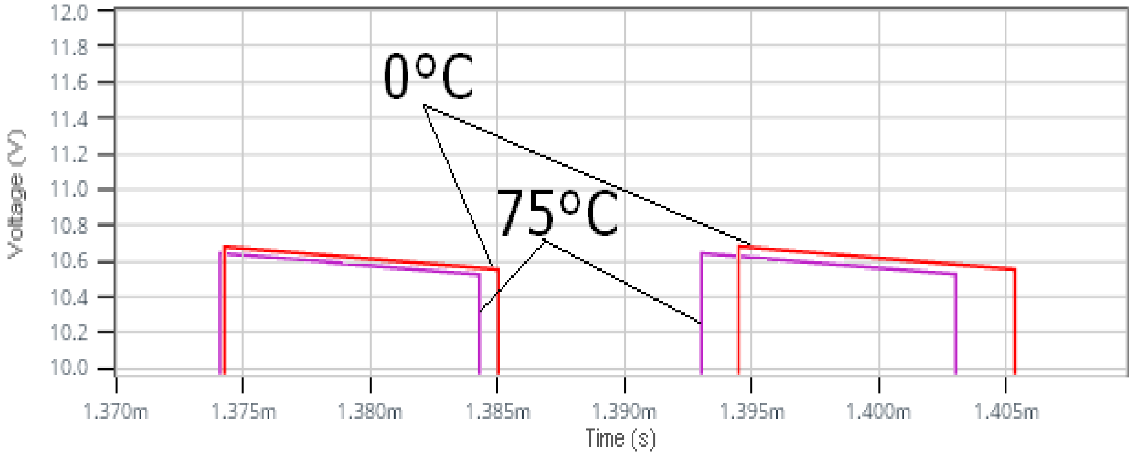

Fig. 8. Graph of VSC load current when load is transient

The work results may also involve the suggested accelerated method for controlling thermal crystal-package resistance. It is obvious that if the tested diode has thermal resistance higher than that of the reference diode, the temperature of its crystal at the moment of measurement will be higher than the reference one, and the voltage difference ΔU shall be lower than reference difference $\Delta U_{ref.}$ However, a change in voltage U is not proportional to change in thermal resistance. It is worthwhile to assess, how temperature and value of temperature-sensitive parameter change, when diode thermal resistance changes. Presuming that averaged temperature of diode crystal, when heated by rated current, changes pursuant to exponential law according to equation:

$$T_J = T_{kn} + T_{Jm}(1 - e^{t/\tau}),$$

where T_{kn} – initial temperature of package, $T_{Jm} = T_{kmax} + P{\cdot}R_{thjc}$ – maximum increment of crystal temperature, τ – thermal constant of package heating time, T_{kmax} – maximum increment of package temperature in a steady state mode, P – thermal capacity, then, if R_{thjc} increases, for example, twice, maximum increment of crystal temperature will change as follows:

$$T_{Jm} = T_{kmax} + 2P \cdot R_{thjc}.$$

Assuming that package temperature when heated slightly changes, change in crystal temperature is disproportional to change in thermal resistance and shall be described by equation:

$$T_J = T_{kn} + (T_{kmax} + P \cdot R_{thjc})(1 - e^{t/\tau}).$$

Fig.9 presents a graph of crystal temperature changing for three values of junction-case thermal resistance, when rated value $R_{thjc,н}$=2 °C/V. Graphs correspond to T_{kn}=20 °C, T_{kmax}=80 °C, τ=50 c, P=5 V. Here, a steady temperature of crystal will be higher than the package temperature by value $P \cdot R_{thjc}$.

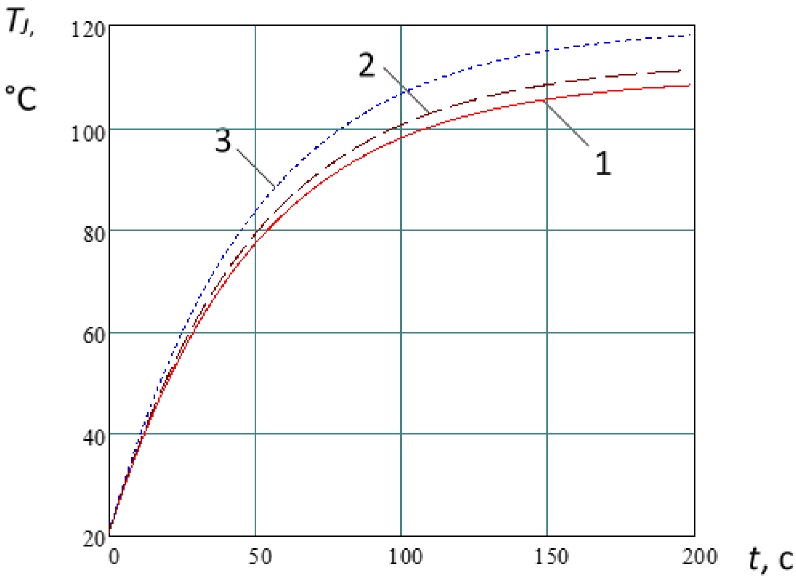

Fig.9. Temperature curve for various thermal resistances:
1: $R_{thjc} = R_{thjc,н}$; 2: $R_{thjc} = 1.3R_{thjc,н}$; 3: $R_{thjc} = 2R_{thjc,н}$

The graph shows that, by the moment of time τ = 50 sec, crystal temperature reaches 76.9°C when $R_{thjc} = R_{thjc,н}$ and 83.2°C when $R_{thjc} = 2R_{thjc,н}$, i.e., when thermal resistance increases twice, crystal temperature at the moment of time, equal to thermal constant τ, will increase by 7.6%.

There are no published methods for controlling thermal crystal-package resistance for integrated microcircuits of high-frequency VSCs. However, an access to *p-n*-junction, available within the structure of these VSCs, allows to use the suggested accelerated method for controlling temperature of junction (diode) and, respectively, crystal temperature and thermal crystal-package resistance of VSC integrated circuits, supposing that temperature of *p-n*-junction will correspond to VSC crystal temperature. Thus, *p-n*-junction in integrated circuit LM2676 (Texas Instruments) is between outputs GND and ON/OFF. It is possible, using this junction, to control in an automated manner its temperature and junction-case thermal resistance of integrated circuit and other high-frequency VSCs as follows:

1. First, in laboratory, a relationship between temperature-sensitive parameter (voltage within *p-n*-junction when gauge current is small) and temperature is established. The obtained relationship $U_J(T)$ is used either for immediate determination of thermal resistance, or is approximated by linear dependence

$$U_J(T) = U_0 - K_T T.$$

An example of such approximation by two points is presented in Fig. 10. Linear approximation characterizes relationship $U_J(T)$ by two parameters: temperature coefficient of voltage K_T and initial voltage U_0:

$$K_T = (U_1 - U_2)/(T_2 - T_1), \quad U_0 = U_1 + K_T T_1. \tag{1}$$

Here, temperature of *p-n*-junction shall be defined by measured voltage U using equation

$$T_J = (U_0 - U)/K_T. \tag{2}$$

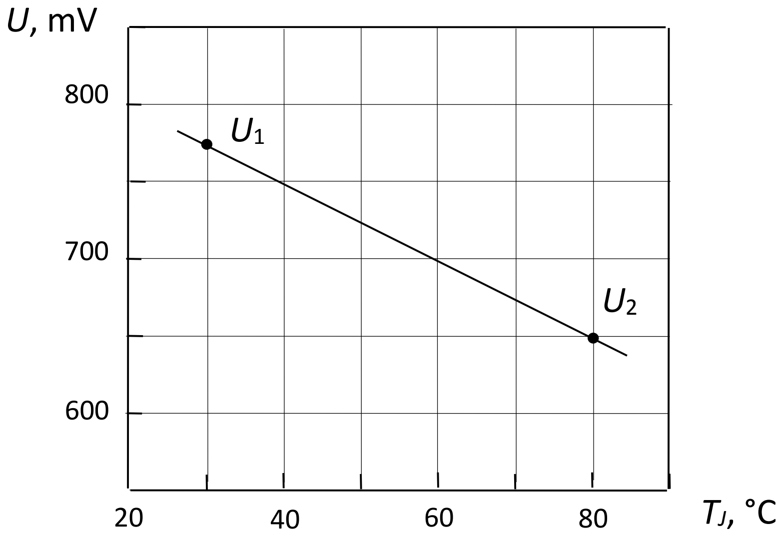

Fig.10. Temperature-sensitive parameter-temperature relationship

2. Thermal resistance of reference integrated circuit shall be defined at the second stage. To this effect, reference circuit is installed into tester, heating mode is turned on, temperature of integrated circuit package is measured, along with the time, upon expiration of which temperature of package will almost stop changing. After dividing measured time by three, an approximate value of thermal time constant τ shall be determined. Heating of integrated circuit continues until package temperature fully stops changing, then the integrated circuit is switched off, and voltage within *p-n*-junction is measured by tester, when gauge current is small.

Temperature of *p-n*-junction T_J shall be defined using measured voltage and dependence $U_J(T)$ or equations (1), (2). Thermal crystal-package resistance shall be defined by equation:

$$R_{thjc}=(T_J - T_C)/P_{н},$$

where $P_{н}$ – lost power (heat flow) in the heating mode, T_C – temperature of package in a steady-state mode.

3. The third stage involves introduction of parameters into tester memory that were defined using reference integrated circuit. To this effect, after complete cooling of reference integrated microcircuit, it is again connected to tester, and voltage within *p-n*-junction is measured, when gauge current is small. Then, heating mode is turned on for a period, comparable with thermal time constant (arbitrary within (0.5…0.8)τ). Then, power is quickly (by means of tester) turned off, and a voltage drop is measured within *p-n*-junction, with small gauge current. Four values are retained in the tester memory: heating duration, two voltages within *p-n*-junction, when gauge current is small, and the value of this current. Preparatory stages, needed to form BM parameters, are completed here, and automated inspection of the entire set of circuits may be started.

Discussion

The obtained time relationships between output voltage and current at the moment of converter's start-up, given in Fig. 4-7, coincide with the results of applying PSPICE-model and experimental studies. It allows to infer that the model is successfully verified.

Applicability of the suggested method is related to the permissible deviation of thermal crystal-package resistance value from the rated value. 2.5% (Fig.9) increase in crystal temperature, when controlling at τ moment in time, corresponds to this thermal resistance exceedance. Such changes in temperature may be safely recorded by automated tester, that enables to arrange for successful automated sorting of microcircuits to be carried out.

However, it should be noted that reduction of heating time results in remarkable reduction of temperature-thermal resistance dependence (Fig. 9). Thus, when there is heating of the same capacity within *0.2τ,* 30% increase in thermal resistance will result in only 1.5 % increase in temperature. A compromise is needed between test duration and accuracy of determining thermal resistance. As per preliminary assessment, it is worthwhile to choose the time for crystal heating within (0.5…0.8)*τ.*

When the suggested algorithm is implemented to control thermal crystal-package resistance in an automated manner, a number of conditions shall be observed.

First, time interval between tripping of thermal capacity and measurement of *p-n*-junction voltage shall be minimized. Taking into account that *τ* of VSC microcircuits is usually several and more seconds, use of switching devices, as parts of tester, that have response time of unities of milliseconds, enables to meet this condition.

Second, it is necessary to ensure that not only time of heating is stable, but thermal capacity as well. Obviously, a connection circuit in heating mode shall be chosen, and an algorithm for stabilizing lost power shall be elaborated for each type part of VSC microcircuit. This algorithm shall be implemented using software-hardware as part of tester, taking into account permissible spread of electrical parameters of microcircuits. Modern automated testing equipment allows to solve this problem as well.

Third, accuracy of determining junction-case thermal resistance strongly depends on stability of temperature-sensitive element (*p-n*-junction) characteristic (Fig. 10) within one set of tested microcircuits.

Conclusions

Analysis of the existing methods for controlling thermal crystal-package resistance of semiconductor devices showed that they are highly labor-intensive with long control process that doesn't allow to utilize them for automated tests of high-frequency VSC microcircuits. This problem may be successfully addressed through the use of the reference behavioral model of microcircuit.

A modified method is suggested that substantially speeds up determination of thermal junction-package resistance of semiconductor diodes, when carrying out automated tests.

Potential application of modified method for automated determination of thermal crystal-package resistance of VSC microcircuits is presented, using *p-n*-junction embedded into their structure.

Algorithm is elaborated to use modified method for automated determination of thermal crystal-package resistance of VSC microcircuits utilizing test equipment.

The suggested method is recommended to be used when controlling thermal resistances of various semiconductor devices.

The method of using behavioral models, discussed in the paper, allows to obtain appropriate results of modelling, comparing with considerably more complex transistor level SPICE-model. Here, improvements in performance are gained and many computational resources are saved.

From the obtained results it can be inferred that behavioral models may be used as a source of reference information during testing electronic components. It enables to greatly reduce the volume of preparatory works when organizing automated testing of microelectronics devices and developing automated testing equipment.

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The Problems of Public Administration in the Sphere of Healthcare in Ukraine

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Abstract

The purpose of this article is to establish the level of efficiency rise ways of public administration implementation in the sphere of healthcare in Ukraine on the basis of the international experience use; to define a unified conception of the institutional and legal basics' management in the sphere of healthcare and to offer specific recommendations as to the introduction into legal reality of Ukraine. The methodology includes general philosophical and special methods of scientific cognition namely, the system-analysis technique, the dialectical method, the Aristotelian method and the structural-functional process as well as the range of empirical methods were used while carrying out the research. Authors came to a conclusion about a low adaptation level of a present healthcare system of Ukraine to real population needs. The formal international standards consolidation in a designated sphere does not provide the services in the sphere of healthcare with the availability and quality signs. The free access ability to the international protocols, in accordance with which the treatment should be provided, has to be in Ukrainian which will allow to simplify the procedure of specific decision making in the sphere of healthcare as well as to find mistakes which can occur in medical practice in due course. The research results are relevant for domestic lawmakers and entities which carry out the public administration in the sphere of healthcare against a background of the tendencies actualization of administrative processes democratization in Ukraine. All the results are independently obtained and original (incorrect adoptions and taxes are absent). The subject of research is examined for the first time in Ukraine and has the prospective for further development.

Keywords: healthcare, public administration, financing, institutional and legal basics, international standards.

Introduction

The health of Ukrainian nation should be the most important thing for any administrative staff machinery and this thesis is not in need of any special justification. But at the same time, the institutional and legal mechanisms of a proper healthcare state provision in Ukraine are characterized with casuistic discrepancy tendencies of a current state of population health in the model of the healthcare system which is tried to be introduced during the last years.

The healthcare system as an object of legal regulation is a set of measures on the security and provision with the proper state of physical, mental and social welfare but not only the absence of illnesses and physical defects (Polozhennya pro Natsionalnu sluzhbu zdorovya Ukrainy, 2018). Illegitimate signs of management in the sphere of healthcare first of all are first of all the absence of a clear bringing to account algorithm of the public administration authority particularly it concerns the health-care agencies and the absence of the healthcare structuration on the specific directions of such a state achievement. While the international community makes it their aim to solve such global issues of community health protection as the provision with the proper state of ecology and safe for health foodstuffs, the minimization of bugs, the observance of treatment protocols considering age-related, national and personal factors, the solve of psychological disturbance connected with "igromania" and depressions, the make of new archetypes of consciousness as relatively specific diseases like dementia and as regards the solo responsibility for the state of health (The official site of the World Health Organization WHO, 2019) Ukraine tries to reformat the national system of health protection on the basis of the obsolete administrative staff machinery and the negative people association of the order and quality of the health care services provided.

The public administration in the sphere of healthcare cannot develop and function separately from the problems and consequences of social evolution. The elaboration of both a long-term concept of the steady healthcare system development and the constant monitoring of existing and emerging problems in this sphere are considered to be necessary.

Methodological Framework

The problems of public administration implementation in the sphere of healthcare in Ukraine are relevant but at present the complex research which is aimed at the theoretical understanding of the medical reform impact on the public administration key points as well as on the service quality rendered in the sphere of healthcare on the whole. A great amount of specialists in different aspects of common knowledge (legal, medical and social) have taken part in the research depending on which the approach to identifying the administration peculiarities in the sphere of healthcare differs.

The theoretical footing of this research is the knowledge about a present financing system in the sphere of healthcare on the one hand and the essence of public administration on the other. On the whole, it is possible to point out such healthcare systems as the system of Bismarck which is based on the social health insurance that is carried out on the state and local level (the healthcare model mentioned is the basis of the public administration national concept construction in the sphere of healthcare in Germany, Austria, the Netherlands and Belguim). The system of Bismarck which consists of medical care accessibility that is ensured at the expense of the fiscal and non-tax budget income without the intensification of medical services into a private doctor prerogative (the healthcare model mentioned is the basis of the public administration national concept construction in the sphere of healthcare in Spain, Portugal, Sweden, Finland and Denmark) (Baeva, 2008) and the system of Semashko (a former Soviet one) which is constructed on the principles of a free medical care mainly at the expense of budgetary funds that is followed by economic risks (the healthcare model mentioned is the basis of public administration national concept in the sphere of health protection in Armenia, Georgia, Moldavia, Bulgaria and Slovenia) (Panov et al., 2001).

It is important to notice that modern systems of healthcare are in fact hybrid. The characteristic feature of countries with the transitional economy is the gap between the guaranteed civil rights for the receiving of a free medical care and their real financing. While at that time the modernization of the national healthcare system should be followed by the standards unification in the sphere of medical services at the international level, development and the priority of the healthcare system entity market relations; the solve of specific internal problems of the expense control important for the coverage of medical public services (Dolot, 2013; Gluzman et al., 2018). The estimate of the medical facility cost and income is approved by the same bodies, that is owned by them, as a result of which the bodies are given an incentive to act in the interests of corresponding facilities but not in the interests of a specific patient.

The reformation of the healthcare system financing, which has the aim to implement a state solidary medical insurance, is being carried out now in Ukraine. While at the same time the chief source of a renewed healthcare system financing are the funds of the State Budget of Ukraine obtained from national tax but payments for the treatment of a separate person will not depend on the amount of his individual contribution (Reform Finansuvannya, 2016). Medical guarantees provide for the obtaining of necessary medical services and medicine connected with the granting of the emergency medical care, primary health care, secondary (specialized) medical care, tertiary (highly specialized) care, palliative care, medical rehabilitation, medical care for children under 16, medical care connected with the pregnancy and labour. Those kinds of medical care which are not listed are paid independently by the patient (Zakon Ukrainy vid 19.10.2017 № 2168-VIII, 2017).

What concerns the definition of public administration the position of this research according to which under the public administration is understood the statutory and normative-legal acts activity of public administration authorities which is aimed at the fulfilment of laws and other normative-legal acts by means of adoption of the administrative decree and the statute-established services provided is taken as a basis (Chernov, 2014; Bondarenko, 2017). The essence of public administration in the sphere of healthcare is respectively defined on the ground of the common theory combination of the administrative law and the specificity of the healthcare sphere as the regulated by the law and by the other normative-legal acts executive-administrative activity on the protection and provision with the proper state of physical, mental and social welfare by means of the administrative decrees adoption and the statutory healthcare services provided.

In spite of the obvious urgency of the management provision with a proper population health rate it is important to recognize that native researchers resort to fragmentary studies on the issue of medical reform in Ukraine only. At the same time the study of real tendencies of danger and diseases which pose a threat to the population in terms of the technological development is insufficient. From this point of view the use of the formal-dogmatic approach, the constitutional state has to create favorable conditions for the functioning of the effective management and development in any sphere. Therefore, the quintessence of normative (legal and international-legal basis of healthcare regulation), managerial (the management of public authority functioning) sociocultural (the state of the compiled health culture archetypes, the presence of safe for health living conditions) the determinant of a healthcare protection sphere which will be the basis for the formation of public administration integrity concept in the sphere of healthcare in Ukraine is appropriate.

The global aspects of the healthcare protection as a systematic instrument of the managerial approach reformation in Ukraine are first examined in this article. For a consistent problem coverage there are allotted separate informative blocks which characterize the uniform group of social relations concerning the features of public administration in the sphere of healthcare namely, the institutional-legal basics of public administration in the sphere of healthcare, global tendencies in the sphere of healthcare, international-legal basics of public administration in the sphere of healthcare and the foreign experience.

Results and Discussions

3.1. The Institutional-Legal Basics of Public Administration in the Sphere of Healthcare

In Ukraine the legal health care maintenance is stipulated by the art. 49 of the Constitution of Ukraine and is expressed through such direct authority as the right for health protection, the right for medical care and the right for medical insurance. The health care is provided with the government financing of correspondent socio-economic, health and sanitary-preventive programs. What concerns the medical care the state creates the conditions for the effective and available medical care for all the citizens. The medical care in government and public institutions of healthcare is provided free of charge. At the same time the support of the physical culture and sport development and the provision with the sanitary-epidemic population welfare is attributed to the state responsibilities (The Constitution of Ukraine, 1996).

The executive and administrative activity and the services provided in the sphere of provision with the proper state of physical, mental and social population welfare is carried out:

1) The health authorities of national importance which are attributed to: The Ministry of Healthcare of Ukraine (Postanova Kabinetu Ministriv Ukrainy: Polozhennya vid 25.03.2015 № 267, 2015) there are 3 departments, 10 administrations, 3 divisions and 5 departments that are the part of the structure (The official site of the Ministry of Healthcare, 2019), the National Health Service of Ukraine which is the central executive body the activity of which is aimed and coordinated by the Government of Ukraine through the Minister of Healthcare of Ukraine who implements the public policy in the sphere of the state financial guarantees of medical population care (Polozhennya pro Natsionalnu sluzhbu zdorovya Ukrainy, 2017);

2) The health authorities of the local importance which are the following: local public administrations in the context of the authorities which are stipulated by the law (Zakon Ukrainy, 1999), rural, communal, urban councils and their executive bodies as well as district and regional councils which represent the interests of territorial communities of villages, settlements and cities in the sphere of health protection (Postanova Kabinetu Ministriv Ukrainy vid 15.07.1997 № 765, 1997);

3)The health-care agencies (legal entities of any kind of property and organizational-legal form or its isolated subdivision providing with the medical public service on the ground of a correspondent license and the professional activity of medical (pharmaceutical) workers (Zakon Ukrainy, 2012). Among them the special place are occupied by the sanatoria and health facilities (Zakon Ukrainy, 2000; Postanova Kabinetu Ministriv Ukrainy vid 11.07.2001 № 805, 2001);

4) The social associations which act with the aim to safe and restore the physiological and psychological functions, optimal working capacity and social activity of a man under the maximum biologically possible individual life expectancy (Postanova Kabinetu Ministriv Ukrainy vid 3 lystopada 2010 r. № 996, 2010).

It is important to notice the bodies carrying out the activity in the sphere of healthcare. Thus, it is reasonable to create the State inspection on the issues of medical services quality. The competence of this body should consist of the following: the observance check of the international medical protocols, the compliance of medical ethics, the issue, stoppage and revocation of licenses to practice medicine.

As regards the health-care agencies in order to obtain the status of the health-care facility a legal entity has to comply with the license requirement such as the carrying out of medical practice, the activity of umbilical blood sampling and other tissues and cells of a man all these are the kinds of activity which have to be licensed (Zakon Ukrainy, 2015). It is necessary to: to obtain the license which is possible in case of the compliance of managerial, regular and technological requirements to the material and technical base compulsory for the fulfillment during the carrying out the economical activity on medical practice as well as under the presence of a comprehensive list of documents enclosed to the application about the license obtained for the realization of the economical activity on medical practice (Postanova Kabinetu Ministriv Ukrainy vid 02.03.2016, 2016). Furhermore, it is important to get the accreditation approved by the health-care agency as an official recognition of the presence of the entity conditions for qualitative, modern, defined level of medical care population and the observance of standards in the sphere of medical care, the compliance of medical (pharmaceutical) workers to the unified qualifying requirements (ZakonUkrainy,1997).

3.2. Global Tendencies in the Sphere of Healthcare

The importance for call registration concerning the problems of healthcare security for all the international community is mediated by the process of borders blurring between the states. The absence of global problems registration connected with the population health leads to the fragmentariness of the national public administration realization in the defined sphere.

One of the key problems for today is the fight against the epilepsy. On the whole, the epilepsy touches almost 50 million people all over the world, 80% of which live in the countries with the low and medium level of income in many cases the reasons are the traumas while giving a birth, brain infection, traumas and strokes. Due to the abnormal electrical activity of the brain, suffering people may experience cramps or unusual behavior, the feeling and sometimes the loss of consciousness. The insertion of the event on the fight against the epilepsy of the international healthcare programs, to encourage the investment in the decrease of its load and act for action aimed at the overcoming of gaps in the epilepsy knowledge and research is the important thing (Epilepsy: a public health imperative, 2019). At the same time this problem is ignored and is not solved in Ukraine. Furthermore, the part of the sick people does not have the officially confirmed clinical outcome due to a low qualification of medical stuff.

The actual problem in the sphere of healthcare is the abuse of antibiotics. The increased attention of the international community to antibiotics consumption and the take of them only in necessary cases connected with the development of a feedback between the bacterium and the antibiotics. The compulsory antibiotics prescription from the very beginning of the bacteriosis and bugs is seen in Ukraine. The consequences of the uncontrolled antibiotics consumption are the following: the inability to treat serious and even widespread infections as a result of the loss of resistance, the inability to carry out operations and the increase risk in the exhaustion of health resources (Adopt AWaRE, 2019). The Ministry of Healthcare of Ukraine has recommended to implement the national legal systems, measures on the monitoring of antibiotic use, the control on the use of antibiotics in the veterinary medicine and agriculture.

Concurrently with the dangerous diseases and the ways of their overcoming one of the key aspects of public administration in the sphere of healthcare is the absence of the healthcare problems opposition system. The increase in the level of physical activity can be attributed to such measures. Providing the neglect of physical activity there emerges a range of cardiovascular diseases. The confirmation of the healthcare importance system is the adoption of the Global action plan on Physical Activity 2018-2030. Moreover, the modern situation in the world shown that on the whole 28% of adults (1,4 billion people) do not spend enough time on physical activity with a view to prevention of widespread chronical diseases and the improvement of mental health. It is important to adopt a national plan of action on the increase of physical activity rate which has to consider the analysis results of a current situation, the strategical package of political measures, the package of technical documents namely, ACTIVE, the attraction of public organizations for the physical activity ideas spreading (ACTIVE, 2019)

One of the indicators of the national healthcare system effectiveness is the presence of statistics on the key activity indicators including the mortality statistics and the reason which caused it. The similar data on the world indicators are annually published in the edition namely, World Health Organization under the WHO. The determination of the population and their diseases and death is certainly the activity indictor of public administration entities. The statistics of death reasons helps the health-care agencies to identify the protection means. In case of the death from cardiovascular diseases, for example, or diabetes the necessary measures will be the realization of energy programs and the cholesterol consumption minimization program. Similarly, if to certify a high death rate among children from pneumonia the slight part of the budget is given for treatment thus the important thing is to raise the cost increase in this sphere. It is interesting that in the states with a low and middle level of income such statistics is absent and the number of death cases from the specific reasons is inaccurate (World health statistics, 2018). Thus, the official data concerning the death rate and its reasons is absent in Ukraine or they are not found in the open admission. The reasonable fact is to adopt the Resolution of the Cabinet of Ministers of Ukraine “Ob osushestvlenii obyazatel’nogo statisticheskogo monitoring smertnosti v Ukraine”.

3.3. The International Basics of Public Administration in the Sphere of Healthcare

The system of international legal norms concerning the public administration in the sphere of healthcare is first of all based on the statute of the Universal Declaration of Human Rights. According to the international document every person has the right for medical care and necessary social service which is necessary for the maintenance of his and his family health and welfare and the right for the maintenance in case of unemployment, disease, disability, widowhood, old age or any other case of the loss of the means of substance by virtue of the independent circumstances (art. 25) and so on. (The Universal Declaration of Human Rights, 1948).The fundamental principles of human rights security in the sphere of healthcare are contained in the International Covenant on Economics, Social and Cultural Rights. Measures that should be taken by the state for the full realization of the right in the sphere of healthcare are attributed to: the provision with the decrease of mortinatality, the infant mortality and healthy child development; the improvement of all the hygiene aspects of the environment and the industry labour hygiene; the prevention and treatment of epidemic, endemic, professional and other diseases and the fight against them; the creation of the conditions which would provide all people with the medical care and medical in case of illness (The International Convent on Economics, Social and Cultural Rights, 1966).

Among the documents of WHO, it is important to notice the Declaration on the Promotion of Patients’ Rights in Europe (1994), where the requirements to the information provided with the patient and which has to be comprehensive are determined. The conditions of the consent to medical intervention and the conditions of the health status information keeping and any other personal information about the patient are indicated in the document. The norms, which are stipulated in the article, regulate the issues of medical care assistance in accordance with the state of health including the disease-prevention and medical service where the human rights security is stipulated in the article 6 of the international act (The Declaration on the Promotion of Patients’ Rights in Europe, 1994).

The important thing for public administration in the sphere of healthcare is the international legal acts which are adopted by the World Medical Association such as: the International Code of Medical Ethics (1983), the Human Rights Declaration and the Personal Freedom of Health Professional (1985), the Declaration on Physician Independence and professional Freedom (1986), the Declaration on Euthanasia (1987), the Declaration of Helsinki; the Declaration on Human Organ Transplantation (1987), the Twelve Principles of Provision of Health in Any National Health Care System (1983), Zayavleniyeobispol’zovaniipsichotropnychsredstvizloupotrebleniyeimi (1983), Declaratsyya o zhostkom otnoshenii k pozhylym ludyam I starym (1990), the Statement of Policy on the Care of Patience with Severe Chronic Pain and Terminal Illness (1990), the Declaration on Physician Independence and Professional Freedom (1986), Zayavleniye o podgotovke meditsynskich kadrov (1986) and others (The official site of the Verkhovna Rada of Ukraine, 2019).

Thus, the international standards in the sphere of public administration compose the system of norms encircling the important aspects of the managerial process. The system given is not stable it always develops with the evolution of social relations. For example, in terms of the intensification of technologies the important thing is the popularization of the electronic participation of people in the sphere of healthcare and the provision with the medical care quality services provided. The creation of an electronic database with the protocols on the principles of the demonstrative medicine in Ukrainian remains relevant for Ukraine. The use of the new clinical protocols in medical practice is one of the main ways of medical practice introduction in our country.

As regards the international practice of a healthcare system reformation the experience of Georgia is controversial. The inpatient care in Georgia is provided in the secondary and tertiary care institutions, multifield hospitals and diagnostic and treatment centers, research institutes, specialized hospitals and dispensaries. Since 2006 the main reform principles of Georgia have been aimed at a full transition of healthcare sector into market relations: the private rendering of services, the private system of services buy, the liberal regulation and minimal control. The adoption of such decisions was dictated by the economic policy conducted which is aimed at the security of economic growth at the expense of liberalization and development of the private sector. The changes adopted in 2008 are directed to a radical reduction of human rights, to the obtaining of medical care in the context of state programs, to the allocation of state funds only for the needs of the most vulnerable households and to the change of the medical service buying change (Systema zdravoochraneniya: vremya peremen, 2010). Thus, the radical actions on the change of the healthcare system have favorably affected the economy of the state and the provision with the population health.

Another example of a typical representative of a private healthcare model is the USA. The branching network of private health-care agencies where the medical service is provided either for the direct payment or at the expense of the private insurance healthcare means functions in the USA. The activity of state and municipal health-care agencies is aimed at the charity and support of the unprotected segments of the people. That is why the significant volume of medical care in the country is provided on the paid basis and private means compose of more than 58% of all the healthcare expenses. Among which 27% is the direct personal population payment for the medical care and almost 32% is the means which come through the system of private health insurance. The feature of the American system of healthcare consists of that the state differentially approaches to the security of population medical requirements by means of the target social insurance program development. The specific feature of the healthcare system organization in the USA is the distinction of the medical services production functions and their financing. The question is that who has to provide medical services (whether it is state non-governmental, commercial health-care agencies), separate from the problem of financing. Such an approach guarantees the equal opportunities in obtaining the medical care both for patients of government programs and for the patients insured on the basis of the private medical insurance but in practice this mechanism not always works (Karpishyn & Komunitskaya, 2008).

The conduct of a cardinal healthcare reform with the obligatory noticing the sense of people justice on the healthcare services provided will be useful for Ukraine. What concerns the experience of the USA the realization of such a system of healthcare which will stipulate the competitive basis as to the quality of the medical services provided is relevant for Ukraine. The innovation given will certainly improve the state of health-care agencies functioning.

Conclusion

One of the results of 20th century, the lesson obtained at the cost of the colossal social cataclysms became a relative but rather important advantage of the socio-political democratic model of manager relations and those who are led which is approved in Western countries. This advantage which emerges in the long term consists of flexibility which is provided at the expense of the effective feedback. The democratic transformation in Ukraine is expressly or by implication connected with the global processes during the time of the references choice for the formation of national healthcare system. As a result, it is offered to realize the following measures:

–the creation of the concept for the epilepsy counteraction and the medical assistance for people suffering from this disease;

–the realization of the antibiotics supply check in accordance with the international medical protocols;

–the establishment of the State inspection on the issues of medical quality services provided the check of compliance of medical protocols, the observance of medical ethics, the issue, stoppage and the revocation of licenses for the medical practice work and so on should be attributed to the competence;

–the adoption of the national plan of actions on the increase of physical activity rate which has to consider the results of the current situation analysis, strategic package of political measures, the packages of technical documents provided namely, ACTIVE (2019), the attraction of public organizations for the spreading of physical improvement ideas;

–the adoption of the Resolution of the Cabinet of Ministers of Ukraine “Ob osushestvlenii obyazatel’nogo statisticheskogo monitoring smertnosti v Ukraine”.

The unified concept of public administration in the sphere of healthcare in Ukraine has to express the combination of normative (legal and international legal basis of the healthcare sphere regulation), managerial (the management of public authority management in the sphere of healthcare, the feature of the public administration entity structure) sociocultural (the state of the health culture archetypes compiled, the presence of health safe living conditions) the determinant of the healthcare provision sphere.

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Universities as Regional Development Drivers: Expectations and Prospects

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Abstract

The main purpose of this study is to determine the role of universities in the development of regions and identify the main factors affecting their activities, based on the analysis of scientific and theoretical literature and the educational process in universities. The leading methods of research are theoretical analysis, review of scientific literature, method of analysis of higher educational institutions' educational activities in the regions, comparative analysis and interpretation of the results of the work. In the course of the study, we have revealed that due to the increased competition of universities at the world level in the conditions of the need to master, but also to advance the best practices and standards in education, it is necessary to improve the quality of the regional system of higher education for the implementation of a high level of scientific and educational services, integration into the world educational space with the preservation of the identity of socio-cultural components of the regional character. We believe that regional universities have their own specifics: they preserve the intellectual potential and ethno – cultural achievements of the peoples of the territory, increase the social importance of higher education, provide quality teaching based on the development of modern technologies, and support the socio – economic development of regional territories. Also, regional universities support interregional cooperation, provide horizontal diversification of educational services, taking into account the needs and interests of the population, its capabilities and compliance with the needs of different social strata of the region. The practical significance of the study is to use the results and research materials in the organization and management of higher education in the regions. The novelty of the research lies in the fact that the necessity of theoretical and methodological substantiation of ways to strengthen the regional orientation of the staff's professional training on the example of specific territories is revealed; it is established that the organization of higher education is one of the effective conditions for escaping the region from the situation of economic instability and discomfort; the role and influence of the University is defined as an educational center, employer and consumer of material goods on the development of the region , but also as a driver in the transformation of social and cultural life, ensuring the modernization of infrastructure and strengthening the position of the region in the country and at the world level.
Keywords: regional University, regionalization, modernization of higher education system, higher education, regional factors of educationdevelopment, University, educational policy, regionalization of higher education, regional socio-cultural traditions,regional orientation of higher education.

Introduction

As it is known, the processes in the field of higher education in Russia always take place in a certain regional context. The regionalization of higher education institutions, when state and local authorities directly link the development of a particular region with the functioning and development of the higher education system, has taken a strong place among the priorities of modernization. The educational policy of the region is connected with the issues of solving the problems of the population employment, internal and external migration, education, demography, etc. (Gluzman et al., 2018). Regionalization of higher education is one of the most important parts of the national education system. It is caused, on the one hand, with the beginning of the formation stage of regions as the economic structure of territories in the process of socio –

economic crisis in the country, on the other, ongoing reforms at all levels of the education system. This circumstance predetermines the need to consider higher education as a regional phenomenon in connection with the increasing priority of education and the strengthening of the role of regions in the development of modern Russian society. A huge role in this situation is played by higher and secondary vocational schools as factors of economic stabilization and growth of the region, improving the quality of life activity of the population, minimizing the outflow of talented youth from the regions, the formation of a new system of problem sectors' staffing, ensuring cooperation of the education system with science, large industry enterprises, government and business sector.

The trend of regionalization of education is reflected in the strategic document of the Russian higher education in the *Program of development of higher education in Russia until 2025*, where regional universities are listed as centers of training of highly qualified personnel capable of providing "growth of intellectual capital and investment attractiveness of the territory" to improve the quality of life of the population (Belogurov, 2007).

Considering universities as a system-forming factor of socio-economic development of the regions, O.V. Dolzhenko (1998) points out that "the traditional life of such higher educational institutions takes place in much more complex conditions, compared with the capital's educational institutions. Higher educational.... they carry a double or even a triple load not only training specialists, but also playing an important role of integral centers of culture" (Dolzhenko, 1998). N.M. Rassadin (2002) characterizes universities in the regions as the basis of socio-cultural inheritance in the region, preserving regional socio-cultural traditions, supporting the historical all-Russian, national and regional memory (Rassadin, 2002). A.R. Naumov and V.V. Chekmarev (2003) characterize "universities as sources of formation of not only human, intellectual potential, but also social and cultural capital; as a producer of scientific and educational products and services, as a factor of social and cultural development of the region" (Naumov & Chekmarev, 2003).

The regional orientation of higher education allows each educational organization to determine the breakthrough directions of development, choose its own growth path and develop a strategic plan to achieve the goal and solve problems taking into account the specific situation and specifics of the region, combined with challenges and opportunities at the level of the macro region (historically developed traditions, customs, peculiarities of economic development, economy, personnel support).

"In the context of modernization of the higher education system, regional universities, unlike large Federal or research universities, as well as existing within public recognition the capital's universities receiving some state support, it is much more difficult to meet the requirements and criteria of the best world practices, due to the smaller number of material and human resources, the lack of wide popularity, low level of resource support from the Federal government, the predominant focus on the interests of the region. Therefore, as a rule, regional universities have to survive on their own, taking certain measures to improve the quality of education, the development of new educational technologies, support" (Frolov, 2015). Rector of HSE Ya. Kuzminov, introducing a new program of support for regional universities, said: "The development of Russian higher education is at a critical moment. We are increasingly paying attention to the existing problem of a sharp territorial gap in the quality of education. It is necessary to *raise* regional universities, and this should become not only the state policy, but also the policy of each of the leading universities of Russia" (High School of Economics, 2019a).

Thus, we have identified different approaches and opinions of specialists in the field of higher education about the ambiguous situation of regional universities in the current socio-economic situations: from the prestigious supporting universities - centers of development strategy of the territory and training of highly qualified personnel, taking into account the needs of the local labor market to educational institutions, forced to *survive* on their own with minimal state support.

Literature Review

"Regionalization of education in Russia, the emergence of regional education systems as new entities in the educational space of Russia" is an imperative for the development of higher education in Russia (Naumov, 2004). This is because the regional system of higher education should acquire the ability to implement a high level of self-sufficiency in scientific and educational services, integration into the world educational space with the preservation of the identity of socio-cultural components of the regional character. One cannot but agree with the view that regional universities determine the competitiveness of the region at the national level to the same extent, in which the competitiveness of the country at the international level determines the qualitative and quantitative level of education of its population: "...the country, the power of which is determined by the regions, is extremely needs and in first-class regional universities" (Belotserkovsky, 2015).

In the book "The evolution of flagship universities: From the Traditional to the New" the authors write that the model of higher education development - *global research universities and mass universities* – is unstable. There is a need for universities in the regions, which should become the flagships of the regional system of higher education, play a key role in the development of the economy, social sphere, and culture of the region (The Evolution of Flagship Universities: From the Traditional to the New, 2019). "The main conclusion is that in the *healthy* system of higher education, especially in large countries, universities that play the role of drivers of regional development are of very high quality. And these universities can simultaneously be recognized at the world level, as the same University in Berkeley, because each region should strive to improve its global competitiveness" (High School of Economics, 2019b).

The transition from a centralized system of University education to the formation of regional and municipal subsystems, the redistribution of resources, the results of activities in favor of the regions demand from Russian researchers the theoretical and methodological justification of ways to strengthen the regional orientation of the staff's professional training on the example of specific territories.

In order to maintain and preserve the developing environment, the regions need to preserve such vital areas of activity as education, medicine, energy, trade, etc. The staff's training for these areas of professional activity is one of the main tasks of the regional University. Higher education refers to such issues. The lack of astrophysicists or theatre Directors in a particular region can be experienced without negative consequences for the regional economy. But the shortage of engineers, teachers and doctors is able to prepare the ground for a regional humanitarian disaster, doom to economic degradation and stagnation (Sergeeva, 2011).

World practice shows that one of the effective conditions for the escape of the region from the situation of economic instability and discomfort, giving it a developing impulse is the organization of higher education. The existence of a higher education institution in the region has a huge impact on the cultural, educational, economic development of the territory. In the modern education system of Europe, universities have a responsible role for the development of the region through interaction with local authorities and the business environment, stimulating the process of equalizing the economic growth of the regions. I. Moses (2003) writes that the mission of universities is to train personnel, forming a prosperous society, culture and economy; universities are the keepers, creators and distributors of new knowledge, through which they enrich people and society; the intellectual potential of universities should serve society (Moses, 2003). In this approach, we see not only the role and influence of the University on the development of the region as an educational center, employer and consumer of material goods, but also as a driver in the transformation of social and cultural life, ensuring the modernization of infrastructure and strengthening the position of the region in the country and at the world level.

As the world practice shows, the University campus is actively used as a backbone part of regional cities. University buildings, academic and other buildings are the starting points for the formation of architectural appearance, strengthening spatial connectivity with the territory. Not only intellectual – scientific, educational and socio-cultural potential of higher education institutions affect the attractiveness, image of the region, but also the model, type, comfort, safety and quality of University campuses influences it. Today, when there is a comprehensive development of territories in Russia, the University can become a driver of agglomeration as a center for generating new knowledge, developing innovative products and effective solutions.

The population of any city, district or region is a socio-cultural community, a certain community living in a particular territory and identifying itself with the values, traditions and stereotypes of the region. Today, a certain difficulty for researchers is the problem of regional identification of residents.

Identification through locality - when the values of home and *small homeland* are accepted as the basis - is an important step in the process of personal self-determination. It is noted that the identification of social, cultural and educational potential of the region is a significant resource for local development. The greater the number of people who link their fate, the fate of their children and their attitudes to living together in this territory, the more they have passion and the appropriate resources for the preparation and implementation of programs of economic and socio-cultural development of the region.

The region is an entity of cultural life activity with its infrastructure, characterized by historically established common way of life, nature and social specifics. In the process of life activity, education, culture in the region its own regional human community develops, which has:

– unique cultural-like targets that determine their historical missions and future;

– its own system of values, a special *world* with its own mentality, worldview and attitude (Moner, 1993);

– historical traditions and achievements that allow to continuously increase the cultural potential of the community.

Each region of Russia has its own inherent natural - geographical, political-economic, historical and socio-cultural, ethnic and environmental characteristics. The essence of the differences is manifested in the changes made to the content of higher regional education. This trend indicates increased attention to the regionalization of education, allows determining the optimal ratio of the content of the Federal and University components in the content of education.

At the level of the educational space of the regions, two models of regional educational markets are implemented - monopoly (domination of one University) and oligopolistic (dominant position in the market of a small number of universities that can influence the market situation by their actions).

Results and Discussion

National, regional aspects in the formation of personality, civic qualities of the future bachelor or master plays a significant role. Being born in the appropriate national-regional environment, a person unconsciously learns all that surrounds him/her – customs, traditions, culture, philosophy, etc. In the future, learned from birth in the process of expanding contacts is enriched by the appropriation of culture, language and traditions of other peoples. A graduate of a regional University cannot remain in his/her national-regional *shell*, as the internationalization of higher education provides education of tolerant attitude to other ethnic groups, the achievements of other national cultures, in the formation of value-based attitude to the integration of economic and cultural life of the world community.

From the ethno-pedagogical position for regional universities the formulation of the correct ratio of ethnic and national, national and international, regional and Federal is particularly relevant to solve both organizational and pedagogical, and content-pedagogical (didactic, methodical, educational) issues of the educational system development in the region as an organic part of the Federal education system.

The regional orientation of higher education is interpreted as *introduction* of ethnographic, historical, cultural, spiritual, religious, social and industrial experience of the inhabitants of a particular territory in the content and organization of education, i.e. enrichment of the pedagogical process with this specificity, based on the national traditions of education. The priority areas of regional education are the following components:

–The use of ethno-pedagogy, which is based on native language and culture;

– Immersion of students during practical training in the traditional ethno-cultural society;

–Awakening of national consciousness, awareness of the need to preserve the traditional values of indigenous peoples living in the territory – their language, rituals, folklore, history, culture, etc.;

–Inclusion in the educational program courses of regional material characterizing the attitude, worldview, and traditional way of life and activities of indigenous peoples, to improve the current socio - economic processes.

Accounting and generalization of the experience of the Russian higher school in the period of reforms, well thought-out regional policy, in close cooperation with municipal structures, continuity of professional education - make the regional system more flexible, sustainable, mobile, providing the acceleration of the development of educational institutions' new types and innovative technologies. Diversification of educational programs, flexibility of educational structures demonstrates significant changes, first, in the content of higher regional education. They are connected, on the one hand, with the possibility to determine the content of education and build the learning process taking into account the uniqueness of the region, on the other - with the fact that there are specific educational problems in the modern socio-cultural situation in the regions.

Thus, the concept of regional universities as cultural centers becomes a constant postulate of domestic experts in assessing the *vector* of higher education development in Russia in the XXI century. Local regional material introduced into the content of higher education, not replacing, but supplementing, clarifying the Federal component, making it accessible to students.

Federal and regional factors influence the development of domestic regional universities in the XXI century. The Federal factor is based on the return of the state to education as a guarantor of the quality of educational programs and services implemented by Russian universities to improve the professional level of specialists, meeting their needs of employers, the Federal and territorial labor markets.

The regional factor is manifested in the rapid response of the University to the needs of the regional community, in the disclosure of regional and cultural mission, socially-oriented areas of University education, in the value-based systems of the University, forming the spiritual – moral, emotional attraction of the graduate to his/her motherland, culture and history of the region. Based on the author's approach, a more detailed description of the selected Federal and regional factors is presented in Table 1.

Table 1. Factors affecting the activities of regional universities

Federal factors	Regional factor
1.Globalization, accompanied by a rigorous test of competitiveness	Socio-economic, financial, infrastructural and demographic differentiation of the region
2. Competition between universities based on Russian and international ratings. Integration of Russian universities into the world scientific and educational community	University in the region as a preserver and facilitator of socio-cultural potential of the region
3.Active Informatization, computerization of society life	Wide range and availability of secondary vocational education for the youth of the region (on the basis of 9 and 11 classes)
4.Adaptation of universities to new political, socio - economic challenges of the country	Dependence and adaptability of the regional University on the socio-cultural, economic, demographic reality of the region
5. E-learning(professionalization in the course of work, including a person's willingness to train and retrain throughout life)	The presence of ingrained traditions in the educational environment of the University
6. The emergence of alternative forms of higher education	Peculiarities of labor behavior and lifestyle in the region, including cultural and ethnic preferences of the population in the field of labor and educational activities
7. Integration of regional educational systems, creation of a unified concept of education development at the national and regional levels, interaction of regional educational systems	Coordination of Federal and regional educational interests and priorities, development of interregional educational systems. Transition from a unitary educational system to a multicultural complex of regional educational systems.

The education system in the region must be balanced. The formation of a balanced education system should be a priority for the leadership of the region and the regional education system. A balanced education system refers to the organization of education in the region, which is able to adequately meet the educational needs and requirements of the region. In other words, a balanced education system is adequate to the existing educational space in the region. The balance-based nature of the education system is achieved: firstly, through the presence in it of all the main components, stages of education (from preschool to higher, basic and additional); secondly, by the functioning of all elements of vocational education, and for the areas of training that are in mass demand in the region – mass, for exclusive areas – exclusive; thirdly, the education system must have flexibility and reserve strength, that is to adequately respond to changes in the regional educational space (Sergeeva, 2011).

Innovative changes in the system of higher education, taking place in all regions of the Russian Federation, increase attention to the problem of quality education and training of specialists of a new level, able to develop themselves as a subject of professional activity. The new quality of the regional University network of vocational education as a system with the ability to influence the accumulation of intellectual capital in the region, as a factor of gradual alignment in the future of economic development of the territory is relevant.

Conclusion

For modern Russia, higher education is one of the fundamental factors and resources of economic and social development, one of the most important conditions for improving the welfare of society, ensuring competitiveness and sustainable development of national and regional economies.

The analysis of the works of Russian scientists specializing in the fields of pedagogy of higher education, sociology and Economics of education has demonstrated the presence of a fairly wide range of views on the state of regional universities and the prospects for their development: from *centers for the preservation of traditional culture* to *start-UPS.*

Regional universities, as part of the higher education subsystem of the region, which is part of the system of Russian and – further world higher education – in addition to training demanded, competitive personnel, integration into the world educational space, the provision of scientific and educational services, self-sufficiency in scientific and pedagogical personnel, preservation of the identity of the territory, its ethno-cultural traditions - acquire a new quality – they become a kind of *growth poles* with the ability to influence regional development.

A number of researchers consider the possibilities of the University for the development of the region in three directions: 1) the contribution of the University as a major employer in the development of the region; 2) technological development of industry in the region through technology transfer (technology parks, incubators, consulting activities, etc.); 3) vocational education and retraining, advanced training, etc. (Dolzhenko, 1998). However, there are other opinions, which includes an extended list of functions of universities in the region: 1) the integration and optimization of the education system; 2) the basis of the regional system of continuous education; 3) an important factor in the stabilization of the economy through participation in the development of science and technology policy of the region; 4) the initiative in the Informatization and connectedness of the region; 5) the humanitarization of the public life of the regions; 6) participation in international cooperation and a catalyst for openness.

Based on the analysis of the concepts of development of the leading regional universities in the Russian Federation, the essence and specifics of the regional University are clarified, regional and Federal factors determining the strategy of its development are differentiated. The authors focus on such characteristics of regional universities of Russia as: the unification in a single regional educational space of the goals of the state, the regional community and business structures, the interests of employees of the University; the introduction into the vertical management of the University of horizontal structures of municipal (regional) and inter-municipal levels; balance (the ability to adequately meet the educational needs and needs of the region); purposeful and prompt receipt of all types of resources (information, scientific and methodical, regulatory, financial and economic, material and technical, etc.).

In the course of the study, a number of promising problems arose, the study of which should be continued. Thus, it is necessary to study the monitoring of the quality and efficiency of regional universities their interaction with the educational, scientific, business communities, their compliance with the expectations and needs of production and the population of the regions.

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Contemporary Art in the Early Identification of Talents

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Abstract

The article discusses aspects of the use of material and methods of contemporary art, which are still fragmented, not represented in one scientific work. They come to the forefront thanks to the humanization of education, an understanding of the priority of culture in the formation of personality, as well as the integration of knowledge areas, including pedagogy and the science of art. A review of publications in recent years has made it possible to identify benchmarks of educational strategies that can be viable, provided a harmonious combination of a stable value foundation with the flexibility of forms of training and education, to aesthetic perfection. The most important of these landmarks is the identification of the giftedness of children at that age when their psycho-physiological development can significantly enrich the educational process with new subjects, works that are difficult for children to understand and understand. In the «fruitful disorder», imitating the structure of the world, as postmodernist thinkers imagine, the child is guided not according to a predetermined plan, but spontaneously, intuitively, structuring reality according to the rules of his talent. Musically gifted children build in a new, obeying to the principles of rhythm, smoothness, fluidity, the system of sounds that he can reproduce, as well as objects available for creativity, movements of his own body, words. The sense of form allows you to create a balanced and aesthetic art composition; their architectonics also indicates giftedness in the field of mathematics, where algorithmic, geometric, and combinatorial abilities determine the success of problem solving. Similar relationships are found between endowments in the field of visual arts and sports, musical and linguistic. The author of the article proposes an approach to the early identification of giftedness by means of modern art, integrating, in the process of understanding life, the accumulated values of culture, the latest scientific discoveries, practical short-term experiment and immediate experience. Students of pedagogical universities, practicing teachers who carry out this approach will have the opportunity to notice, record in diagnostic cards and use in their professional activities the results of monitoring the activities of children, indicating their talent. In addition, by comparing the art product of a child with the creative product of modern authors according to certain criteria, it will be possible to get a certain idea about the similarity of creativity of adults and children, at the level of form, content, and understanding of the same phenomena. Contemporary art, offering a wide range of works, more diverse than ever and created in the process of free copyright.
Keywords: art, giftedness, talent, gifted child, modernity in art, diagnostic tools of giftedness, art synthesis, art composition, child art product, artistic and creative process, cultural and educational space,integration of science and art, value foundations of education, artistic creative process.

Introduction

The professional activity of a teacher in the 21st century will be successful if it is carried out in accordance with the challenges of time and is aimed at solving acutely urgent tasks, including the identification of the child's talents in a chosen field of activity [1] as the basis of his early career guidance and successful advancement in the individual educational trajectory [2]. Although this problem is recognized, its solution in the near future is waiting for the pedagogical community, a thoughtful, detailed and realistic approach to its solution, connecting together theory, methods and practice at the level of modern scientific knowledge, has not yet been proposed. On the one hand, this is explained by the diversity of points of view on the phenomenon of giftedness, the "crisis" state of scientific knowledge about it (D. B. Bogoyavlenskaya [3]), on the other hand, by the inability of the researcher to capture an avalanche-growing data set, electronic publications and systematize them. Therefore, in contrast to numerous ideas that have not been tested in practice for a long time, the importance of fundamental knowledge, cultural values, as well as educational resources that embody these values, increases. Modern art, representing one of them, is little used in the practice of teachers, and its capabilities as an indicator of "gifted behavior" are far from clear to everyone and not fully.

Special attention should be paid to the training of teachers to identify giftedness in children 6-7 years old. It is at this age that a child is particularly predisposed to productive aesthetic activity, and the level of his psycho-physiological development allows him to quickly and successfully move towards an attractive goal of creativity (L. S. Vygotsky [4]), move from emotions to comprehending the meanings of a work (E. V. Safonova [five]). However, the age group of children standing on the threshold of schooling and starting school is not covered by large-scale projects aimed at identifying and developing their endowments. So, in the Samara region the scientific and educational program "Rise" is implemented for older students in educational organizations that implement basic and additional educational programs. But the question of the contingent of gifted students, who in a few years will participate in scientific sessions of "Takeoff", remains open. Also, early identification of children with giftedness is necessary for the successful work of the innovative educational platform "Kvantorium" (Samara, Togliatti), the Open International Research and Development Conference of young researchers (high school students and students) "Education. The science. Profession "(Otradny town), in the future - research projects of the" Flight "program and the scientific-educational program" Orbit ".

The rapid progress of the scientific and technical centers of Russia has caused a high need for specialists capable of increased mental stress and the solution of complicated, complex tasks. But the programs and subprograms for the development of a support system for gifted children and talented youth are mainly aimed at working with students, whose talent is already clearly manifested. Those children for whom it has not yet been disclosed remain out of sight of the teachers and lose the opportunity to realize their potential.

At the same time, there is a shortage of diagnostic tools that would meet the current idea of giftedness, as well as being accessible in use to every teacher working with young children, and economical to use. Appeal to modern art allows, in our opinion, to create and implement in practice just such a toolkit. Borrowing from the authors of the second half of the XX - early XXI centuries. [not previously existing] synthesis of the values of artistic consciousness, natural science and practical experiment with direct experience (TE Shechter [6, p. 26]) helps to concentrate and make the creative process vivid, accessible to observation. Close gaming techniques of citing, variation of the material, improvisational development of the "fruitful disorder" of reality (W. Eco [7]) minimize the tension of the situation and leave the child relaxed in his self-expression, manifestation of giftedness.

The problematic of the research is due to the need to understand the function of contemporary art in the early identification of giftedness.

Methodology

In order to concretize the pivot points of our work, let us consider the basic concepts of "giftedness" and "modern art". First of all, the publications of A.A. Adaskina, d.B. Epiphany, E. Winner, F. Guattari, J. Guilford, J. Deleuze, DK Kirnarskaya, J. Martino, A.A. Nikitin, J. Renzulli, A.I. Savenkova, K.A. Heller, U. Eco, K.A. Eriksson

There is no consensus in understanding giftedness today. The boundaries of scientific research are constantly expanding, intruding into areas that integrate psychological and pedagogical concepts with philosophical, sociological, and art criticism. For 60 years after the creation of the "cubic model of the structure of the intellect" by J. Guilford [8], no other convincing starting point for the scientific community to develop the idea of high achievements depending on individual prerequisites was proposed. Based on it, J. Renzulli proposed a "three-ring" scheme, according to which endowments are a coincidence of highly developed qualities: intellectual abilities, dedication to the task being performed and creativity [9, 39]. Some progress in this direction was observed. Of particular interest to us are the observations of the "gifted behavior" of the student in various fields of artistic activity [10], confirming the loyalty of the idea of using modern art in identifying giftedness. "Multifactorial" model of endowments K.A. Heller includes achievements in the arts [11, 40]. K.A. Eriksson is convinced: the constant tracking of productivity in music, ballet is necessary to establish its connection with the creative achievements in the field of science and art. D.B. Epiphany came to the conclusion that the essence of the phenomenon is most accurately expressed in the characteristic "creative talent" [13], paying special attention to creativity in art (musical, artistic) [14]. A.I. Savenkov noted: "special talent, allowing the situation that a person is gifted to any one field of activity and practically unsuitable for others, is rarely in nature" [15], i.e. promising is the discovery of a stable relationship between endowments in the field of art and its other types.

Obviously close attention of authoritative researchers to the study of giftedness in one way or another relationship with art, artistic and creative activities. Complete the work said:

- A.A. Adaskina [16], A.A. Nikitin [17], devoted to the study of artistic talent;
- D.K. Kirnarskaya [18] in the field of research of musical talent;
- E. Winner and J. Martino [19] on the problem of giftedness in the field of music and visual arts.

Comparing their concepts with publications devoted to mathematical, sporting and linguistic giftedness, we proposed the concept of "duo vector talent" expressing the relationship of child giftedness on the basis of similarity of behavioral characteristics and qualities of the created art product [20].

Giftedness, taking into account the above scientific ideas, is understood by us as a holistic, versatile resource of the psyche, manifested in favorable conditions as high compared with the norm, the success of activities.

The phenomenon of modern art is not so specifically described in scientific works. The rhizomatic structure as characteristic of the modern work was presented by J. Deleuze and F. Guattari [21], and was also considered by us in the monograph [22]. Let's pay attention to the characteristic aspects of modern art studied by U. Eco. It:

- ahead of science, finding solutions to problems in the field of imagination, offering metaphorical images of the world in order to learn it;
- openly, unbiasedly in its approach to reality, it is not constrained by norms, prompting the reader / viewer / listener to form their own model of the world, which is still at the stage of formation;
- progressively, because seeks to break out of the framework of psychological and cultural habits;
- aimed at finding a new depth, comprehensive integrity;
- many meanings, inexhaustible in the elements themselves, which serve to achieve the aesthetic result;
- associated with mass culture, upheavals and crises in society;
- Close to fabulousness, game [23].

Based on the above, in a further study, we will look at recent publications that allow us to find vectors for the use of modern art in the early detection of talent.

Results

We have to:

- Specify the concept of "modern art" in accordance with research in recent years;
- frame to describe the approach to the early identification of giftedness by means of modern art.

Presentation of the main research material with full justification of the scientific results obtained. To achieve the objectives of the work we turn to those aspects of the problem that were found as a result of studying the publications of recent years. The closest to the topic of our article: the material of knowledge clusters J. Renzulli and K.A. Eriksson, research d.B. Epiphany, A.V. Eremeeva, A.A. Melik-Pashayeva, S. Nikolskaya, T.A. Melnichenko and E.K. Khleskina.

A retrospective look at the problem of studying giftedness, carried out using the knowledge cluster of J. Renzulli [24], allowed us to find proven approaches to the use of art in the study of intelligence and giftedness:

- an attempt by J. –M. Charcot to combine the scientific method with the artistic, referring to the theatrical teaching style;
- F. Gudeno's suggestion to measure IQ of preschoolers according to their drawings (Draw-a-Man test);

- use K.V. Taylor's approach to exploring giftedness is based on evaluating several talents in the classroom to identify more students who are gifted in recognized areas of creativity. At the same time, students can learn more about themselves and choose activities that require their best talents, i.e. courses that will allow optimal implementation and to be productive;

- the contribution of D.K. Simonton in the study of intelligence as a reflection of his passion for classical art, science and humanities (problems of genius, creativity, leadership, talent, aesthetics; cognitive, personal, educational, social and cultural factors behind outstanding, gifted and talented in science, art, politics and war).

Another knowledge cluster is the site of the Swedish and American scientist K.A. Eriksson [25] - to a certain extent complements the materials summarized by J. Renzulli, emphasizing: the foundation of scientific knowledge is one; in order to study achievements in the field of arts, sciences, and sports, it is advisable to refer to the results of peer review.

In general, foreign scientists confirm the urgency of the question of finding effective methods for the study of giftedness, which would combine scientific validity, ease of use and efficiency.

In the current and broad format of the All-Russian scientific-practical conference "Psychology of creativity and giftedness", held April 20-21, 2018 in Moscow, a cluster of scientific knowledge is also presented, which is close to our research [26, 37]. The general premise of the conference includes an important thesis for us that today there remains an ambiguous use of the concepts “creativity” and “talent”, a fact that to a certain extent is explained by the absence of valid diagnostic methods in general practice. D.B. Epiphany considers the concept of "giftedness" as explaining creativity [27, 38]. According to her, the social order for identifying gifted people was not fulfilled, and the methodological approach has exhausted itself. The result of the synthesis of scientific knowledge is a methodological approach D. B. Epiphany, whose main idea - the search for "cells" of creativity, with the quality of universality and further indecomposable. At the same time, it is necessary to analyze higher forms of creativity, and not standard problem solutions.

A.A. Melik-Pashayev complements the modern concept of giftedness, showing its integrity as aesthetics [28]. Explicit artistic "coloring" highlights the priority of understanding giftedness, and not proof of its existence. And yet, the refinements made by the scientist are very significant. The main thing is the understanding of the “Man in the aspect of the Artist”. It is from this that the methodology of researching giftedness follows: the selection of qualities that are studied, the construction of diagnostic methods, the criteria for evaluating the data obtained. Endowment equals AA Melik-Pashayev to the ability to work as a manifestation of internal activity (which, in essence, coincides with the concept of D. B. Epiphany). At the same time, the value-based, universal sense of talent prevails over the statistical meaning. In aesthetic relation to the world, integral to her, A.A. Melik-Pashayev singled out such traits as direct experience of unity with the world, attitude to everything as living and self-valued, the ability to perceive the unique sensual appearance of everything around. Aesthetic experience is necessary, if the conditions do not interfere with this, leads to the creation of an artistic image. A.A. Melik-Pashayev also stressed that the age most favorable for enhancing the creative potential of a child is from 4 to 10 years; that giftedness can be distinguished in universal creative potential depending on motivation. We will find out about the child’s abilities at the moment when he is interested in a certain activity, i.e. certain conditions are necessary for the manifestation of giftedness.

Among other concepts presented on the forum, giftedness seems to us especially significant:

- clarification of the approach to creating a subject-spatial developmental environment in a pre-school educational institution as a condition for the identification and development of child giftedness [29];

- the idea of using modern music as a means of developing the giftedness of a child of preschool age (although the specific works and authors are not mentioned in the article) [30].

Attention is drawn to the stereotypical approaches of a number of authors with respect to the problem of studying giftedness, quotations and diagnostic methods repeated from publication to publication.

In the field of studying the phenomenon of modern art and its educational opportunities publications a little. Nevertheless, a number of them reveal new aspects of the concept proposed by TE. Schechter

Natural science knowledge "works" in the field of art as a source of creating new materials with new expressive possibilities. T.A. Melnichenko and E.K. Khlestkina noticed that the enrichment of the means of expressiveness of modern art occurs, in particular, at the expense of new knowledge about plant genetics as artistic material [31]. Discoveries in the field of color change and the quality of straw of cereal plants made possible a kind of "order" of an author, working in the field of decorative and applied art, to a geneticist who grows natural coloring material, flexibility, resistance to external influences, corresponding to the artistic concept.

Practical experiments of modern art are common in the field of fashion. A.V. Yeremeeva is convinced that fashion becomes art [32], since the novelty of the images and the improvement of the product to the level of the museum exhibit provide the fashion brand with popularity and uniqueness, and the classic environment in which the designers carry out fashion shows, embody style and sublimity. On the other hand, a fashionable object is transformed into an artistic and philosophical development, becoming a "museum exhibit", with an implied history that absorbs all the fullness of life and perpetuates it.

In the article of S. Nikolskaya, the borrowing forms of modern designers of ideas and techniques of masters of decorative and applied art from past eras were held [33]:

- prototype (a work of art becomes a figurative source of a design project);
- "form" (two objects of different epochs reveal compositional and visual similarity);
- "structure" (the design algorithm is taken as the basis of the project);
- "myth" (the object was created in a context that relates the viewer to the deep traditions of world art and national culture);
- "dedication", or "hommage" (the design reminds of a famous work of art, but attention is drawn not so much to the thing itself, as to its author).

It details the idea of an artistic experiment.

A review of publications devoted to the problem of contemporary art points to its broad educational opportunities, due to the unification of the past, present and future artistic culture and penetration into the most diverse spheres of human life and society.

Implementing the project "Early detection of giftedness in terms of the artistic and creative process" (2018), we developed and tested the diagnostic technique "Art +" based on the implementation of the approach to the use of modern art in solving this problem. Children of 6-7 years old, performing specially created creative tasks-subtests, plunged into the atmosphere of "fruitful disorder" and acted like modern authors, creating art compositions marking their talent (musical, mathematical, in the field of sports, visual arts, linguistic, and also "duovector", made up of pairs of the listed types of giftedness). The pilot experiment allowed us to collect material that confirms the validity and reliability of the technique, as well as the manifestation in art products created by children, similarities with the images of modern art.

We give a number of examples on the project website: Gifted children_https: //qps.ru/bdeKE. The "drafts ornament" resembles a stylized animal head; the art composition is made by a child from the items related to the game selected in the "fruitful disorder"; the process of creating a job was similar to placing checkers on a board before a game. Those. obviously, the attitude to the art of making an ornament as a game situation, is similar to the creative activity of modern authors.

Рисунок 1 - «Орнамент из шашек»

«Орнамент из деталей конструктора», согласно комментарию педагога, проводившего эксперимент, был составлен ребенком, проявляющим постоянную приверженность конструированию. В данном случае он с увлечением соединил художественное (орнамент) и нехудожественное (элементы конструктора).

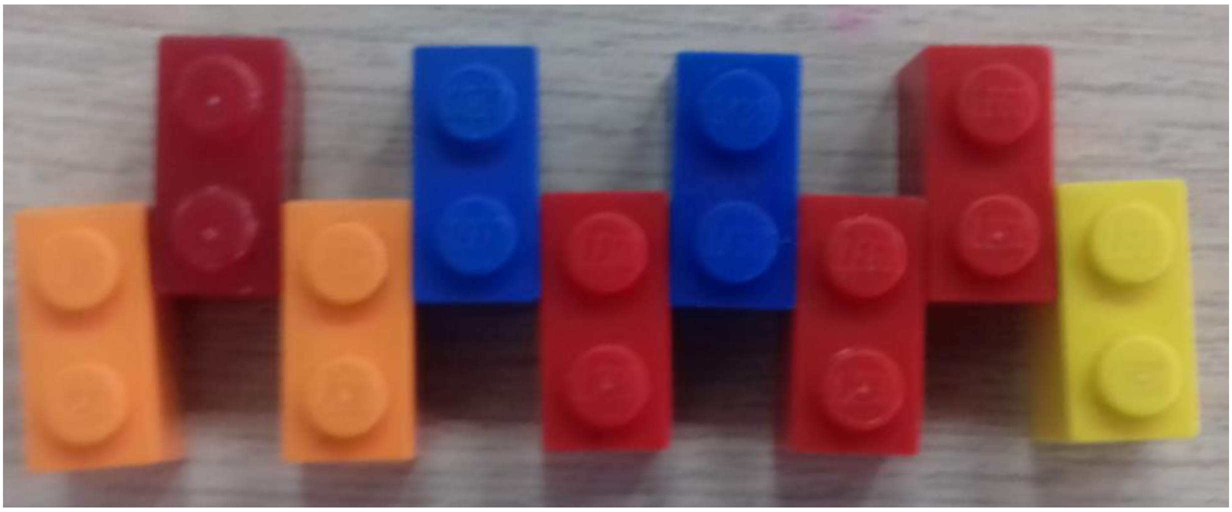

Figure 2 - "Ornament of the details of the designer"

A small author of “Ornament of cubes with syllables” showed not only artistic, but also linguistic talent, because the choice of material was wide, but “speaking” cubes turned out to be especially attractive. The age of the children who made up the ornaments is 6 years.

Figure 3 - “Ornament of cubes with syllables”

Conclusion

The study allowed us to draw the following conclusions:

- modern art, in accordance with studies of recent years, most accurately characterize the involvement of natural science knowledge as a source of creating new materials with new expressive possibilities, practical experiments (fashion images like museum exhibits, stylish and sublime environment for their display; borrowing modern designers of ideas and techniques of masters of decorative and applied art of past eras) and the expansion of its educational opportunities by combining epochs x dozhestvennoy culture and penetration into more and more spheres of human life and society;

- the approach to identifying endowments with the means of art involves the use of the diagnostic technique “Art +”, the content of which consists of creative tasks-subtests, the educational environment is “fruitful disorder”, the purpose of the activity “on behalf of the modern author” is to create art compositions marking types of giftedness.

The problem the article is devoted to is not fully resolved. It is necessary to collect, analyze and summarize a large amount of empirical material in order to characterize with greater validity the possibilities of modern art in the early detection of giftedness.

In our next publications, we will present the results of testing the “Art +” methodology and monitoring the talent of children participating in experimental work after the project is completed.

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Social Entrepreneurship as A Promising Way to Economic Security

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Abstract

This study is relevant because of the significant capability of the social entrepreneurship to ensure economic security of the state by solving social problems. In this context, the article aims to set out the theoretical social entrepreneurship framework, to study its experience and to reveal current problems of development of the social business as well as the ways to solve them. The concept and essential features of social entrepreneurship are studied with the historical and genetic method. Activity approach provided the basis to explore social entrepreneurship as a specific kind of human activity. Statistic procedures enabled to make sense of the social entrepreneurship development figures. The article considers different approaches to the phenomenon social entrepreneurship and the need to render it with a separate law is substantiated. Moreover, it analyses the current social entrepreneurship trends in Russia, considers factors presently impeding the growth of its importance for the Russian economy, suggests solutions to some organisational and economic problems in its development. The article is useful for potential social entrepreneurs and public bodies, which may use its conclusions for the development of state and municipal small and medium business support programmes by separating the social entrepreneurship sector and establishing regional and municipal social entrepreneurship development centres to further the idea.

Keywords: state support; public support; governmental support; non-profit sector; social business; responsible business; social policy; social issues; social sphere.

Introduction

The nature of the modern economic development in the context of economic security requires a faster improvement of the material level and quality of life of the population. Economic security is critical for strengthening of the state, ensuring social safety, developing corporate responsibility and democratic social partnership. [10, c. 7]

Social entrepreneurship is a relatively new and promising economic phenomenon fostering the economic security of the state by solving social problems.

In Russia, it is not yet strong due to the insufficient publicity despite the existing forms of support and general understanding of its idea and principles.

Therefore, it has to be furthered by state and discussed actively by the professionals.

Financial problems are crucial for the development of social entrepreneurship because, first of all, it solves “financial matters” raising funds and distributing income.

The development of social entrepreneurship will deliver state administration and subordinate municipal bodies from some services and cut respective state budget costs making quality services provided to proper living standards more accessible to people.

As a social and economic phenomenon mitigating social problems, social entrepreneurship attracts scientists, activists, politicians and traditional businessmen.

Despite the longer history of social entrepreneurship studies abroad, it was rather a problem for many scientists to define it. [30 - The definition of social entrepreneurship: the failure of Schumpeter from David M. Key. International journal of entrepreneurship and small business (IJESB) , vol. 31, No. 3, 2017.].

A serious advancement was achieved in the article of Susan Mueller, Robert S. D’Intino, Jennifer Walske, Michel L. Ehrenhard, Scott L. Newbert, Jeffrey A. Robinson & al., “What's Holding Back Social Entrepreneurship? Removing the Impediments to Theoretical Advancement”. [23]

Economic, political and cultural aspects of implementation, institutionalisation and prospects of social entrepreneurship are explicitly illustrated by research of many countries described in the book of Anders Lundström, Chunyan Zhou, Yvonne von Friedrichs and Elisabeth Sundin, “Social Entrepreneurship Leveraging Economic, Political, and Cultural Dimensions”. [25]

An analysis of differences between the European and American versions of the social entrepreneurship concepts is also interesting. [24 - Defourny, Jacques and Nyssens, Marthe. Conceptions of Social Enterprise and Social Entrepreneurship in Europe and the United States: Convergences and Divergences]

Functioning of the social entrepreneurship in non-profit and profit sectors has been studied quite well by Marta Peris-Ortiz, Frédèric Teulon and Dominique Bonet-Fernandez. [26 - Social Entrepreneurship in Non-Profit and Profit Sectors : Theoretical and Empirical Perspectives]

It is generally accepted, that social entrepreneurship is perceived as a legal and innovative solution to social problems. Nevertheless, the social problems to be solved by the social business have not been determined yet, whilst identification of these problems is crucial for many maters to include many areas of the state support. [29]

Thus, the need for changing the social and economic role of social enterprises is stated [27 - Stevens, R., Moray, N., & Bruneel, J. (2015). The social and economic mission of social enterprises: Dimensions, measurement, validation, and relation], as well as, for example, the ways to solve the poverty problem [28 - Bruton GD , Ketchen DJ. Entrepreneurship as a solution to the problem of poverty] and the problem of the social entrepreneurship efficacy [29 - Bernard Arogyaswamy, Social entrepreneurship performance measurement: A time-based organizing framework; 22 - Lumina S. Albert, Thomas J. Dean & Robert A. Baron. From Social Value to Social Cognition: How Social Ventures Obtain the Resources They Need for Social Transformation]

In this article, it is important to stress the enormous role of the state support of social entrepreneurship which is indispensable for the development of this significant sector. Thus, in Great Britain, the number of social enterprises increased from 5,300 to 62,000 in only five years. [21 - S. Teasdale , F. Lyon & R. Baldock. Playing with Numbers: A Methodological Critique of the Social Enterprise Growth Myth]

Social entrepreneurship matters have not yet been sufficiently worked out by Russian professionals, which is due to the insufficient time to discuss them and relevant experience. Mostly, there are descriptive and synoptic works whereas practical studies of the Russian data are scarce. However, some of the most active researchers are worth noting to include A.F. Veksler [А.Ф. Векслер] [1], N.I. Zvereva [Н.И. Зверева] [7, 8], N.F. Kadol [Н.Ф. Кадол] [9]. The theory of social entrepreneurship is being efficiently developed by V.A. Gaydarenky [В.А. Гайдаренко] [3], D.A. Gafarova [Д.А. Гафарова] [4], I.V. Manakhova [И.В. Манахова] [11], A.V. Mukhin [А.В. Мухин] [12]. The innovational nature of social entrepreneurship is studied as its most important feature by N.A. Voskolovich [Н.А. Восколович] [2], N.S. Poanshval [Н.С. Поаншваль] [13], A.I. Tatarkin [А.И. Татаркин] [15], D.O. Sheyanenko [Д.О. Шеяненко] [16]. The current state and peculiarities of the phenomenon are studied by K.P. Yegorova [К.П. Егорова] [5], O.A. Zakharchenko [О.А. Захарченко] [6] and Ye.M. Shmatkova [Е.М. Шматкова] [17].

This article aims to unfold theoretical and practical aspects of social entrepreneurship, reveal most topical problems of its development and the ways to solve them. To do this, the following tasks were completed: the concept of social entrepreneurship was defined as well as its substantial features; the federal bill on social entrepreneurship was described; the current trends in social entrepreneurship establishment in Russia were analysed; the factors impeding the growth of its influence in the Russian economy were revealed; some solutions were proposed.

Materials and Methods

The concept and essential properties of social entrepreneurship were studied using the historical and genetic method enabling to show the development of this kind of business from its origins to the present state showing the laws of its changing in the history.

The activity approach formed the basis for the study of the social entrepreneurship as a specific domain of social (human) activity.

Statistic methods allowed to distribute social businesses and entrepreneurs as well as their products (services) by activities, audiences and regions.

The study is based on scientific literature as well as websites of public bodies and organisations dealing in organisational, informational and other support of social entrepreneurs promoting the social entrepreneurship in Russia.

The governmental programmes of the Russian Federation and particular regions aimed to include social entrepreneurship in the areas of their competence were studied.

Findings

The terms "social entrepreneurship" and "social entrepreneur" are first mentioned in 1960-s in the West where that phenomenon was considered as a way to solve social problems as well as a driver of economic and social change. The term "social" derives from a Latin word meaning "assistant" or "ally" or "companion". It implies people united as a group living or working together. [29-31] Thus, the concept of social is related to something done for the society as a whole or in particular. It places the society over the individual.

Social problem shall be understood as a gap between desired social conditions and reality. As a rule, social problems are termed as a human pathology such as delinquency, alcohol and narcotic abuse, any dysfunction of a particular social institution (school, family etc.), any form of conflict (ethnic, labour etc.), lack of funds available to the society to satisfy current needs, such as healthcare, leisure etc. These made the social entrepreneurship popular. The concept itself became generally acknowledged and widespread in 70-s and 80-s due to some sociologists regarded presently as the founders of the movement [32. 33].

To make sense of the term "social entrepreneur", the definitions given by international organisations supporting social entrepreneurship and social entrepreneurs shall be used. The most influential of them are Schwab Foundation, Skoll Foundation, Social Enterprise London, The Social Enterprise Coalition, Ashoka Foundation.

Thus, SchwabFoundation[1] defines social entrepreneurship as:

"- useful, innovative and sustainable practices for the benefit of the society;

- unique approach to economic and social problems;

- based upon values and practices common for social entrepreneurs working in any sector of economy organising for profit as well as for non-profit purposes.

A social entrepreneur is a pragmatic visionary in pursuit of a broad, systematic and sustainable social change.

All social entrepreneurs share common qualities including unshakeable faith, willingness to change, practical and innovational approach, willingness to measure and control their influence, healthy impatience. Social entrepreneurs cannot stand bureaucracy. They cannot wait for changes to happen – they make them happen instead."

In Russia, the theoretical base of social entrepreneurship is in its infancy. The concept is vague, unusual and complicated for the public conscience. The very phenomenon is only being formed. Still it is not understood in the same terms by all parties of the process to include social entrepreneurs, public institutions empowered to nominate them, sociologists and anybody studying and interpreting the phenomenon. In default of a generally accepted definition, anybody feeling like social entrepreneur can consider himself a social entrepreneur. It turns out to be a matter of self-identification and social standing.

The term "social entrepreneurship" is used as a synonym of social facilities, socially-responsible business and social issues as a whole. Therefore, it is extremely topical to develop, openly discuss and accept a federal law on the social entrepreneurship.

Social entrepreneurship is developing in Russia. A survey of existing grants and competitions in the field revealed, that all of them are held and financed by private foundations, local authorities or foreign investors meaning, that social entrepreneurship is not supported at the federal level as it ought to be.

Federal laws have no such concept and provide no tax credit for social entrepreneurs, although there are some concessions for socially-responsible business practices.

Information support of social entrepreneurs is also rather weak. There is only one internet resource containing some examples of social business: http://coindex.ru/ (Social Entrepreneurship of Russia).

Two years ago, social entrepreneurship was present in different forms only in 14 of 85 constituents of the Russian Federation. Now, according to the said internet portal, 456 social enterprises named themselves in 58 regions and there are 329 individual social entrepreneurs in 44 regions. Given inter-regional and all-Russia projects, the number of social enterprises and entrepreneurs totals 824 which is

[1]Schwab Foundation for Social Entrepreneurship http://www.Schwabfound.org/

neglectfully small compared to the real social business potential confirmed by the experience of the developed countries. Table 1 shows which Federal Districts are most active at developing social entrepreneurship. The greatest concentration is visible in the biggest constituents of the Russian Federation including Moscow and the Moscow Region (22.5%) and Saint Petersburg and Leningrad Region (8.6%).

Table 1. Social Entrepreneurs
by Constituents of the Russian Federations and Kinds of Goods (Services)

Federal Districts	Social Entrepreneurs			Goods	Services
	Total	Enterprises	Entrepreneurs		
Total	824	480	344	-	-
Inter-regional Project	10	5	5	1	3
All-Russia Project	29	19	10	19	8
North-western	152	84	68	37	35
St. Petersburg and the Region	71	38	33	9	9
Central	221	124	97	224	70
Moscow and the Region	185	104	81	216	49
Volga	147	85	62	19	72
Southern District	36	28	8	5	9
North Caucasus	21	10	11	4	10
Ural	40	28	12	7	11
Siberian District	159	91	68	14	20
Far East	9	6	3	2	2

The Table includes and is based upon data of http://coindex.ru/ (Social Entrepreneurship in Russia) as of 18.08.2017

All the territories are very much different in respect of their mentality, business and social issues to be solved. Therefore, the effects of the same activities are different in the regions. It is worth noting, that 27 constituents of the Russian Federation have no social entrepreneurs or enterprises.

The sectors of social entrepreneurship differ including mostly social services, healthcare, education etc. As to the audience, the foremost are children, families with children, socially disadvantaged and elderly people.

Discussion

Despite some persuasive examples, the furthering of social entrepreneurship requires a separate law as well as some changes to the existing ones to include the Law on Non-profit Organisations, which has to be supplemented with a broader list of NPO activities.

A similar bill exists and is being discussed. However, it has not been accepted despite the order of the President. Although important, it is not devoid of shortcomings.

First of all, criteria are not properly worked out including the share of employees and activities.

The bill is based upon the order of the Ministry of Economic Development of Russia on Competitive Selection of Constituents of the Russian Federation Subsidised in 2013 from the Federal Budget for the State Support of Small and Medium Enterprises Provided by Constituents of the Russian Federation. The provisions of the order is only applied to entities eligible by the Ministry. Social entrepreneurship is a socially responsible activity of small and medium enterprises aiming to solve social problems and meeting the following requirements:

a) employment of disabled persons, mothers with children to 3 years of age, emissaries of orphanages, prisoners released during 2 years before the selection date, provided, that their average number is at least 50% and their share in the payroll budget is at least 25%;

b) provision of services (production of goods) in the following areas:

- assistance with vocational training and employment to include self-employment;

- social services to private individuals to include healthcare, physical education and sports, educational activities for children and the youth;

- assistance to persons affected by natural disasters, environmental, self-inflicted and other catastrophes, social, ethnic and confessional conflicts, as well as to refugees and immigrants;

- production and/or selling of medical equipment, prosthetic appliances and other technical devices used exclusively for prevention of disabilities and rehabilitation of disabled persons;

- cultural education including theatres, theatre schools, musical establishments and workshops;

- educational services to people with limited access to educational services;

- involvement of socially disadvantaged persons (disabled persons, orphans, emissaries of nursery schools, elderly people, drug and alcohol addicts) in social activities;

- prevention of unsafe behaviour;

- issuance of periodicals and books related to education, science and culture.

The law has to define social entrepreneurs and enterprises to include commercial and non-profit entities and individual entrepreneurs more distinctly. It may provide for separate corporate forms of business. It is worth noting, that social entrepreneurship may be in all sectors not to be reduced to those narrowly restricted by the bill.

Secondly, the law must strictly define the way the status of social entrepreneur may be received, set out relevant requirements and constraints as well as tax preferences which the social entrepreneurship enthusiasts may be eligible to. The main ways of state support shall also include simplified procedures of registration and reporting, up-to-date financing schemes, easy terms of rent and access to franchise databases, educational programmes and public purchases.

Whatever it be, as soon as the meaning of social entrepreneurship is defined, the limits of the concept shall be set to make it clear that it is not already a charity but not yet purely commercial activity, since social entrepreneurship stays at the borderline of both. In particular, social entrepreneurship takes social purposes from charity and entrepreneurship from business. Of course, any production has a social component including employment, salaries, labour compensations and organisational matters, not to mention various social programmes any big, medium and even small business has. All these features of a socially responsible business are present in any commercial entity. Therefore, it is important to legislatively separate the social entrepreneurship from public projects and traditional business charity.

A businessman managing a social enterprise has very much in common with a traditional businessman creating a non-commercial project. However, they differ in possibilities they use and values they create. A social entrepreneur strives to solve problems of the society (such as famine and poverty) measuring his success with humanistic values. With his innovation and resourcefulness, the entrepreneur improves the well-being of the society as a whole and sometimes even takes part in creation of economic value. However, the latter would be an instrument and not the goal. The social entrepreneur uses entrepreneurial innovation for the universal good and not for the personal profit. The advantages of pro bono enterprises are commonly known. They strengthen reputation, rise business efficacy, make the company more attractive to investors, improve the infrastructure etc. Nevertheless, social programmes are considered knowingly ineffective, irrational and profitless. The social entrepreneurship dispels this myth because it is based upon self-sufficiency and profitability placing social benefits higher than the economic ones.

In Russia, social entrepreneurship is connected with non-commercial organisations having socially-oriented goals, charity, venture philanthropy and corporate responsibility. Its viability is determined by conditions of competition for public contracts. Presently, the differences between the commercial and non-profit sectors are tending to degrade. Social enterprises pursuing non-standard goals are increasing in number in different parts of the world. Such organisations combine the functions of different sectors sweeping away their boundaries [14].

In the economic situation of the modern Russia there are some conditions making social entrepreneurship necessary, such as:

- numerous social problems;

- weak public policy under scarce budget;

- low quality public (municipal) services in crucial sectors (healthcare, social services etc.);
- outsourcing of public services to private contractors through public contracting;
- need to make people more socially conscious, responsible and active;
- increasing financing by grantors; for example, the Presidential Programmes Fund increased financial support of non-commercial organisations from RUR 4.3 to 7 billion in 2017;
- social investors with funds exceeding those of the proposed social projects.

At the same time, there are some barriers impeding social entrepreneurship and innovation related to the state government including:

- vague and mixed delineation of responsibility areas between department (by sectors or types of business organisation) isolating independent organisations from state on one hand, and bringing social entrepreneurs out of the scope of competence of departments seemingly “relevant” to them;
- concentration of social departments on regulation of publicly-financed organisations, whereas non-profit social companies are on the fringes, and commercial ones are totally beyond the field of their attention;
- missing or formal criteria of small and medium business support, most of which are copied from the law of 2007; there are no social ones among them;
- formal approach to business incubators; no strategy for their development; as a result, they are regarded as mere premises and not as the business and professional consultation and education centres;
- lack of meaningful criteria of “socially-oriented non-profit organisations”, which is why the most efficient and innovative of them are not supported;
- no mechanisms to support social innovation projects: at early phases (which is relatively expensive requiring financing, administrative and expert support) as well as at the phases of growth of the projects that have already proved their viability (which is more “cost-saving”) etc.

Today most of the social entrepreneurs build their businesses for borrowed money, and excessive leveraging is risky involving possible insolvency. The appraisal of economic stability appears an instrument to reveal unhealthy businesses enabling to monitor their positions improving or deteriorating, thus, predicting and possibly preventing bankruptcy. The main risk related to borrowed capital is the lack of funds to meet financial obligations under unfavourable conditions. Therefore, it is expedient to keep a part of monetary assets ready to meet the obligations which decreases the bankruptcy risk significantly.

Factors of financial instability can be revealed by analysis of activities of social enterprises. Then, the revealed problems may be ordered by their influence to solve the existing problems and avoid further ones. It is possible to determine which factors or ratios influence the economic situation of an economic entity most and work out managerial actions to improve it.

One of the most important problems is the absence of definite and measurable indicators of the social effect of projects undertaken by social entrepreneurs. Organisations are often pressed upon by their founders requesting the social effect to be calculated. For example, it was said at the Social Investors Forum in Amsterdam (2016) that the investment in social enterprises had totaled USD 77 billion by the end of 2015. USD 15 billion of them were invested during 2015 and 38% of all that amount fall to the North America.

Investors and other interested parties want to know the real effect of their donations and investments. According to some researchers, the present methods of measuring the social influence do not stand up to scrutiny due to the following two reasons: general immaturity of appraisal methods and diversity of goals to be reached by the analysis. We can see the future of social entrepreneurship full of possibilities and innovation capable of solving many serious human problems. Most important is our understanding how the attention to the projects aimed to cure social diseases moves. The system to support social entrepreneurs facing obstacles must be built.

As mentioned previously, the law does not consider social entrepreneurship a separate sector of economy, which is why many social businessmen find public support through the programmes devoted to small and medium businesses. Presently, there are commercial and non-profit funds and private persons supporting and financing social entrepreneurs. The increasing role of the state was an important aspect of development during last several years. The Ministry of Economic Development prioritised the support of the constituents of the Russian Federation subsidising medium and small businesses among whose types the social entrepreneurship was a separate item.

Given, that social entrepreneurship is a business putting mission over profit its governmental support has to be more tangible.

The Russian state and municipal budgeting follows programmes and pursues goals. There are state or municipal programmes for all governmental functions. A programme named Development of Social Entrepreneurship as a part of the programmes of each constituent of the Russian Federation devoted to economic development and innovational economy would improve the situation with the state support of this sector. The main goal may be a larger share of social enterprises in local economies. Hence, the following tasks would have to be solved:

- available financial, material, educational, informational and consultation support of social entrepreneurs;
- cutting social entrepreneurs' costs related to the state regulation;
- improving social entrepreneurship taxation related to the state regulation;
- improving taxation of social enterprises as a whole.

Target indicators of the sub-programme shall include:

- number of social enterprises per 1 thousand of population;
- number of social entrepreneurship jobs created by the sub-programme annually;
- number of social enterprises founded by people under 30 years of age, inclusive;
- number of people under 30 years of age, inclusive, having completed educational programmes teaching social business;
- number of people under 30 years of age, inclusive, taking part in the programme events;
- increase in the number of social enterprises founded by people under 30 years of age, inclusive (this indicator will be applied since 2018);
- share of social enterprises founded by people under 30 years of age, inclusive, in the whole number of social enterprises.

The sub-programme is expected to yield the following results:

1. In qualitative terms:
   - simpler business procedures;
   - more affordable financing for social businesses;
   - infrastructure supporting social business basing upon unified requirements;
   - systems compensating difference in welfare by means of the social entrepreneurship;
   - mitigating thorny social issues making them solved by increasing the number of interested persons;
2. In quantitative terms:
   - larger number of social enterprises per capita;
   - larger number of public support beneficiaries in the social entrepreneurship sector;
   - increased number of new jobs in the sector;
   - larger share of socially-disadvantaged persons serviced;
   - more social enterprises founded by people under 30 years of age, inclusive;
   - more people under 30 years of age, inclusive, having completed social business education programmes;
   - more people under 30 years of age, inclusive, involved in the programme events;
   - larger number of social enterprises founded by people under 30 years of age, inclusive;
   - greater share of social enterprises founded by private individuals.

To solve the organisational and economic problems at the regional level the experience of the social entrepreneurship centres has to be reproduced. Such centres shall be devoted to the social and economic development of relevant territories aiming, first of all, to develop and carry out an efficient system of measures fostering social entrepreneurship in the constituents of the Russian Federation and largest municipalities.

This may be achieved with the following:

- favourable conditions for the social entrepreneurship to develop in the region;

- supplementary financing of the social sphere by medium and large businesses;

- programmes to rise the efficiency of public support to the social entrepreneurship, preferably, within the aforementioned sub-programmes;

- higher quality of social services in the region through outsourcing of municipal services to social enterprises;

- improving business development climate and overcoming administrative barriers by interaction of business with the government;

- educating people in social entrepreneurship issues;

- creating a positive image of social entrepreneurs in the region.

The centre will work to improve the existing support of social entrepreneurship and introduce efficient measures to solve social problems, improve social services quality and make social organisations and businessmen more efficient in the region and large municipalities.

Conclusion

A socially responsible economic system has to solve social problems. It is one of the crucial economic security requirements. Modern developed economies are already proving the economic and social usefulness of social entrepreneurship aiming to mitigate social issues by giving business a special mission.

The concept of social entrepreneurship is multi-faceted reflecting a wide spectrum of properties inherent to it. The very name means, that it is not the maximum profit but mitigation of social problems and their consequences it is aimed to.

In the modern Russia, social entrepreneurship is a real opportunity to improve social and economic security. Therefore, the following issues impeding its development shall be addressed:

- insufficient understanding of social entrepreneurship by potential businessmen, youths and authorities;

- legislative and administrative difficulties;

- complicated search of financing for social entrepreneurs; narrow opportunities to find an interesting projects for social investors.

Therefore, for the social entrepreneurship to develop, the following is required:

1. to upgrade the bill on social entrepreneursip and the law on non-profit organisations;
2. to supplement the state programmes of economic development with sub-programmes to promote social entrepreneurship;
3. to create social entrepreneurship centres in all regions and large municipalities.

Thus, social entrepreneurship is a quite promising line of the Russian business furthering the full employment, broader and better social services available to all social strata. Solving these problems would encourage the development of social entrepreneurship and civil society with greater social responsibility and quality of life.

This study is significant theoretically and practically because it clears up the concept as well as functional and developmental features of social entrepreneurship and suggests specific instruments to promote social entrepreneurship ideas more actively.

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Formation of the Kreatosfera: a Digital and Creative Economy

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Abstract

The relevancy of the problem under study is determined by the development of methods and tools for analyzing the digital and creative economy within the framework of the formation of the postindustrial and information society. The paper is aimed at revealing the relationship between the digital and creative economies and the designation of common points of contact. The leading methods of research were analytical and synthetic methods of systems analysis, information synthesis and convergent approach. The main results of the study and the conclusions of the analysis are as follows: Firstly, the basis for the growth of the digital and creative economy is 3 leveled data: economic spheres, the digital environment and the establishment of development and support. Secondly, the main difference between the digital and creative economy lies in the created added value through the capitalization of the value of intellectual deposits. This is the provision of production, industry, business and other spheres of economy, when the key added value arises from technology. Thirdly, today new creative layers are emerging, which the author suggests to be called the Kreatosfera (creato-sphere). In the digital and creative economy, the Kreatosfera is the environment for building of human potential. The materials of the paper can be of use for further research in the field of digital and creative economy, in substantiating the empirical data of the new paradigm of cognition - the Kreatosfera.

Keywords: Digital space (environment), information society, creative economy, Kreatosfera, digital economy.

Introduction

In the contemporary world, it is impossible to survive without information technology, which is changing and facilitating different branches, opening up a new potential of market. The emergence of a new digital infrastructure, the development of digital communication technologies and computer technology provokes the birth of new opportunities in the field of information technology, their integration into the economic and socio-political areas of public life, the formation of a new *digital* system of the international economy.

Researchers (Buzgalin (2017), Mikhailova, Vinokurova (2017), Alikperov (2017), and Abankina (2017)) are contributing to the analysis of digital and creative terms within the framework of the information and postindustrial society.

For the first time, the concept of "information economy" was identified in 1976 by Mark Porat, who was an employee at the Stanford Center for Interdisciplinary Brain Sciences Research.

Doctor of Economics, Professor L.G. Lisovskaya believes that: "The development of modern economy urges us to search for path to form economic theory in such a way that it embraces new organizations and structures that would be created with the digitalization and globalization of the modern world" [17, P. 112].

D.V. Evtyanova under the digital economy comprehends the following: "Digital economy is represented by automated regulation of economy on the basis of advanced information technology; new economic standard that relies on productive information management of production systems, and for which the modern world is required to pursue successful economic growth. In order to implement a new way it is necessary to widely introduce digital management platforms that meet specific criteria that perform certain functions" [10, P. 54].

The digital economy belongs to the main direction of the state development declared until 2025. The strategy of forming the information society in the Russian Federation for the period from 2017 to 2030 was adopted. In the next ten years, each market branch and activity is subjected to reorientation according to the requirements of the new digital economic models. We are adherent to the conclusions of analysts A.G. Rozhanskaya, A.M. Kulik and D.P. Koryakov, that "the growth of the digital economy affects not only the external and internal business environment, but also political government functions. Turning to organizational aspects – the Internet helps any company to sell its products around the world (including companies with insignificant capital investments); reduce costs; significantly increase the productivity and efficiency of activities"[16, P. 64].

A.M. Ashkhotov, along with V.P. Osmanova, is noted that "the formation of the creative economy is carried out on the basis of an industrial backbone core around which the expanding effective layer of the postindustrial type of economic activity is developing. In this reference, when determining the productivity of different variants of industrial growth, the development of an increased added gross value is not a priority aspect. The key criterion of industrial productivity is the provision of jobs, followed by consequential income of the population in a long reproductive chain" [4, P. 90]. In other words, the creative economy belongs to the basis for ensuring the development of labor productivity, additional capital, and as a result, increasing the quality of labor resources.

S.V. Frolova is concluding that: "Creative economy is a rather vague term. In different states at different times it included different markets. However, they share one common characteristic. These industries are based on the application of human skills and knowledge. The product of creative economy - services and products, the occurrence of which is unrealistic without the active involvement of their developer" [23, P. 168].

The purpose of the paper is to identify the interrelationships between the digital and creative economies and key the common points of contact. The leading methods of research were analytical and synthetic methods of systems analysis, information synthesis and convergent approach.

Methodological Framework

In fact, in a creative economy and renewed information society a person's potential is the basis of development. Academic specialist V.A. Zhuravlev is stating that: "The key factors in the development of the creative economy are human potential, investments, innovations, domestic demand; providing criteria are productive, manufacturing, investment, creative, innovative and social management; the additional criterion is external demand" [11, P. 52].

In addition, the creative economy can be characterized from the standpoint of a creative approach that is based on project thinking, creative imagination (i.e. modeling) and practical orientation.

One has to agree with the popular American sociologist Richard Florida, who proves that the post-industrial economy belongs to the basis of the creative class. Guided by the conclusion by S.V. Frolova, that "the specific "density" of the cultural space, the creative environment and the atmosphere of tolerance are essential for them" [23, P. 165], we believe that another creative community is conditioned by increased mobility and focused on the implementation of creativity and search for a comfortable and favorable place to live.

T.V. Abankina in her research work concludes that: "The modern concept of protection of cultural heritage is based on the idea of increasing the quality of its application; this and the increase of creative potential along with the systematic support of the creative industry are the key tasks of strategic provision of municipalities and regions in the postindustrial period" [1, P. 100]. The analyst V.V. Vasekina states that: "The main value of the creative economy does not lie in physical (traditional) capital, but is expressed by an intellectual contribution" [8, P. 15].

The researcher L.V. Smaglyukova notes that "the development and application of creative resources is the main task of each participant of the economic process. In the creative new economy, the function of all actors relies primarily on the ability to think critically and create new knowledge, which in turn is unacceptable without the formation of a creative resource, both within separate companies and in the economy as a whole. Financial assistance for higher education helps to form highly qualified employees whose highly qualified and motivated activities influence the dynamics of economic development" [21, P. 59]. We believe that investing in education is the most significant of the whole variety of investments in public innovation. Special and general education improves quality, increases the stock and level of human knowledge, while at the same time increases the quality and volume of a human capital.

E.G. Abramov performed analysis of the period of transition of the economy from service to creative, based on the increase in gross product. It is concluded that "the formation of modern tools for data processing and transmission makes it possible to translate the provision of services to a radically new level. And first of all - to the level when services can be separated from the subjects, and be given for a long period. The main feature of such services, unlike the services peculiar to the era of the industrial economy, is the possibility of its replication" [2, P. 78]. In fact, the results that users acquire in the creative economy are separated from the entities that provide such services; therewith, the service is replicated on a scale, in space and in time.

The researcher A.O. Bulina and Doctor of Economics V.Yu. Pashkus introduced the criterion of analysis in the creative economy, which is become a brand. The scientists proposed "an integral analysis of brand power within the framework of analysis of the "creative industry", "creative cities" and "creative classes"" [18, pp. 41-42]. We believe that the qualitative indicator of brand analysis may differ by subjective character and may not reflect the objective characteristics.

N.I. Petrova, guided by the results of her own study, performed the assessment of the formation of intellectual capital and the creative industry and came to the conclusion that: "The creative economy provides new economic intraregional segments, new types of labor activity, developing an economic perspective for new public provision and growth" [19, P. 59]. Associate Professors A.V. Fedorova and N.I. Petrova defined "factors of the formation of creative industries in the conditions of the Northern regions" [20, P. 96]. And researchers K.A. Kornilova and T.V. Gromova defined "criteria of the creative economy and the connection of creative industries with creative classes" [24, P. 69].

The researcher M.A. Kamenskih conducted an analysis in which it was concluded that there is a difference between financial sources within the creative economy: "The difference in funding of R & D in the Russian Federation and USA is obvious. In Russia, the state is investing in creativity, and its share is only increasing. In America, the major investors in creativity are the enterprises; and their share also increases" [14, P. 18]. Consequently, the institutional model in the creative economy is the interaction of companies. Another form may be the private-public partnership. The objective of such a partnership is to involve infrastructure investments and the use of financing from private sources. In the Russian Federation, the Federal Law under the number 224-FZ (dated 13.07.2015) "On municipal-private and public-private partnerships in the Russian Federation and on introducing corrections in certain legislative norms of the Russian Federation" became effective as of 01.01.2016.

U.A. Vinokurova and A.V. Mikhailova substantiated the concept of the Arctic Kreatosfera: "The cultural and natural source of the Arctic Kreatosfera has been determined. Using an example of the most large-scale region of the Russian Federation, we examined the sources of wealth development of the Republic of Sakha in Yakutia. Currently, Yakutia is one of the major cultural regions in the north-eastern part of Russia. The unique and rich culture of Yakutia rightfully belongs to the national treasure. In this regard, the protection and subsequent development of the cultural and unique spiritual heritage of the people of the North is of paramount importance. The folk-life culture of the peoples of the Republic of Sakha in Yakutia is distinguished by traditions that come from the depths of centuries. People who have mastered the harsh, but at the same time beautiful arctic nature, continuously enrich primordial Olonkho-country with new creations. The foundation of the creativity became the human contribution and solid support. Natural and cult places and cultural heritage of the Arctic lands became a source of self-realization, inspiration and creativity of the Arctic Kreatosfera" [25-27].

In fact, the foundations of Kreatosfera are imagination, creative industry and manpower. We assent to an opinion of the economist I.M. Alikperov PhD, who singled out the requirements within the framework of the formation of Kreatosfera as "requirements to the production force, user requirements, requirements for the creative environment and requirements for institutional infrastructure" [3, P. 17]. The researcher I.D. Barkhatov defined the boundary of the creative class and the creative economy, which include "the core of the technological standards of the information economy, the industrial economy, the management of the innovative and creative economy and knowledge" [6, P. 25]. This model focuses attention on the main component - knowledge. However, any knowledge is inseparable from the carriers in the creative groups. The evolution of the society and development of new classes - the class of the Kreatosfera emerges.

Doctor of Economics, Professor A.V. Buzgalin is marking the formation of the creative class and economy of the Kreatosfera, and emphasizes “the result of providing public goods in the Kreatosfera in the form of progress in individual human qualities” [7, P. 51]. This branch is focused on the formation of the institutional framework for personal development; and on the preparation of the basis for social and economic progress. There is also the opposite opinion by V.V. Gromyko, who believes that “creative economy leads to social segregation” [9, P. 30]. Note that this position is partly correct, because society is divided into classes of traditional economic spheres and into classes of creative industries. At the same time, the components of the digital environment of the digital economy offset stratification and segregation, due to the fact that these elements of the digital economy fully penetrate any social relations. This indicates the public involvement in the Kreatosfera. Confirmation of this opinion can be found in the works of scientist R.V. Kamanina: “The foundation of innovation-oriented models is solidarity practice, as well as information, communication, science and education” [13, P. 171].

Thus, a review of the literature shows that much attention is paid to the issues of creative and digital economies.

Results

We have identified the relationship between creative and digital economies through a new concept - the Kreatosfera.

Kreatosfera is a special sector of economy, which is based on intellectual work. The key characteristics are, as follows:

- The important role of new technology and breakthrough in various spheres of human activity.
- High level of social uncertainty.
- A large amount of already existing knowledge and an urgent call to generate the new one.

"Kreatosfera" consists of three terms:

The first - the resource of creative work - every phenomenon of culture, including the result of social, artistic, technical, educational, scientific work, which can be attributed to a new cultural value (with all the issues in determining novelty, this is a draft definition of creatology). The Kreatosfera seems to be the world, which qualitatively differs from matter traditionally analyzed by economists, in which resources are always limited from the "technological" perspective.

The second component of the Kreatosfera is a process of creative work. The subject of creative work in the modern world is represented not only by the person of a liberal profession, not only by management and the financial "elite", but also by all "mainstream", "ordinary" creative employees - librarians, engineers, artists, doctors, teachers, "creative directors" of society and nature.

The third component of the Kreatosfera is a product of creative work, which is also not restricted from the "technological" perspective, as is its resources. Because of this position, the total "public property of all" in the Kreatosfera is quite possible.

Professor, Doctor of Economics A.A. Stepanov along with Assistant Professor M.V. Savina provided the terminology of creative economy: "The creative economy is a set of special social and economic relationships that arise on the issues of consumption, exchange, production, and redistribution - based on non-traditional, non-standard, original strategies, concepts, ideas, activities that form an effective solution of social and economic issues on the basis of new knowledge and fundamentally qualitatively different solutions" [22, P. 104]. By virtue of this approach, in our opinion, the concepts of creativity, creative personality, and innovation are applied. However, it is important to know that in a creative economy a new creative class, a category of the Kreatosfera is being formed. We have made our conclusions on the basis of the position of researchers M.V. Savina and A.A. Stepanova that: "At the stage of formation of the innovation economy, there is an increasing call to create new methodological, theoretical and practical ways and approaches for activating productive and rational application of the creative and intellectual potential of man as the main source, as the strategic mean of productive use of the main productive human capital in the post-industrial society" [22, P. 105].

In the digital and creative economies, creative and digital technologies are used as the basis for the development of the added value chain, which increases the capitalization of the organizations appraisement and affects the increase of domestic gross products. Thus, an ecosystem of the creative and digital economy of the Russian Federation emerges; it consists of market segments in which added value is developed through intellectual cognitions and digital (information) technologies.

In accordance with the last criterion, USA is at the final stage of transformation of the economy into an information type, whereas in contrast the Russian Federation needs to be in progress for more than 30 years.

Discussions

In our opinion, the subject of the digital economy includes laws and economic relations. Relations arise in the production, exchange, redistribution and consumption of scientific and technical data through digital information technologies, and the formation of such processes are subjected to the laws of the economy.

The "Digital Economy of the Russian Federation" program has been adopted, aimed at providing conditions for the formation of a country's knowledge society; increasing the quality and well-being of the lives of citizens through improving the quality and accessibility of services and products made in the digital economy using modern digital technologies; increasing the level of digital literacy and awareness; improvement of quality and accessibility of public services for citizens, including public security, both outside the outside the Russian Federation and within the country.

For example, in most of the subjects of the Russian Federation in the 21st century, the traditional industrial spheres were given the key role of providing regional gross products. Thus, the Republic of Sakha in Yakutia is an important mining and mineral-raw materials region of Russia, it is given the leading place in the state in the field of antimony, gold and diamonds extraction industries. Oil and coal are also produced here on a significant scale - for export and domestic purposes; platinum, natural gas, building materials, gemstone raw materials and other minerals are extracted for domestic needs. According to the rating of the total reserves of various types of natural resources, Yakutia is steadily occupies the first place in the state. In the spec. gravity of all natural endowments in the mineral resource potential of the Russian Federation, Yakutia reaches 82 percent for diamonds, 17 percent for gold, 61 percent for uranium, 82 percent for antimony, 6.2 percent for iron ore, 40 percent for coal, 28 percent for tin, and 8 percent for mercury[1]. There are substantial reserves of wolframite, lead, silver, rare earth elements. Importance is given to the regional administration, a direct relationship between industrial and regional growth is defined. This is the foundation of development in the creative economy. Hereby, we go along with the opinion of A.M. Ashkhotov: "For the modern industry, the segments of manufacturing industry and branches that are associated with the development of minerals matter. However, the increase in the share of industry in the domestic economy is accompanied by a reduction in the percentage of processing plants in the industrial segment of the economy. In the context of the development of the creative economy, this trend requires increased interaction between regional and industrial growth" [5, 28, 29].

As can be seen from the above, experts singled out a few key aspects on the basis of which one can say that the economy has become of information type:

- Socio-economic characteristics (if the half of the population/society or more is involved in the field of information services, this indicates that such a society is of information type);

- Technical specification (the period of IT penetration of the society should not exceed 60 years).

Digital economy is based on the development of electronic products and services to high-tech business establishments and the sale of such products through e-commerce.

The digital economy is represented by 3 levels, influencing the life of society and citizens in general due to close interaction:

- Technologies and platforms
- Economic sectors and markets
- Fundamental conditions (a space that creates conditions for the formation of technologies and platforms, including for the productive interaction of market actors and sectors of the economy, encompassing normative regulation, information security, personnel and information infrastructure).

In our opinion, the digital economy is the field of activity, where the main production factor is information in digital form, and its processing and application in large volume contributes to the improvement of quality, productivity and efficiency in different production sectors, as well as in the areas of equipment and technologies within the consumption process, delivery, sale and storage of products and services.

Conclusion

Thus, we are defining such fundamental points of the creative and digital economies. The relationship between the digital economy and the creative economy in the formation of the Kreatosfera is based on:

1. Legal regulation of digital relationships and industries of creative economy.
2. Creation of professional and educational competences of digital economy.

[1] Republic of Sakha (Yakutia) economic situation data // http://old.sakha.gov.ru/№ode/1106 (access date 10.01.2018)

3. Digital and communication platform for cooperation, processing, storage and exchange of data, communication and research activities.

The Kreatosfera is when, with the help of knowledge, new intellectual values, innovations, and humanitarian technologies are created to improve and transform the socio-economic reality. The cognition of the Kreatosfera involves changing attitudes toward people and intellectual properties.

So, the creative and digital economies are technological and socio-economic vectors of the foundation and development of the formation of the Kreatosfera. The Kreatosfera has a spiritual creative beginning on the basis of ecological philosophy, social intelligence and socio-natural harmony, the principles of the creative and cultural economy. The digital space is a catalyst for the development of the Kreatosfera cognition. The Kreatosfera is designed to meet the threats to integrity and sustainability and become an energy driver for challenges.

Recommendations

The materials of the article can be of use for the further research in the field of digital and creative economies, in substantiating the empirical data of the new paradigm of cognition - the Kreatosfera.

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Conflict Resolution Skills Among Flight Attendants in High-Quality Service Oriented Context

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Abstract

The rationale of the study: The work of flight attendants has a conflict-generating nature, and the conflicts that occur during the provision of service to air travelers may have negative consequences and cause serious damage to the airline reputation.

The purpose of the paper is to assess the maturity of conflict resolution skills among flight attendants of the airline and suggest ways of its improvement to ensure a high-quality customer service.

The basic approach to the study was the development of a theoretical model of the conflict resolution skills of flight attendants that included the cognitive, motivational and regulatory components. In light of this model, a set of methods was devised to assess their maturity on the sample of 100 flight attendants of the airline. Splitting the sample by gender and work experience in the field allowed to identify component-wise differences in the structure of the conflict resolution skills of flight attendants.

It has been determined that the cognitive component of conflict resolution skills is higher among flight attendants with work experience of 5 years and more, which confirms that they have a broader professional experience and have accumulated a wide range of ideas about potential conflicts and ways to successfully resolve them.

Significant differences were determined in motivational (motivation to success) and regulatory components of conflict resolution skills (mental stability, emotional stability, assertiveness) in groups of flight attendants with work experience of less than 5 years and 5+ years. The mental stability levels are lower among flight attendant with longer work experience than among those with work experience of less than 5 years, which is a consequence of the negative impact of overwork and professional burnout that reduce motivation to achievement.

The findings from the study determined the need to develop a training program to improve the conflict resolution skills among flight attendants and to develop their professional self-reflection and self-regulation. The program should view the conflict resolution skills as a key professional competence of flight attendants and a corporate value of the company.

The materials of the paper have a practical value to airlines personnel management departments.

Keywords: Flight attendants, conflict resolution skills, mental stability, extraversion, assertive behavior, self-reflection, self-regulation

Basic provisions

The conflict resolution skills of flight attendants are regarded here as an integral characteristic of a flight attendant's personality, which is manifested in readiness and ability to optimize their behavior in challenging situations of social interaction in order to constructively resolve issues in relations with customers and communication partners. The conflict resolution skills include the following components: *cognitive, motivational and regulatory*.

The study determined that the values of the cognitive component of conflict resolution skills have higher maturity levels among flight attendants with work experience of 5+ years, which confirms that they have a broader professional experience and have accumulated a wide range of ideas about potential conflicts and ways to successfully resolve them.

Significant differences were determined in motivational (motivation to success) and regulatory components of conflict resolution skills (mental stability, emotional stability, assertiveness) in groups of flight attendants with work experience of less than 5 years and 5+ years. In the latter group, the proportion of high levels of mental stability is lower than in the group of flight attendants with work experience of less than 5 years. The experts who participated in the study attributed this fact to the negative impact of overwork and professional burnout that reduce motivation to achievement.

The obtained data became the basis for a program to improve the conflict resolution skills among flight attendants, to upgrade the knowledge of conflict management among flight attendants with work experience of less than 5 years, to develop optimal behavior patterns in typical conflicts that may occur in the course of interaction with passengers in mixed crews, and to re-inforce appropriate ways to resolve those conflicts. The program is also focused on developing professional self-reflection and self-regulation skills among flight attendants and includes self-relaxation sessions with audio recordings after work. In general, the project is aimed at recognition of the conflict resolution skills as a key professional competence of flight attendants and a corporate value of airlines.

Introduction

Rationale: The problem of conflict resolution skills among flight attendants is a priority issue since airlines need to ensure high standards of customer service in the context of the competitive environment. At the same time, airline flight attendants work in an environment with a high risk of conflict in the course of customer service they provide.

The purpose of the paper is to assess the maturity of conflict resolution skills among flight attendants working at the airline and to develop suggestions to the program that aims at resolving the problems.

The objectives of the research:

1) To theoretically analyze scientific approaches to the study of conflict resolution skills among flight attendants;

2) To develop research methods;

3) To take a component-wise evaluation of the maturity of the conflict resolution skills among flight attendants;

4) Substantiate suggestions for the project to improve conflict resolution skills among flight attendants and determine the conditions for its implementation.

The hypothesis of the research: There are differences in the maturity of conflict resolution skills among flight attendants depending on the duration of their work experience.

The theoretical and methodological foundations of the research were works on the problems of professional activities and the formation of a skilled specialist (including works by V. V. Bodrov [Bodrov 2011], V. G. Zazykin [Zazykin, Smirnov 2014], E. F. Zeer [Zeer, Symanyuk 2005], I. P. Krasnoshchechenko [Krasnoshchechenko I. P., Krasnoshchechenko L. V. 2012, Krasnoshchechenko 2010], Holand [Holand 1966], and others); works in the psychology of conflict (including works by A. Ya. Antsupov [Antsupov, Shipilov 2004], N. V. Grishina [Grishina 2000], T. P. Demidova [Demidova 2017], M. M. Kashapov [Kashapov, Bashkin 2010, Kashapov 2011], A. V. Buzmakova [Buzmakova 2016], N. I. Leonov [Leonov 2016], T. A. Makedon [Makedon 2017], and others.), studies of specific features of work and competencies of flight attendants (I. Yu. Vorotskaya [Vorotskaya 2005], Z. I. Grin'ko [Grin'ko 2008], T. V. Filip'eva [Filip'eva 2006]).

For example, the study by Z. I. Grin'ko distinguishes 5 types of professional competence of flight attendants:

- intercultural;
- sociocultural;
- communicative;
- emergency;
- informational.

This approach looks at the flight attendants' response to conflicts from the viewpoint of those competencies. At the same time, in view of the fact that conflicts on board the aircrafts occur quite often, it is reasonable to introduce additional competence: *conflict resolution skills of flight attendants* which are defined here as an integral characteristic of a flight attendant's personality as a subject of professional practice with a high risk of conflicts, which is manifested in readiness and ability to optimize their behavior in challenging situations of social interaction in order to constructively resolve issues in relations with customers and communication partners in line with the professional regulations requirements.

Considering the approach of M. M. Kashapov and M. V. Bashkin (Kashapov & Bashkin 2010, Kashapov 2011), this paper suggests the following structure of the conflict resolution skills of flight attendants, which includes three components:

- *1. Cognitive component (C):*
- C_1 – Knowledge of professional regulatory documents, requirements and guidelines required to ensure the safety of flights and passengers (the level of its maturity is strictly controlled by the Human Resource Department, this component was not measured in this study);
- C_2 – *Knowledge of conflict management that allows to minimize the risk of conflicts caused by flight attendants and successfully resolve conflicts that occur while working with passengers;*
- C_3 – *Knowledge of typical conflict situations that may occur on board the aircraft and the appropriate ways to resolve them;*
- C_4 – *Self-reflection: the ability to review one's own professional performance in actual interaction with passengers on board the aircraft.*
- *2. Motivational component* (M):

M_1 – A will to successfully accomplish one's professional goals;
M_2 – *A will to successfully resolve conflicts*.

- *3. Regulatory* component *(R):*

R_1 – Mental stability and emotional stability as the foundation of professional behavior during conflicts;
R_2 – Extraversion;
R_3 – Assertiveness: confident behavior that is manifested in the ability to genuinely make demands and enforce them without being aggressive or hostile.

Methods

The following methods of empirical research were used in the study: observation, questionnaire survey of flight attendants (authors' questionnaire), a content analysis of the findings from the survey while developing a pool of typical conflict situations, self-assessment of the effectiveness of conflict resolution, the method of expert evaluation of effectiveness of conflict resolution in the professional practice of flight attendants, where experts were the employees of the Human Resource Department of the company; as well as the inventory methods:

- A) *T. Ehlers' test of professional motivation to success*, focused on the identification of the relevant motivation (http://azps.ru/tests/3/test11.html, 2017). The motivation to success is viewed as a condition of commitment of flight attendants to good performance;
- B) The IPIP Big-Five Factor Markers method, developed by the American psychologists R. McCrae and P. Costa. The method was the result of long-time research of scientists around the world and allows to diagnose five universal factors or fundamental personality traits that constitute the human personality structure: extraversion, openness to experience, agreeableness, conscientiousness, emotional stability (Khromov 2000);

C) The "*Prognoz*" *method*, designed at S.M. Kirov Military Medical Academy, is intended for the identification of persons with signs of mental instability and at the risk of disadaptation under stress. The method is used in the personnel recruitment for jobs with higher requirements (Prokhorov 2004);

D) The method of diagnosing assertiveness (http://azps.ru/tests/3/test11.html): a type of behavior characterized by self-assurance and confidence. The assertiveness is important for flight attendants because they need to be able to confidently, politely and in line with corporate standards ensure compliance with safety requirements even in interaction with most challenging passengers.

SPSS 22.0 for Windows, a specialized statistical package was used to identify the reliability of differences in estimates of the intensity of the parameters in groups of flight attendants depending on gender and duration of work experience and to establish a connection among the results of the methods that diagnose similar traits (for example, mental stability, emotional stability).

Results

The study involved three stages. At the first stage, 300 flight attendants of the airline were interviewed in order to prepare a pool of conflict situations that occur in the work of flight attendants. The key informative aspect of the questionnaire was the following question: "Describe conflicts that challenged your work with passengers." The survey results were analyzed and a list of 26 typical conflict-generating situations was compiled: passengers complain about individual lighting, unpleasant neighbors (children, a noisy company, passengers with animals...), lack of choice of food, the absence of pre-ordered food, food quality, etc.

Based on the list of situations, the questionnaire survey of the main study sample of 100 flight attendants was carried out in order to detect of maturity of cognitive component of conflict resolution skills among flight attendants of the company. Table 1 summarizes the characteristics of the basic sample by age and gender.

Table 1.

Characteristics of the sample of flight attendants by work experience and gender (n = 100)

Parameters	Percentage
Work experience	
less than 5 years	50%
5+ years	50%
Gender	
Male	37%
Female	63%

The questionnaire included questions to identify whether a flight attendant had an experience of conflicts at work (from the list of typical conflicts) and to carry out a self-evaluation of how successful their resolution was:

1. Specify whether you experienced any of the following situations. The question is followed by the list of the 26 most common situations with three answer choices: 1) Yes, often; 2) Sometimes; 3) No, never.

2. If you did, did you successfully resolve the conflict? The answer choices: 1) Yes, to the full extent; 2) Not sure; 3) No, I did not.

At the second stage, the motivational and regulatory components of the conflict resolution skills of flight attendants were assessed through psychodiagnostic methods.

At the third stage, the answers were analyzed, compared and summarized, and the project to improve the conflict resolution skills of flight attendants was developed using the obtained data.

The data are presented below.

- *Assessment of the cognitive component of conflict resolution skills.*

The C_1 cognitive component (knowledge of professional regulatory documents, requirements and guidelines required to ensure the safety of flights and passengers) was not assessed because this is a mandatory requirement to obtain a flight cerebrum and all the flight attendants have high values of maturity. The research was focused on assessment of the *C_3 component (knowledge of typical conflict situations that may occur on board the aircraft and the appropriate ways to resolve them).*

Table 2.

Averaged self-evaluation of frequency of occurrence and success of resolution of conflicts by flight attendants with different work experience

Work experience of less than 5 years						Work experience of 5+ years					
Did you encounter such situations?			If so, did you successfully resolve them?			Did you encounter such situations?			If so, did you successfully resolve them?		
Yes	Sometimes	No	Yes	Not sure	No	Yes	Sometimes	No	Yes	Not sure	No

66%	30%	4%	34%	44%	22%	36%	54%	0%	64%	32%	4.00%

The analysis of the answers to the questionnaire questions showed that the group of flight attendants with work experience of less than 5 years described the situations in the questionnaire as "*frequent*" almost twice as often as flight attendants with work experience of 5+ years.

At the same time, the self-evaluated "*success of conflict resolution*" among those with experience of 5+ years was higher than that of flight attendants with work experience of less than 5 years. In the authors' opinion, this confirms that the flight attendants with experience of more than 5 years have an extensive professional experience of working with conflict situations, which leads to devaluation of certain situations and treating them as ordinary. The experience brings about a decrease in emotional attitude to such situations, because they happen quite often in the professional practice and effective behavior patterns have already een developed for them, which leads to confidence in propriety and success of the decisions the flight attendant makes (as an automated skill).

- *The motivational component of conflict resolution skills was assessed using the T. Ehlers' method for evaluating motivation to success.* The obtained data are presented in Table 3.

Table 3.

Percentage distribution by motivation of success levels on the sample of flight attendants depending on the duration of work experience and gender

	The whole sample	**Work experience less than 5 years**	**Work experience 5+ years**	**Women, work experience of less than 5 years**	**Women, work experience 5+ years**	**Men, work experience of less than 5 years**	**Men, work experience 5+ years**
Low Level	4.0%	0.0%	8.0%	0.0%	5.6%	0.0%	14.3%
Medium Level	39.0%	32.0%	46.0%	29.6%	55.6%	34.8%	21.4%
High Level	57.0%	68.0%	46.0%	70.4%	38.9%	65.2%	64.3%

An interesting result of the method is that a high level of motivation to success dominates among the flight attendants (57%), an average level was found in 39% of those tested, a low level in 4%. Moreover, among employees with a work experience of less than 5 years the motivation to success is higher (68%) than in the group of flight attendants with the experience of 5+ years (46%). Interestingly, female flight attendants with work experience of less than 5 years are more motivated. 70.4% of them have high levels of motivation to success. Among male flight attendants with work experience of less than 5 years, a high level of motivation to success is found in 65.2% of them.

The Mann–Whitney test showed that the differences in the motivational component among flight attendants with a work experience of less than 5 years and 5+ years are statistically significant. Therefore, improving conflict resolution skills among flight attendants should involve working on the motivational component among those who have a longer work experience.

- *Assessment of regulatory component of conflict resolution skills among flight attendants.* To evaluate the maturity of the *regulatory component*, the following methods were used: the Prognoz mental stability evaluation method, the Emotional stability, Extraversion, Openness to experience scales of the Big-Five Factor Markers, and methods of studying assertive behavior. The data obtained using the *Prognoz method* are presented in Table 4.

Table 4.

Percentage distribution by mental stability depending on the duration of work experience and gender

Level	The	Work	Work	Women,	Women,	Men, work	Men, work

	whole sample	experience less than 5 years	experience 5+ years	work experience of less than 5 years	work experience 5+ years	experience of less than 5 years	experience 5+ years
Low	2.0%	0.0%	4.0%	0.0%	0.0%	5.6%	0.0%
Medium	30.0%	22.0%	38.0%	11.1%	34.8%	38.9%	35.7%
High	68.0%	78.0%	58.0%	88.9%	65.2%	55.6%	64.3%

The assessment of mental stability of flight attendants using the Prognoz method suggests that 68% of all the flight attendants have a high level of mental stability and 30% have a medium level. Interestingly, the mental stability level declines in proportion to the duration of the work experience: 78% of employees with work experience of less than 5 years have a high level of mental stability, but among those with experience of 5+ years, it is only 58%.

As was already mentioned, the behavioral component of conflict resolution skills was assessed using the IPIP Big-Five Factor Markers method. The data obtained using the Big-Five method are presented in Table 4, which includes data on all the five scales – Extraversion, Openness to experience, Agreeableness, Conscientiousness, and Emotional stability. It also shows the descriptive statistics data, including average values, standard deviation values, minimum and maximum values, and distribution by levels: low, medium and high.

Table 5.

Descriptive statistics on the Big-Five method findings.

Scale	**Extraversion**	**Agreeableness**	**Conscientious-ness**	**Openness to experience**	**Emotional stability**
Medium. values	33.05	35.44	37.26	34.01	33.95
Minimum	15	15	5	20	15
Maximum	50	48	49	47	48
Average deviation	7.6	6.3	8.2	5.3	5.8
Low Level	29.0%	17.0%	10.0%	37.0%	1.0%
Medium Level	63.0%	77.0%	58.0%	61.0%	55.0%
High Level	8.0%	6.0%	32.0%	2.0%	44.0%

The data in Table 5, obtained for the Emotional stability scale of the Big-Five method on the entire sample of flight attendants, show the prevalence of high (44%) and medium (55%) values on the emotional scale. The levels of emotional stability in the groups of flight attendants by duration of work experience are shown in Table 6.

Table 6.

Data obtained for the Emotional stability scale of the Big-Five method (by work experience and gender)

Level	The whole sample	Work experience less than 5 years	Work experience 5+ years	Women, work experience of less than 5 years	Women, work experience 5+ years	Men, work experience of less than 5 years	Men, work experience 5+ years

Low	1.0%	0.0%	2.0%	0.0%	2.8%	0.0%	28.6%
Medium	55.0%	46.0%	64.0%	7.4%	66.6%	47.8%	28.6%
High	44.0%	54.0%	34.0%	92.6%	30.6%	52.2%	42.9%

54% of flight attendants with experience of less than 5 years have a high level of emotional stability. With the increase of work experience (5 years and more), a decline in the percentage of flight attendants with a high level of emotional stability can be observed (to 34%). It is characteristic that in the sample of female flight attendants, the proportion of those having a high level of emotional stability among those who have experience in the company less than 5 years amounts to almost 93.5%, while among employees with 5+ years it is 30.6%. The sample of men with 5+ years of experience is characterized by an increased share of flight attendants with a low level of emotional stability to 28.6% and a lower proportion of employees with a high level of it (42.9%), compared employees with work experience of less than 5 years (52.2%).

The distribution of the Extraversion scale results (the Big-Five method) on the sample of flight attendants depending on the duration of work experience and gender is shown in Table 7.

Table 7.

Percentage distribution by extraversion levels on the sample of flight attendants depending on the duration of work experience and gender

Level	The whole sample	Work experience less than 5 years	Work experience 5+ years	Women, work experience of less than 5 years	Women, work experience 5+ years	Men, work experience of less than 5 years	Men, work experience 5+ years
Low	29.0%	28.0%	30.0%	37.0%	33.3%	17.4%	21.4%
Medium	63.0%	66.0%	60.0%	59.3%	58.3%	73.9%	64.3%
High	8.0%	6.0%	10.0%	3.7%	8.3%	8.7%	14.3%

Table 7 demonstrates that the medium level of extraversion (a personal trait that is manifested in activity, sociability and energy) is found in 63% of the flight attendants, the high level in 8%, and the low level in 29%. When comparing the samples of female and male flight attendants, larger proportions of flight attendants with a low level of extraversion on a sample of women can be observed. Among male flight attendants with work experience of 5+ years, the proportion of those who have low levels of extraversion is higher than in the group with work experience of less than 5 years. The same tendency was observed when comparing groups with high levels of extraversion: the value is larger in groups with longer work experience.

When comparing the standard values for this sample of flight attendants that correspond to the [$X_{average}$ $\pm$ 6] interval and fall within the range [25.4–40.6] with average standard indicators, which were obtained by the authors after adapting the method for the Russian sample [low level – 10–28; medium – 29–43, high – 45–50], it was observed that the range of average values on the sample of flight attendants is shifted to the left (towards lower values). This fact has the following explanation. The duties of flight attendants are not so much the direct communication with passengers, but *attending the flight* and ensuring that the regulatory requirements for passenger service of the airline are observed: it is important that they provide proper, competent, conflict-proof and high-quality service to passengers from the moment of on-boarding the aircraft, during all the flight till the moment of leaving the aircraft after landing at the point of arrival. In the course of service, a high level of extraversion is mostly not required, as it can cause unwanted tension in passengers.

To evaluate the maturity of the behavioral component, the method of studying the assertive behavior was used. The data obtained using this method are presented in Table 8.

When analyzing the data obtained through the method of studying assertiveness (*the regulatory component*), the authors proceeded from the fact that in a conflict, assertiveness helps to preserve neutrality, to refrain from aggression and passivity, therefore, a medium level manifestation of assertiveness is an important prerequisite of the conflict resolution skills. The assertiveness here means a confident and calm discussion of the problem and interaction with the partner in it, without aggression or passivity.

Table 8.

Distribution by assertiveness on the sample of flight attendants depending on the duration of work experience and gender

Level	The whole sample	Work experience less than 5 years The whole sample	Work experience 5+ years The whole sample	Women, work experience of less than 5 years	Women, work experience 5+ years	Men, work experience of less than 5 years	Men, work experience 5+ years
Low	10.0%	6.0%	14.0%	11.1%	0.0%	16.7%	7.1%
Medium	74.0%	78.0%	70.0%	77.8%	78.3%	69.4%	71.4%
High	16.0%	16.0%	16.0%	11.1%	21.7%	13.9%	21.4%

The study found the prevalence of the middle (*optimal*) level of maturity of assertive behavior in flight attendants: 74% in the whole sample. Flight attendants with work experience of less than 5 years, an optimal level of assertiveness was found in 78%. Among flight attendants with work experience of 5+ years, it is found in 70% of respondents. At the same time, 16% of flight attendants in the sample with a high level of assertiveness are at risk of conflict situations when working with passengers.

Figure 1 is a visual representation of average values obtained through the psychodiagnostic methods in the groups of flight attendants with experience of less than 5 years (Group 1) and with experience 5+ years (Group 2).

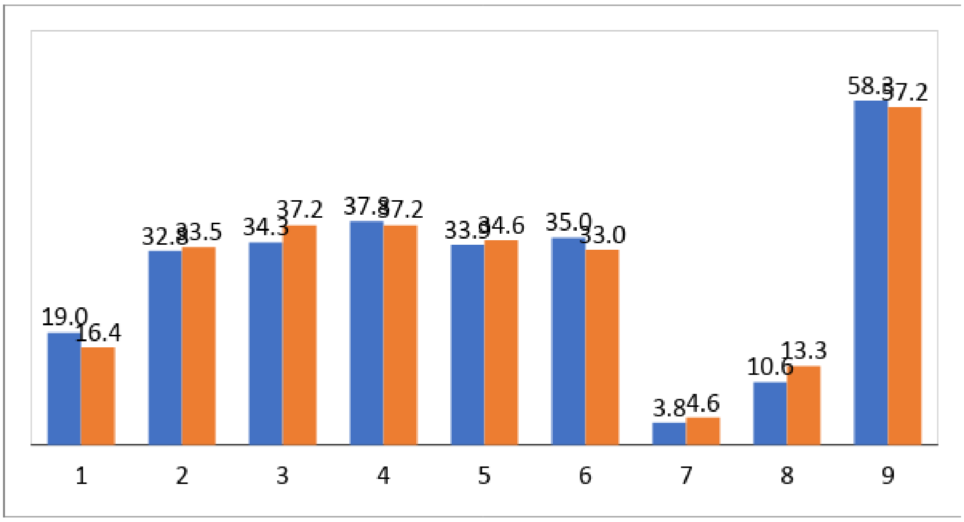

Figure 1. Visual representation of differences in average values (the psychodiagnostic methods)

Legend: 1 – The T. Ehlers method: motivation to success; 2. The IPIP Big-Five Factor Markers method: 2 – Extraversion, 3 – Agreeableness, 4 – Conscientiousness, 5 – Openness to experience, 6 – Emotional stability, 7 – Sincerity; 8. Prognoz test – mental stability, 9. Assertiveness

Mann–Whitney test was used to analyze the obtained values on the psychodiagnostic parameters of the study. Table 7 shows the comparison of Group 1 and Group 2, where Group 1 — flight attendants with experience of less than 5 years, and Group 2 — with experience of 5+ years.

Table 9.

The statistical analysis of psychodiagnostic data using the Mann–Whitney test

Statistics of ª Criterion

	Mann–Whitney U Statistics	Wilcoxon W statistics	Z	asymptotic value (two-sided)
Motivation to success	679,500	1807,500	-3,350	,001
Extraversion	1076,000	2252,000	-,387	,698
Agreeableness	837,500	2013,500	-2,165	,030
Consciensciousness	1016,000	2144,500	-,831	0,406
Openness to experience	1055,500	2231,500	-,541	,589
Emotional stability	850,500	1978,500	-2,071	,038
Sincerety	937,000	2113,000	-1,444	,149
Mental stability	838,000	2014,000	-2,164	,030
Assertiveness	1052	2180	-,566	,571

a. grouping variable: 1 – 1–5 years, 2 — more than 5 years

Statistically significant differences on the following variables were obtained between Group 1 (flight attendants with work experience of less than 5 years) and Group 2 (flight attendants with work experience of 5+ years):

- Motivation to success (Variable 1) — (the scale of T. Ehlers' method) ($p \leq 0.001$),
- Agreeableness (Variable 3) — (a scale of the Big-Five method) ($p \leq 0.05$),
- Emotional stability (Variable 6) — (a scale of the Big-Five method) ($p \leq 0.05$);
- Mental stability ($p \leq 0.05$) (Prognoz method).

Pearson correlation coefficient was used to analyze the statistically significant correlations of parameters that are considered as components of conflict resolution skills in the sample of flight attendants (see Table 9).

Table 9.

Statistically significant correlations among psychodiagnostic data

	Correlations between parameters	Correlation coefficient value and significance level
1	Motivation to success and work experience	r = -0.37 as α = 0.01
2	Motivation to success and conscientiousness	r = 0.343 as α = 0.05
3	Extraversion and openness to experience	r = 0.805 as α = 0.01
4	Extraversion and agreeableness	r = 0.452 as α = 0.01
5	Extraversion and assertiveness	r = 0,367 as α = 0.05
6	Emotional stability and conscientiousness	r = 0.685 as α = 0.01
7	Emotional stability and mental stability	r =-0.586 at α = 0.01
8	Openness to experience and assertiveness	r = 0.292 at α = 0.01
9	Mental stability and openness to experience	r = 0.302; α = 0.05

The negative statistically significant correlation between work experience and motivation to success confirms the identified tendency of a decline of motivation to achievement in proportion to the duration of the work experience.

The established statistically significant correlation of Mental stability (Prognoz method) and Emotional stability (Big-Five method) ($r = -0.586$ as $\alpha = 0.01$) confirms the proximity of the phenomena of mental and emotional stability, which were diagnosed using the two methods. The negative value of the correlation coefficient is caused by the opposite direction of the scales those methods use.

The identified strong correlation between Extraversion and Openness to experience ($r = 0.805$ as $\alpha = 0.01$) confirms that people oriented to the outside world are more open to the experience that the world offers them. It is no coincidence that according to findings from the study on the sample, the total proportion of flight attendants with high and medium average levels of extraversion is above 70%.

4. Table 10 summarizes the maturity of conflict resolution skills (the data obtained through the research methods used).

The summary in Table 10 serves as a foundation for conclusions on differences in the component-wise level-wise maturity of conflict resolution skills among flight attendants depending on their work experience. The differences in the levels found in the samples depending on the duration of work experience are the foundation for designing a program for developing the maturity of conflict resolution skills among flight attendants.

Table 10.

Summary table on the maturity of conflict resolution skills components

- *The cognitive component of conflict resolution skills (C_3)*

	experience of less than 5 years	Experience 5+ years
Low Level	22,0%	4.0%
Medium Level	44,0%	32%
High Level	34,0%	64%

- *Motivation and Value-related component (M_1)*

Level	experience of less than 5 years	Experience 5+ years
Low Level	0,0%	8,0%
Medium Level	32,0%	46,0%
High Level	68,0%	46,0%

- *Regulatory* component:

Mental stability (R_1)

Level	Work experience less than 5 years	Work experience 5+ years
Low	0,0%	4,0%
Medium	22,0%	38,0%
High	78,0%	58,0%

Emotional stability (R_1)

Level	Work experience less than 5 years	Work experience 5+ years
Low	0.0%	2.0%
Medium	46.0%	64.0%
High	54.0%	34.0%

Extraversion (R_3)

Level	Work experience less than 5 years	Work experience 5+ years
Low	28.0%	30.0%
Medium	66.0%	60.0%
High	6.0%	10.0%

Assertiveness (R_2)

Level	Work experience less than 5 years	Work experience 5+ years
Low	6.0%	14.0%
Medium	78.0%	70.0%

High	16.0%	16.0%

Discussion

Ehe obtained frequencies of conflicts occurrence in the professional activity of flight attendants and self-evaluations of success in their resolution (that mostly comply with the expert evaluation of the Human Resource Department) determined that *the cognitive component (C_3)* of the conflict resolution skills have higher maturity among flight attendants with work experience of 5+ years, which is determined by them having experience-tested understandings about behavior during conflict situation on board the aircraft. At the same time, flight attendants with work experience of less than 5 years need additional training to develop the knowledge component of conflict resolution skills, as well as to develop self-reflection.

Since the study showed that among employees with work experience of less than 5 years, the motivation component of the conflict resolution skills is higher (the differences found were statistically significant, see Table 8), therefore, improving conflict resolution skills among flight attendants should involve working on the motivational component among those who have a longer work experience.

The discovered tendency of a decline of the percentage of components of the high level of the regulatory component of the conflict resolution skills of flight attendants (mental stability and emotional stability) in proportion to the duration of the work experience might be the consequence of overwork, fatigue and professional burnout. Therefore, the program of improving the conflict resolution skills among flight attendants should include measures to prevent this phenomenon.

The tendencies found in the study confirmed the reasonability of developing the project aimed at increasing the maturity of conflict resolution skills components among flight attendants and prevention of a decline in mental stability and motivation.

The project objectives:

1) Expanding the knowledge component of conflict management skills that allow to minimize the risks of conflict occurrence in the work of flight attendants with experience of less than 5 years (especially for beginners) and contribute to the successful resolution of conflicts in case of their occurrence;

2) Practicing optimal variable-based models of behavior in typical conflict situations that may occur in the work of flight attendants with passengers, practising appropriate ways of their resolution in line with corporate standards, and using a creative approach;

3) Enhancing professional self-reflection and self-regulation (meta-cognitive processes directed on regulation and self-organization of mental processes involved in the behavior in conflict situations taking into account the approach presented in this study) (Grin'ko 2008);

4) Developing within the company the attitude to conflict resolution skills among flight attendants as a most important component of their professional competence and a condition for the customer-oriented policy of the company and high standards of customer service.

The project developed by the authors includes a set of measures, in particular:

- A 2-day intensive educational program in the form of a social and psychological training,
- Extended independent work by flight attendants that involve analyzing conflicts, group discussions and making presentations for a thematic corporate seminar/conference, that promote development of professional self-reflection within the structure of the cognitive component of conflict resolution skills;
- Ereating a thematic page in the corporate network called "Enhancing conflict resolution skills" and publishing analytical materials based on the practical work of flight attendants of the company, including the presentations that were prepared by the micro-groups of flight attendants.
- Practical application of audio/visual relaxation materials using mobile devices by flight attendants after work to relieve fatigue and mental and emotional tension that accumulates during the working hours.

The training program is focused on the following aspects: the fundamentals of conflict resolution studies; assertive behavior; self-regulation of emotional states and self-reflection as basic mechanisms of behavior management in conflict-generating and conflict situations; analysis of conflicts (and potential conflicts) during interaction with passengers on board the aircraft and development of optimal patterns for their resolution in line with the corporate standards. The program includes self-reflection of the training outcomes and an extended stage: preparing and defending a self-analysis report on resolution of conflicts with passengers.

Conclusion

The study of the maturity of the conflict resolution skills among flight attendants became the basis for the development of a project designed to solve the identified problems, to improve the cognitive component of conflict resolution skills for new flight attendants, to mitigate the risk of lack of motivation to success and emotional stability among flight attendants with work experience of more than 5 years, which determined the practical relevance of the study and the project.

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The Phenomenon of Subjective Time: Methodological and Conceptual Aspects

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Abstract

The purpose of the paper is to examine the insufficiently studied problem of applying subjective social time to the interpretation of transforming reality. The work in this direction is interesting and significant, since it is directly related to the dialectics of subjective and objective time in social cognition. The article makes one of the first attempts in the modern philosophical literature to show the features of the internal social time development with an emphasis on the temporality aspect in the context of linear and nonlinear social development with a theoretical immersion of social development in the complex self-organizing systems of society, which is an essential contribution to the formation of the conceptual apparatus of modern social philosophy. The application of general philosophical methods and principles of research, i.e. the historical, systemic, comprehensive principles, the principle of unity of the concrete and abstract, as well as logical and historical in social cognition, has made it possible to identify the basic structural features of subjective time and to consider it in the context of the interpretation of social development. The paper analyzes theoretical and methodological approaches to the modern transforming society; the study shows that there are a number of issues related to the intentionality of subjective time; it demonstrates the existence of different levels of application of the conceptual and semantic apparatus when considering social transformations at the level of different systems.

In accordance with the stated goal, the main purpose of the article is to reveal that the consciousness of a social subject in the context of subjective time is intentionally directed both at those intervals that exist in the past and the near future, or at the intervals in which certain social processes are realized, and, on the other hand, they are directed at the boundaries of these intervals, which are connected by states, events, or complexes of events that reflect the very process of social development. The authors of the paper believe it to be correct to use domestic and foreign interdisciplinary concepts of the philosophy of transitivity, philosophy of time, philosophy of preferences and evaluations in the context of subjective time as a methodological, theoretical and conceptual-semantic basis of the study.

Keywords: subjective social time, social transformations, social subject, transforming society, social time, temporal referents.

Introduction

In modern philosophical literature, the interest to the study of subjective time has recently increased, which is determined by the need to clarify the integral role of the social object in evaluating and understanding social reality. The purpose of the article is to examine the insufficiently studied problem of applying subjective social time to the interpretation of transforming reality. In accordance with the goal, the following specific research tasks are being solved:

- to represent the spectrum of approaches to the intentionality of subjective time;
- to reveal the correlation between subjective time and the concept of temporality;
- to show the structure of subjective time in correlation with temporal referents;
- to disclose that the present should be regarded as a continuing present; it is a point of time, from the point of view of the traditional approach, but any present is real, it is a certain interval which, in this or that research, can be expanded both with respect to the past and the future, whether it is a question of reconstruction of the past or whether it is focused on futurological problems.

In this research direction, certain conclusions have been made, accumulating the following:

- when considering the problem of temporality and the problem of the time factor in the context of the study of social development, it is necessary to use different versions of the time chronology;
- examining subjective time through the prism of the social subject's consciousness and its specific structure;
- a complex of events, which exists in the continuing present time, can move in an idealized time both in some past and in some future;
- the social subject realizes his subjective time in relation to social development within a sufficiently long interval the idealized center of which is the "now" point adopted in the history of philosophy, and it is perceived precisely as the continuing present around which scenarios are formed that turn into the segment of the future.

The results above have been described in the works of K.A. Abulkhanova, A.A. Alyushina, A.V. Boldacheva, P.P. Gaidenko, T.N. Berezina, V.I. Molchanov, E.N. Knyazeva, N.N. Karpitsky, T.M. Ryabushkina, P. Laslett, J.Fraster, J.Hassard, as well as in the studies of A.Giddens, E.Husserl, et al [1-6, 8-15].

Materials and methods

In the history of philosophical thought, many philosophers addressed the problem of subjective time. Studies split mainly in two directions: the study of subjective time as a component of subjective reality (from Ancient Greek philosophy to Marxism) and consideration of the internal structure of subjectivity as the only human reality (modern Western theories). The principles of the unity of the historical and the logical as philosophical methods make it possible to identify and analyze the dialectics of the subjective and objective in the sphere of time, the principles of historicism and systemicity make it possible both to trace the historical formation of the problem from the scientific standpoint and to represent it in a dynamic system of categories. The general problem is also connected with the choice of methodological aspects of the study of subjective time, especially since one can speak about social time, biological time, and psychological time, that is, in this case the problem is not only complex, but also integral and it is possible to assume that the very understanding by a social subject of the development of social reality should be viewed both from the point of view of intentionality and from the point of view of existentiality. It is clear that in modern and, especially, in analytical literature, there are different approaches to the problem that has been identified. However, these approaches are one-sided. For example, the representatives of philosophical anthropology, just like the representatives of phenomenology, undoubtedly prioritize the consideration of the consciousness of the social subject. On the other hand, the positivist, neopositivist and postpositivist concepts in this case are focused, to a greater extent, on the sphere of interpretation between the consciousness of the social subject and the temporal scale with which this social consciousness will correlate. In this case, the authors of the present paper are for taking into account all points of view, however, certain emphases should be made.

The problem of researching subjective time is quite complex, and it must be said that in modern Russian literature there is a significant contribution to the development of this problem. However, it can hardly be said that this problem has become widespread among modern scientists in the field of philosophy and in other social and humanitarian sciences. It is clear that the problem is many-sided, complex and interdisciplinary. It is a problem when, on the one hand, we are dealing with the knowledge of the social subject, and, on the other hand, with the objective chronology of time, which naturally has its own existence. Moreover, in this case it is necessary to say that the consciousness of the subject itself is intentionally directed to a whole series of sub-problems connected with the subjective time of the social subject, but such intentionality is associated with a certain chronology that reflects the social historical processes that take place in the transformations of modern society.

Results:

- the complexes of social events can be the result for a person of the present time and move on to the future;

- the interval-moment structures solve one, but very important problem: when the chronology ceases to be permanent, various structures appear in it that make it possible to make the consciousness of the social subject more focused;
- the consciousness of a social subject is intentionally directed to a certain sphere, the center of which is an interval of the present time or the continuing present;
- the problem of interpretation arises not just in relation to the consciousness of a social subject, it arises in relation to the reconstruction of past events;
- the real, social and historical processes go beyond the consciousness of the subject in relation to the time segments.

As practice shows, the study of psychological time and its phenomena involves a number of problems associated with semantic and conceptual difficulties. These difficulties arise when scientists try to describe psychological phenomena in a strict conceptual system.

Discussion

Historical heritage and modern analytical sources show that the problem of social time has not been considered in a systematic form yet. In this regard, it should be noted that the philosophers who addressed to the problem of time often used the very factor of temporality in the study of various social and philosophical problems. The concept of subjective social time really entered the science in the 1970ies of the 20th century and was considered in a very wide range: from the social invariant of physical time to the temporary form of social life. However, priority was given to the research in the field of sociology and social philosophy. Interdisciplinary studies, in which subjective social time correlated with social transformations, actions and social events, took the leading roles.

The theoretical sources that influenced the formation of the concept of subjective social time are associated with the names of M. Belloni, A. Bergson, I.Gurvich, E. Durkheim, G. Simmel, R. Merton, K. Pronovost, and D. Hassard [7,14].

I.V. Bestuzhev-Lada, N. Ya. Danilevsky, W. Dilthey, and V. A. Lectorsky paid much attention to the features of the role of the time factor in the system analysis of the structure of social processes. The methodological aspects were reflected in the works of G. von Wright, H. G. Gadamer, and R. Collingwood. The relationship between social and historical time was studied by A.B. Bocharov, T.Zeldin, G. Simmel, and E. V. Sokolova.

The specifics of social time in determining the alternatives and tendencies of social development was studied by A.B. Bocharov, I. N. Danilevsky, A.V.Korotaev, A.V. Obolonsky, A. Toffler, E. Troeltsch, G. V. Ehrlich.

The temporality factor in the analysis of the structure of social development was investigated in the works of the following researchers: A.S. Karpenko, M.Cresswell, W. Newton-Smith, V.V. Popov, R. Thomason, M. Heidegger, Ch.Hamblin [16, 17].

There is a number of issues related to the intentionality of subjective time that have to be solved without having a definite approach, fixed points of interpretation, etc. If the subjective time of a person is directed at certain social events, then the question arises: do these events take place in the present, past or future? The same question can be formulated more broadly: does the social subject in this case have a connection with the complexes of events in the past, the present and the future? This implies the adoption of rigid idealizations in relation to the present time. In this case, the present itself, from the point of view of its chronology, makes it possible to speak about a complex of events that exist in the present time of the subjective temporality of the social subject, but in the same way one can also say that the social subject has a history that can be reconstructed, in which it is possible to find certain sets of events that may have arisen in the past, have not materialized, have passed through the continuing present and as a result can appear in the future.

This way is valid and in this case the problem is in the methods of interpretation that the social subject at the given moment, taking into account his subjective time, chooses in the analysis of social development. At the same time, the same complexes of social events may not be the result of the cessation of a past time segment reconstruction; they can be a result of the present time and move into the future tense, signifying certain scenarios of the future, certain systems, perhaps self-organizing or self-developing, the systems which are to provide, on the one hand, a futurist approach to the historical process, and, on the other hand, give a very specific explanation of certain trends and options for development, which will eventually take place.

In this sense, the moment-interval, interval-moment, interval-periodic structures are very useful, because they solve one, but fundamental problem. When the chronology ceases to be permanent, various structures appear in it. In this case, on the time scale, there emerge periods, moments, intervals of time that allow more conceptually and more intentionally to direct the consciousness of the social subject. In this case, it is very convenient to talk about those versions of social being that occur at different levels, intervals or periods. It is a special problem that should be discussed at certain moments of awareness of the social subject and social being. In the case in question, the focus is on the fact that since the consciousness of a social subject from the point of view of subjective time is positioned with astrological time along the segment of the past, the present and the future, then naturally the accents are transferred to the time scale represented, on the one hand, by the socio-historical process, while, on the other hand, this socio-historical process is subjected to a certain temporal reference. Depending on whether we want to see events, states, phenomena or facts in it, or, rather, a process or dynamics, moments and time intervals are fixed on this time scale. Of course, it would not be entirely correct to say that moments have in this case a subordinate role in relation to the intervals. The authors of the paper believe that, recognizing the equivalence of these concepts in this case, nevertheless, it is still probably worth talking about the interval-moment structure, as in social development, the moment on the temporal scale distinguishes those events, states or complexes of events which existed, exist in the continuing present, or will exist in some scenarios of the future.

On the other hand, if time is considered through the prism of the perception of a social subject, then, definitely, this sphere exists in this plan. It is this sphere that relates to the fact that the social subject perceives the present, a certain interval, some nearby, not remote past, the intervals at which the realization of certain processes or events occur, as well as similarly close in implementation intervals in which certain trends that started at different levels of social life will be realized. Therefore, it can be said that the consciousness of a social subject is intentionally directed to a certain sphere the center of which is an interval of the present time or the continuing present in which a primary assessment of certain events, states or processes developing within the framework of the general development of history takes place.

In general, in this case, researchers face an unexplored problem related to the interpretation of the actions of a social subject within the framework of subjective time in the context of certain social and historical processes, and this is indeed quite serious, since the problem of interpreting and evaluating the actions of a social subject taking in account the time index in certain intervals of the historical process is a rather important part of the analysis by the social subject of the general parts of the social process, as well as local ones. In this case, the problem of interpretation arises not just with respect to the consciousness of a social subject, but with respect to the reconstruction of past events, as well as with respect to variants and scenarios of future events. As for the evaluation of these events, this is a separate problem the research of which is, apparently, to be continued in the most immediate studies on this topic. However, the authors of the present paper linking both the evaluation and interpretation, believe that in fact in this case it is the social subject with the opportunity of interpretation of certain phenomena, events, processes, etc., actually simulates certain structures for the development of social processes. The fact that these structures are temporal structures (for example, temporal, periodic or momentary) means that in such a case the consciousness of a social subject within the framework of subjective time is really capable of accurately separating the state and complexes of subjects from the processes that lead to these sets of events, these processes, etc.

Of course, in this case it should be said that the real, social and historical processes go beyond the consciousness of the subject in relation to the time segments, however, it is more important that by fixing this particular sphere of the social subject, taking into account social time, it really becomes possible to realize the goals of the social subject's being, and to realize the subject's own essence in relation to the future.

Having fixed within the framework of the ongoing present various temporal structures and defined the temporal reference, which can be used both for the analysis of social and historical processes, as well as for analyzing events, complexes of events, ideas and facts, the social subject in this case may go beyond the limits of consciousness. In this case, if we are talking about the future, we will talk about social forecasting and social design, if we are talking about the past, then we will say that there is a reconstruction of not just some complex of events, but the reconstruction of a certain image of the past. This allows the social subject to really adequately assess the past events that have taken place, and concerns those moment-interval periods or interval-moment structures that cover the subjective consciousness of the social subject. In the opinion of the authors of the present paper, this problem, is beneficial for the social subject, because, in principle, it makes it possible, in view of the chronology of time, to a certain extent delineate the boundaries of the closest subjective time, because the social subject cannot consider neither past reconstructions without very strong idealizations nor similar future constructions.

It is important to pay attention to the fact that indeed, quite often the past is not seen from the point of view of its dynamic nature; the past can pass through the present into the future without any special evaluation or interpretation, but at the same time it is the past, which can get its value and its specific index, its significance in the future. If you forget about such a past, you can forget about past alternatives, which, possibly, for subjective reasons, have not passed into the continuing present.

The study of subjective time in the context of various social transformations and social development in general involves reaching out to a whole series of aspects that directly concern this issue. In this direction, various positions emerged in the socio-philosophical literature, which are upheld by modern scientists both in our country and abroad, and the leading role is played by a peculiar analysis of the correlation between biological, psychological and subjective time. Indeed, if we recall the historical and philosophical contexts, then we can say that this problem got seriously serious in Ancient Greece, in the Middle Ages, in Modern times and in modern Western philosophical schools. Such well-known scientists as Nietzsche, Husserl, Toynbee, Heidegger and many other philosophers, considering the various aspects of time from the point of view of its subjectivity, sometimes consciously, sometimes not, mixed, for example, questions relating to the correlation of psychological and subjective time of the social subject.

This is indeed a problem that has deep historical and philosophical roots and therefore it is quite natural to address it now, especially since there are not so many fundamental works at present, and the available ones do not always unambiguously consider the synthesis of aspects of this time, since, in most of the research, priority is given in many respects to either psychological time or subjective time. This, of course, can depend on the individual preferences of the research itself and, possibly, on the philosophical school to which it belongs, but in any case, such distortions are not a positive factor for the overall image of subjective time. Especially, it should be noted that when such a synthesis occurs or when the discourse is at the level of comparison, one must take into account the fact that modern psychology in general is reflected in various branches of humanitarian, social, and public knowledge.

Therefore, when talking about psychological time, it should be said that we are dealing with an interdisciplinary research, that is, it is important to emphasize the point that if the subjective time of a social subject in the context of social development is viewed as a momentary, as part of a socio-philosophical study related to the ontological problems, then the subjective time in this case is in no way, in the first place, separated from the psychology itself, and, on the other hand, its use in the scientific discourse is connected with the fact that, indeed, in the mind of a person, there often arises the question of certain fragments of the very consciousness of man, especially since the historical and philosophical thought, especially the philosophy of life, phenomenology, philosophical anthropology, have shown that subjective time of a person and psychological time have been sometimes treated as one and the same. No doubt, it is wrong, these are completely different concepts belonging to different categories, but it has been hard to realize this fact, especially taking into account that in the framework of various philosophical schools such a problem has not been raised at all.

In the opinion of the authors of the present paper, when the term “psychological time” appears in some social and philosophical context, it is necessary to pay attention to the research that is conducted in this case, that is, on its purpose, tasks, on the social subject itself , as, in most cases, the subjective time of a person is really connected with major fundamental philosophical problems and, first of all, with different versions of the formation of human being at different levels of the social being, while psychological time may not occur in such contexts, in principle. Undoubtedly, when the phenomenon of human consciousness is being investigated, it is quite often that scientists who deal with such problems single out psychological time as an independent time. In the present paper, the issue of its independence is not discussed because a special analysis of psychological time is not the topic of the present work, but it is emphasized in the paper that such studies try to put subjective time and psychological time on almost one level of research. This is not correct and adequate because, on the one hand, we explore fundamental philosophical problems connected not only with human consciousness, but also directly with the transition of consciousness into the plane of social development; on the other hand, when it comes to psychological time, scientists most often pay attention to the experimental character of certain moments of psychological time, which is connected with the problems of psychological development.

It should be noted that the study of psychological time and its phenomena, as practice shows, involves a number of problems related to semantic and conceptual difficulties. This problem arises when researchers try to express psychological phenomena in a strict conceptual system. Such a statement certainly has the right to exist, but if it is regarded from the other side, namely, from the position that psychology itself is certainly in its present understanding at the junction of dialectical and applied aspects (though none of the aspects is being denied), but still in this case it should be said that if the emphasis is on applied aspects, then it is difficult to talk about some theoretical or metatheoretical questions that would bring about some clarity about the features of psychological time. On the other hand, such clarity is not required in case of subjective time.

In this case, the problem can be presented in a more general form, when subjective time directly relates to the characteristics and parameters of human consciousness and correlates only with some everyday experience, which in general does not contradict the dialectical synthesis of theoretical and applied aspects of the psychological time of the social subject, then in this situation it should be said that the separation of the subjective and the psychological time of a person can be regarded within wide conceptual systems, in the framework of which certain concepts are discussed.

The subjective time will be part of the paradigm of general scientific human concepts, and as for the psychological time, it cannot be so unambiguously defined because it is possible to describe this concept within the framework of the psychological science itself and then to reach a certain theoretical level, but, on the other hand, when it is necessary to implement this concept in practice, then such a conceptual apparatus should be chosen that is characteristic of some special studies and special sciences. Moreover, in the latter case, one can also say that, unlike the general philosophical view of the psychological time, there is a number of specific moments that require special study involving not only philosophical methods but also the methods of other sciences, for example, physiology, biology and a number of other sciences, on the one hand, while, on the other hand, one can differently understand a person's consciousness, the social experience that a person acquires in the process of realization of the social development in which he actually lives.

Therefore, the problem of considering the synthesis or correlation of social and psychological time will naturally be divided at the level of how and in what directions a person uses subjective and psychological time. In the latter case, it has been proved by the representatives of the philosophy of life, phenomenology, and philosophical anthropology. It is necessary to pay attention to such an important aspect that when a researcher deals with the problem of psychological time at the level of various applied aspects, then, naturally, there appears a wish to move to more general problems. These problems imply the use of a special conceptual apparatus, which clearly does not coincide with the conceptual apparatus of subjective time, though, certainly, certain analogies and parallels can be drawn as the discourse concerns the fundamental problems of time. On the other hand, there is an interdisciplinary problem of psychological time, connected both with some theoretical moments of psychological time, and with its applied aspects. It is worth noting that, indeed, within the framework of the socio-philosophical literature, situations often arise where there is a peculiar intertwining of the psychological and subjective time from the standpoint of certain actions of the researcher.

That is, for a social subject this is quite justifiable, since the problem concerns the correlation of the person's real time with the actions that he/she performs. In such cases, it can be said that the set of concepts used for this purpose is quite wide, since problems concern the experience of time, the feeling, the representation of time, and its reflection. Of course, with such a wide range of problems, subjective and psychological time will be linked in many contexts. The question, which has been focused on above, has not found proper reflection at the present time in the context of interpretation of philosophical and social-philosophical studies both in Russia and abroad.

The authors of the present paper emphasize that such concepts as the duration of subjective time, the evaluation of its organization by a social subject in the context of subjective time, have not been properly studied within the framework of social philosophy yet. Some fragments of this problem are represented within sociological knowledge, and even within psychology, but they are fragmentary, and there is hardly any system approach to the problem. The authors of the paper believe that such a synthesis or search for a correlation between subjective and psychological time should be sought from the position of temporality and those temporal structures, which are now quite well developed by a number of foreign and Russian researchers. In this connection, it can be assumed that consideration of subjective and psychological time can imply a number of issues that are in the competence of both areas of research, of course, with different categorical apparatus. This is both the interpretation and the evaluation of time, the temporal chronology and, of course, a number of issues, which are associated with a fairly complex area of social and philosophical research and with the appeal to human consciousness.

In this case, such a correlation of subjective and psychological time cannot influence the social subject in the context of experiencing the time in which the subject exists, but this certainly involves at least two areas of experience: on the one hand, it is the subjective attitude to the reality within which the subject is located, and the relation of the subject to the different versions of social being in general and his own being, in particular, and, on the other hand, is the experience of the psychological time and psychological phenomena that are certainly relevant in this situation.

In this regard, it is appropriate to point out that, when in a number of scientific studies the physiological, biological or psychological time becomes a priority, then in this case the actions of the individual as a social subject do not always have a priority character. Moreover, it should be emphasized that, for example, if the social subject is considered in such a context, it sometimes makes no sense to consider his cognitive attitude to the existing reality, which makes it senseless to consider this or that subjective time, and, in general, the problem of consciousness and social experience in similar situations sometimes becomes superfluous, and sometimes even goes to the background.

Therefore, when the interdisciplinarity of the problem is emphasized which is associated with this or that combination of subjective and psychological time, these aspects should be in the focus of attention, since they probably do not influence the nature of the basic research, but create such fragments of it that, they do not only interfere with the consideration of the experience and the very consciousness of the social subject, but also make it possible to go into other problems that are secondary in relation to philosophy. We must not forget that the investigated relationship has a number of different aspects, and if the problem of temporality in this case becomes a priority, then it is justified to state that it implicitly covers all that follows from it, that is, in this case we deal both with the subjective and with other types of time.

First of all, the present study focuses on psychological time, because, for example, if we take into account a certain level of psychological attitude to the reality which the social subject is experiencing, then the researcher possibly will not have direct contact with the reality in time, but he can assume a certain picture of the acquisition of human experience from its adaptation to this or that relation within the framework of psychological time, and in this case one can bear in mind a whole series of aspects that are connected with the social development. However, in this case it should be noted that there are several aspects that are not directly related to them and these are the aspects of psychological time, namely: in this case, the psychological time will correlate with certain time parameters with which are faced by the social subject, and as a result of this there will develop a definite picture of the reality that the social subject is experiencing and this reality will concern the fact that the problem of time can move from subjective time to psychological time, since in this case other aspects of human consciousness are considered.

In this case, there is a very serious problem that makes it difficult to conduct research within the psychological time, which is a problem the researcher does not face when considering subjective time. When considering the temporality problem in relation to subjectivity, both conceptual schemes and temporal structures come to the fore. In this sense, subjective time also accommodates the conceptual apparatus of dynamic theories, which cannot be applied in case of psychological time, which largely depends on the features of the social subject's own experience of. This is indeed a very interesting problem and in the modern socio-philosophical literature, sociology, in other sciences the problem is in the focus of close attention. Indeed, the problem that is raised in this case, namely, the combination, synthesis or correlation of subjective and psychological time has very different aspects and shades. And it must be said that in the modern socio-philosophical and other literature there is a number of works that are connected with the fact that subjective time comes to the fore due to the fact that it is associated not only with the levels of social being and the understanding of the being of a social subject. It is associated not just with temporality, which is certainly inherent in both subjective and psychological time. In this case, the most significant aspect is the connection of the social subject with the experience of time, taking into account the interval structures, which stand out against the background of the general idea of the concept of interval time.

It should be noted that philosophers and researchers who worked in this direction had an interesting approach to the interval concept of time, considering it from the point of view of those possible structures that it can include: the moment-interval, metric interval, periodic interval and other structures. However, these philosophers have not always directly linked the concept of subjective time to these structures, which involves problems associated with a deep analysis of the interval concept with the analysis of certain interval structures associated with the possibility of studying the subjective time of a social subject, with the subject’s experiences and the reality in which the subject exists. These studies have yielded really interesting results which at present have made it possible to study not simply the structure of subjective time, but more general problems associated with the relation of subjective time of a person and social development, social and historical processes that take place in a real society. Another important problem is studied in the works of V.V. Popov, I.Hamberstone, S.Kripke. The fact is that they linked the subjective time with a definite transition from the interval concept to its possible interval or mixed structures, and this is a major contribution to the study of the ontological problems of social philosophy, since these researchers do not simply analyze the questions related to the representation or the construction of certain structures relating to the comprehension of time, but, mainly, they paved the way to the construction and modeling of subjective time, as well as the issues related to the interpretation and evaluation of subjective time, which is a fairly important segment of the consideration of subjective time in the context of socio-philosophical knowledge [18-21].

Conclusion

It is advisable to fix the situation: when the subjective time of a social subject is viewed, especially in relation to that period of social development to which the subject has a direct relationship, it is natural to define the fundamental and theoretical bases on which the definition of the durations of phenomena, events, and processes that are characteristic for the consciousness of the social subject through the prism of subjective time.

The present time itself from the point of view of its chronology makes it possible to speak about the complex of events that saturate the present time with the subjective temporality of the social subject, but in the same way one can also say that the social subject has a history that can be reconstructed in which one can find complexes of events that may have arisen in the past, have not materialized, have passed through the continuing present, and eventually can appear in the future. If time is considered through the prism of a social subject’s perception, then there is a certain sphere that relates to the fact that the social subject perceives the present, certain interval, some close, not remote past, the intervals in which the realization of certain processes or events, as well as intervals sufficiently close in implementation, in which there will be implemented the trends that were laid at different levels of social being. That is why it can be said that the consciousness of the social subject intentionally directed at a particular area the center of which is the interval of the present time or continuing present, in which the initial evaluation of certain events, conditions or processes developing in the general historical process takes place.

It is shown in the paper that time really “branches” into the future, and, naturally, the researcher has the right to say that in the past there were alternatives that were not realized, but their further destiny deserves special attention. These alternatives can be interpreted both in the continuing present, and make up fragments of the future. In general, the acceptance of such intentions in relation to the structure of time, the intentionality of consciousness in relation to these structures, certainly has been influenced by phenomenology. If we are talking about a certain fragmentation of the chronology of time into periods, intervals, moments, etc., in this case it is, to a large extent, connected with the need to solve those specific tasks that posed in the research, so one should not attach very serious value to the rigid division into intervals, moments, into periodic, metric and other structures. The situation is more flexible, it is connected, first of all, with the present, i.e. the continuing present; therefore, the structure of social or historical processes, which in this case passes through the continuing present, will naturally have a certain structure, and it will be associated with the developments and achievements that are available within the framework of modern time structures, and accordingly with the modern temporal reference.

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Identification of Current Scientific and Practical Research Trends in the Performance of the Product Distribution System in Traditional and E-Commerce

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Abstract

This article aims to define and investigate practice-oriented trends in modern academic and practical research on the performance of the product distribution system in stationary commerce and e-commerce. The outcome of the study is the provision of a rationale for the differentiation and distinctive features of these trends in the context of major differences of the institutional and market mechanisms relating to the present-day and, most likely, future transformation of the product distribution system in stationary commerce and e-commerce as well as to the role and significance of the logistic component in one- and multichannel supply chains. The study led to the identification of a new vector of the empirically articulated research into logistics knowledge, which is to synthesize new tools designed to adapt the supply chain to current challenges.
Keywords: product distribution system, supply chain, multichannel supply chain, logistics, academic research

Introduction

With the advent of the Internet, the shift of distribution channels and communication with consumers to the online environment has led to a considerable transformation of logistics, which is fundamentally different from the mechanism and patterns of its modifications on the stationery market.

The Internet has made it possible not only to finish building value chains in a digital environment, but also to expand distribution potential in technological terms. All of the above has led to the emergence of new business online retail models, has expanded producers' capacity to boost its institutional restructuring processes and to explore new ways of solving logistic issues relating to product distribution and new sources of investment into logistic infrastructure. All of these processes are closely related to each other.

Considering the above factors, an in-depth analysis of the performance of the product distribution system in stationary commerce and e-commerce shows that present-day digital distribution channels feature a markedly different mechanism for developing supply chains and the trade logistics infrastructure as its immanent component.

A comparison of these features and patterns allows to differentiate between the level and the vector of the impact that commerce and logistics have on the development of product distribution processes as well as to detect its most relevant patterns, whose evolution is already shaping the area of practice-oriented research.

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Materials and Methods

Important scientific and practical research in logistics includes issues relating to the cooperative interaction of the product distribution network, the market sustainability of supply chains and the emergence of the resulting vector of their current market evolution in product distribution in Russia.

Researchers such as V. Borisova [2], E. Vetrova [3], A. Voronova [4], V. Gasparyan [5], D. Lopatkin [13], V. Sergeyev [23, 24] and M. Chernyshenko [25] carried out a thorough analysis of the present-day institutional transformation of one-channel retail trade and the development of e-commerce indicative of a new phase of its market development cycle. They attempted to assess the impact of the expansion of e-commerce and of new marketing communication channels on the formation of a balance model of the development of a retail distribution system on the consumer market. What their research studies have in common is the empirically articulated acknowledgement of the increasing role of e-commerce in the consumer market's distribution network.

This study will seek to specify, to refine and to sharpen the focus of present-day scientific and practical research in stationary and multi-channel commerce logistics, which has specific distinctive characteristics and performance patterns.

Results

Figure 1 shows the distinctive features of and issues relating to the performance of the stationary product distribution system in modern commerce.

As may be seen from the figure, the most significant of them, indicated by arrows, feature units specifying current trends in practice-oriented research that have already been implemented in modern logistics. These units' structure fully reflects the research and publishing activity of modern researchers and specialists, the specific nature of related logistics research, including in the Rostov Logistics School. The latter attaches great importance to the disparity of market power in supply chains resulting in the redistribution of profits in favor of trade networks and a distinct shift of the center of accumulated value to commerce.

As of now, the institutional and market stress on this vector and on this disproportion in suppliers' logistical cooperation and chain retailing has led to commerce's excessive pressure on the tradable goods sectors, which is one of the major reasons behind its structural imbalance.

This increased potential difference has lapsed into inertia that cannot be overcome, in fact, even in the regulatory framework of market exchange administration rules. It has proved largely ineffective, as illustrated by the Trade Law of 2009 and the subsequent state regulatory practices.

The remaining features of the production distribution system's performance on the Russian consumer market do not produce any effects that might considerably reduce its economic efficiency or increase the asymmetric logistical infrastructure of its component parts.

Today, they are based on a static (as of now) view of the specificity and developmental characteristics of the product distribution system in traditional and digital marketing channels. Over time, the evolving online commerce and its operators may lead to a new result showing characteristics other than those presented in the figure.

As an example, the growth of online market, a more active development of online aggregators and the increase of the market power may result in an asymmetric distribution of profits in their favor and, consequently, in a situation identical to what we have in traditional commerce. In the latter, trade networks also have a monopoly on and stronger market power over suppliers. The rapid development of online commerce and ample opportunities for aggregating a client base create favorable conditions for the future implementation of such a scenario [1, 2].

The development environment of online retail is of multi-factor nature, which requires a deeper research and practical evaluation of the coevolution of traditional and digital retail in Russia.

A major goal of the present study is to show the difference in the dimension of this research due precisely to different institutional, market and technological conditions for the development of stationary and e-commerce.

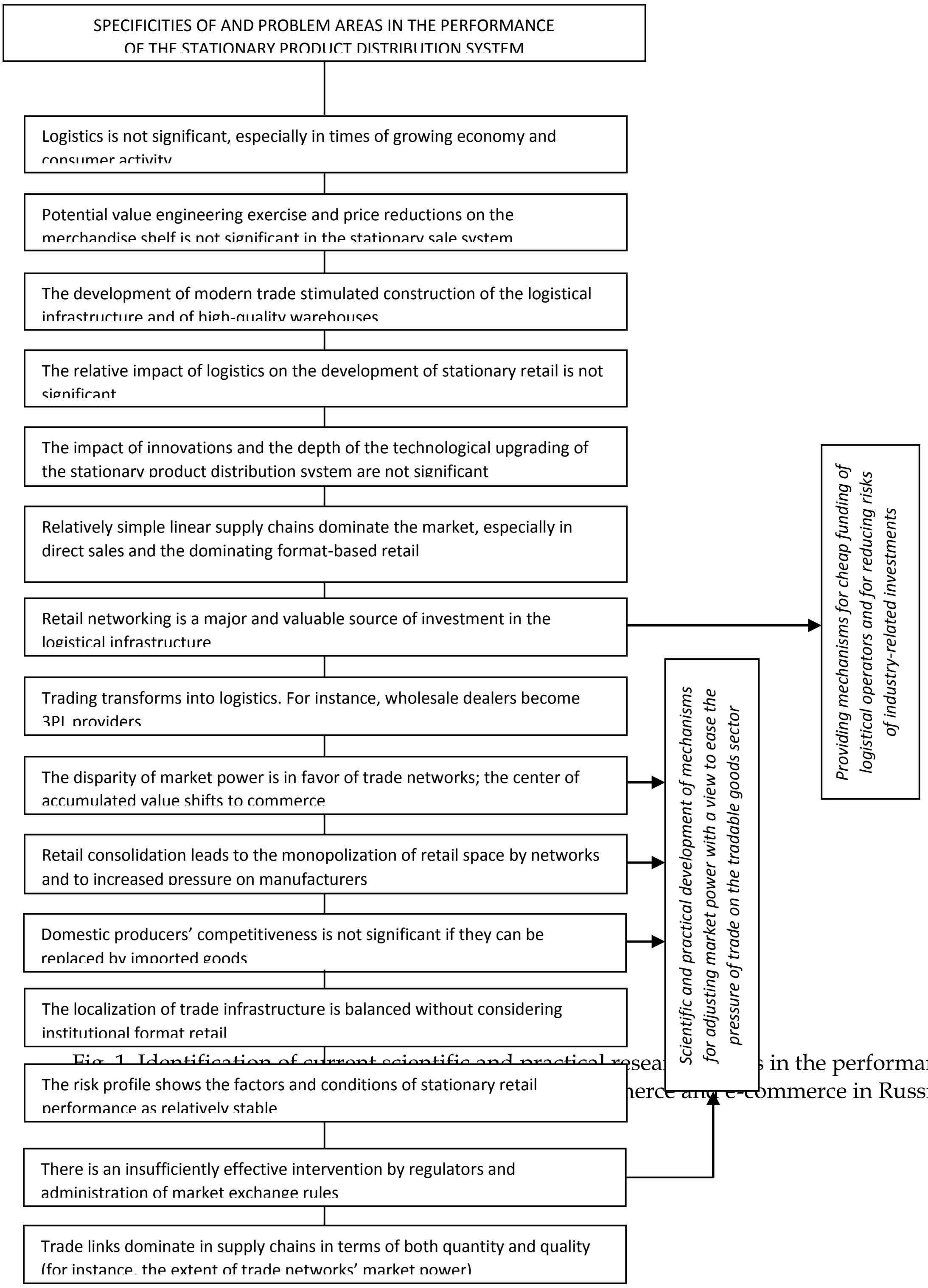

Fig. 1. Identification of current scientific and practical resea… s in the performance … herce and e-commerce in Russia

Based on this conclusion, consider now Figure 2 that shows an "equivalent" diagram for online commerce.

The same structural pattern of factors behind the performance of the product distribution system shows differences in factors driving current challenge-oriented research into online marketing channels [4, 5].

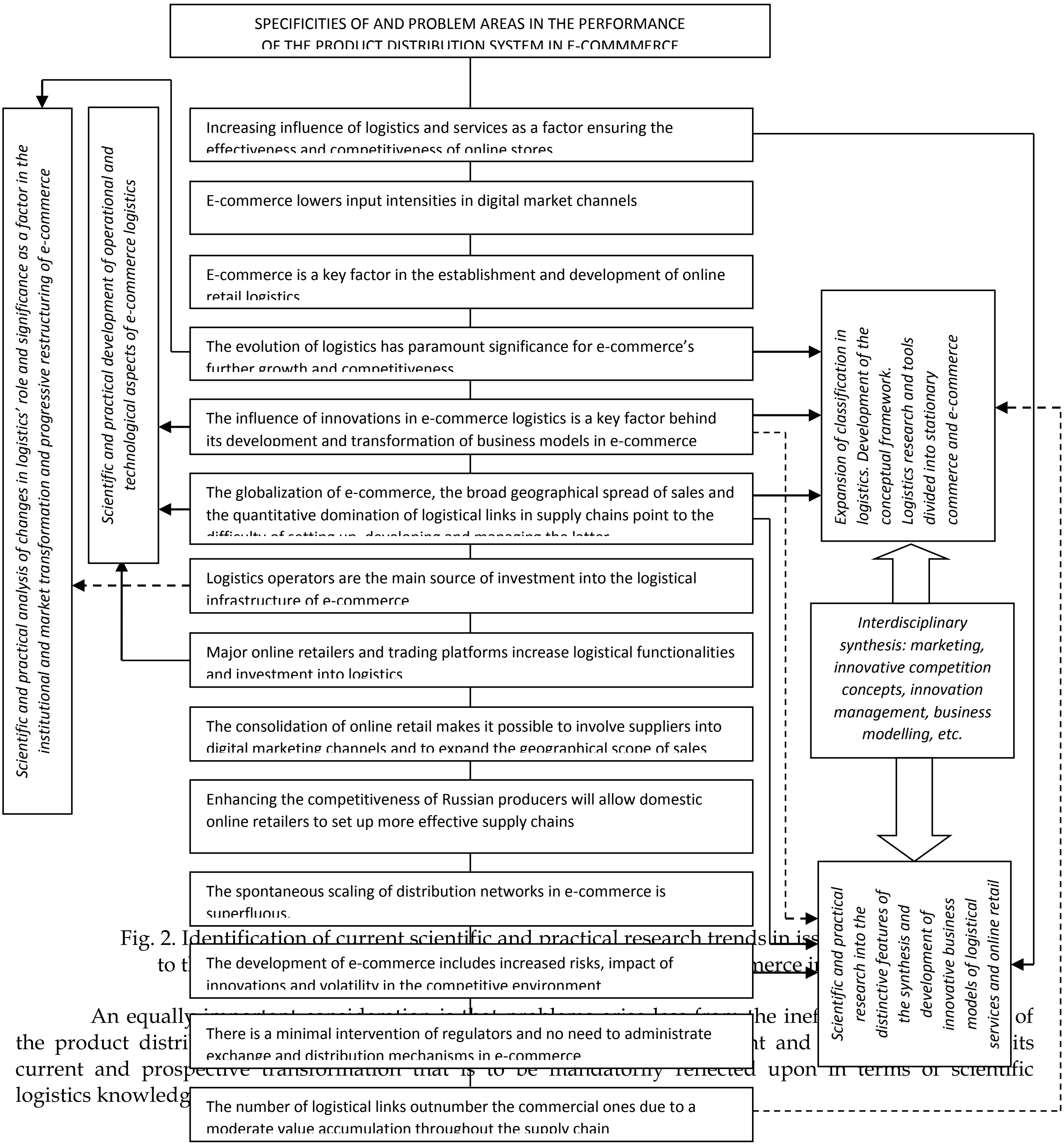

Fig. 2. Identification of current scientific and practical research trends in iss… to t… …merce i…

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Discussion

What is characteristic of the above diagrams is that they show distinctly different aspects to the performance of the product distribution system in stationary commerce and e-commerce.

In traditional retail business, the key takeaways of its empirical developmental complexities are related to the aggressive growth of trade networks that not only increase their market power, but also expand tools for profit redistribution in their own advantages. This leads to a shift of the center of accumulated value to commerce, in which the concentration of capital and profit greatly exceed the capacity to use them effectively. This factor results in the increasing pressure of commerce on the tradable goods sector, which is today one of the major axes of its structural imbalance.

The remaining issues relating to the performance of supply chains and of the product distribution system on the consumer market are not essential and, generally, result from the market evolution of the circulation of commodities in Russia. A major surge in the use of innovations took place during the advent of trading networks that introduced industrialization technologies into commerce, increased investment in the trade and storage infrastructure, abolished the traditional business model, i.e. wholesale distribution, and the open market format, got closer to suppliers and developed the direct sale system, thus shaping short supply chains, in which they dominate today. All of these processes are now institutionally embodied and do not give rise to issues that need to be urgently addressed.

E-commerce presents a markedly different landscape, a market growth mechanism and online retail scaling. The institutionalization of e-commerce brings about different effects and issues that have nothing to do with the asymmetry of market exchange, which dominates in traditional commerce.

As a new information technology, the Internet enabled present-day businesses to expand supply chains to digital marketing channel, thus responding to many challenges facing modern producers and affording them ample opportunity for moving on to the federal level and for substantially expanding the geographical spread of sales under moderate price pressure. Importantly, the latter does not increase the asymmetry between e-commerce and suppliers in terms of market power distribution and profits. Even the expansion of the most institutionalized form – Internet trading venues – contributed to the growth of the market attractiveness of suppliers and/or online shops, additional distribution services and cost-effective logistics minimizing costs of small Internet shops and the competitiveness of their products' final cost.

This said, e-commerce acted initially as a catalyst for the development of digital marketing channels and logistics. However at the later stage of the market evolution of online retail and market places, logistics started to act as a means of improving online retail's efficiency and competitiveness and, particularly, of maintaining the vitality, that is, the market stability of the online platform business model. Currently, their low marginality rate makes them actively develop their logistic schemes and services, abandon the purely marketplace model and engage in procurement and sales. These activities increase the share of the return traffic thus ensuring online retail business's sufficient cost-effectiveness.

In other words, the consolidation of online retail and the emergence of market places in e-commerce – unlike the consolidation of retail trade (the growth of trading networks) that leads to the asymmetry of exchanges – does not produce any negative impacts that would harm the performance of logistics cooperation or would increase pressure on smaller online shops. In traditional retail business, trading networks do not deal with small suppliers incapable of meeting their demands on logistics and supply volumes and frequency. In online business, on the contrary, trading platforms are the ones that solve issues facing suppliers and small online shops, providing them with cost advantages through the outsourced expressed delivery logistic service. Unlike traditional trading networks that invest in logistic services themselves, the complexity and the multi-link nature of e-commerce logistics in online retail business (long-haul logistics, fulfillment and broadband last mile) encourages an active development of the logistic ecosystem, mostly using the resources of logistic operators themselves.

At the same time, examples of the independent development of logistics and investment into the logistic infrastructure by major online stores (KupiVip or Lamoda) mirror a certain logic of a proactive development of online retail business. Investment in logistic services leads to its improved competitiveness and profitability of the business model, with the following advantages:

- A supplementary source of business monetization that increases profitability while improving the logistic functionalities through reinvestment of profits from outsourcing activities;

- A barrier to new operators' market entry, whose active business activities will not be related to increased investment risks in the logistic infrastructure. A shift to the outsourcing services provided by bigger online shops result in a specific form of self-fixing (self-reproducing) dependence.

Thus, it can be concluded that the role and significance of logistics, the principles of marketing cooperation and interactions between big online retail businesses and small online shops and/or suppliers differ considerably from what happens in stationery commerce dominated by formatted network retail.

Therefore, as illustrated in the figure above, prospective scientific and practical research will focus mostly on the development of a new classification logistics basis, whose ecosystem structure is distinctly different in stationery and digital areas [18]. In other terms:

- There is a different kind of "fragmentation" of the constantly developing production and commercial cycle. On one hand, there exist different ways of building supply chains in drop shipping or independent stock formation. On the other hand, today marketplaces, for example in Russia, gradually abandon the "pure" marketplace transaction model, which has no warehouses of its own, unlike, for instance, AliExpress. Marketplaces' shift to the retail field complicates even more the business model and produces new focus areas, the need to manage fence logistics and sales, to optimize the range of products and to turn to the debt financing of the working capital when developing regional deliveries with long logistics that extends the stock turnover;

- Unlike stationary retail, trade links are much more dependent on the performance of logistic links, whose number are greater due to the fact that e-commerce logistics is more fragmented and longer. This entails a different order and management pattern, other more sophisticated operational platform junctures, new reasons for expanding and promoting integrated, "last mile" express delivery services and fulfillment enabling the single-window mode;

- Application of different logistic management techniques in online retail business and in traditional commerce, management of multichannel supply chains and operational business processes of their omnichannel integration and more.

On the other hand, e-commerce reveals an extremely complicated overlap between technological innovations, part of which, for instance, acts as pure technology boosting operational logistic effectiveness and express delivery management. Others are brand new approaches to building delivery business models and new types of online logistic services, whose entry on the market leads not only to the transformation of the traditional online retail business, to its fragmentation, but also to changes in offline markets. As an example, the launch of express delivery services (Top Delivery, among others) resulted in the emergence of offline businesses (kitchens) producing food and ready-made meals for online sale only [14]. Acceleration of order processing, routing and use of specialized mobile transport vehicles allowed to considerably increase a value proposition and to reduce delivery time in comparison, for example, with Utkonos, a Russian online supermarket. At the same time, further development of the model of impulsive buying behavior, including by approaching online shipping logistic standards to those of stationery commerce, will boost the development of equivalent departments in large-scale network retail trade, which will transmit this inessential competence to HoReCa specialized express delivery services. At the same time, "only those will be successful who offer not only excellent service in terms of timeliness, but also a comprehensive solution ranging from an order placement and the identification of a client's need to the service's simple disposition and flexibility and a solid support for this service from digital tools" [21, p. 83].

The Internet and logistics provide new operational and digital express delivery platforms and technologies resulting in the emergence of new business models: crowdsourcing delivery, order consolidation platforms and expanding current business models. The latter concerns, for example, the payment industry (QIWI), which is now setting up a private agent-based post network using QIWI payment terminals that resolve the payment-on-delivery issue on the spot.

The ideological and theoretical basis for the establishment and development of innovative business models in present-day logistics enters into an interdisciplinary relation with new approaches and methods presented, above all, in the latest marketing theories and competition concepts (Christensen's theory of disruptive innovation, Chan Kim's blue ocean strategy, etc.) [8, 10-12, 22].

Therefore, technologies are not the only important factor in the establishment of innovative logistic delivery business models. Of much greater significance are the innovative theoretical ways of building uncompetitive businesses that change the balance of the strategic value proposition canvas, using the new principles of on-demand economy. The importance of applying relevant new methods for constructing express delivery business models is evident in the unsuccessful shift of the existing business model from one market to another. As an example, there are limited prospects for shifting Uber to the trucking market, in which urgency is much less important than smooth workflow and cargo safety – something this model leaves unaddressed [28, 29].

Overall, the current and prospective development of online retail logistics in relation to the innovative upgrading of business models dominating this market, i.e. online shops and services, should be based on a transdisciplinary synthesis of the latest methods and competition theories, marketing, innovation management and so on.

Russian researchers E. Krivosheya and Y. Semerikova (Department of Finance, Payments and E-Commerce, Moscow School of Management SKOLKOVO) summarize in the following way the distinctive features of the current "straightening" of economy due to the elimination of the intermediate party link from the transaction chain.

"We have gone into a period of time when the use of old, long-established methods gradually becomes outdates, stops working properly and may hide important ideas from managers' view. As for the outdated economic theories, they make erroneous predictions about impacts of shock on economy, which could lead to unintended consequences" [9, p. 51].

What enables the establishment of entirely new, decisive competitive advantages is the application of innovative competition concepts and approaches to business development.

Importantly, using this intrinsically and potentially progressive and practical theoretical basis is effective not only during the development of new services, but also in the process of promoting existing business models, for instance, at a time when new companies enter the Pick Point delivery market [19].

Pulse Express is a good example of a company that avoided the traps of traditional competition and created a "blue ocean" on the traditional Pick Point delivery market. The company has implemented the new concept of spatially localizing the Pick Point network ("Pick Point at Home") and has expanded vastly both geographically and quantitatively, thus excluding the possibility of other operators' entry into the market at the same location, mostly due to a resource gap [6, 7, 26].

On the other hand, the operational and technological upgrading of specialized express delivery services changes consumer demand's trajectory. This applies, for example, to the basically multi-level food delivery market, in which "the trajectory of the improvements needed by the market is more slopıng than that of real technological solutions", as reflected in the theory of disruptive innovation [10, 27].

The implementation of the above approach as part of the operational development of express delivery logistical services in HoReCa offers the following benefits:

- It changes and reinforces the model of impulsive buying behavior resulting in increased demand for this or that service in the digital environment;
- It brings about radical transformations to the offline retail market, part of which can be converted entirely to suit the needs of online readymade meal and food business;
- It diversifies even major offline fool retail businesses: as an example, Metro is a Russian company that not only focuses on the classical Cash&Carry line of business, but is also developing a distribution network, i.e. business deliveries; the latter's advantage is that is provides for the comprehensive producer-to-client control of a supply chain. Importantly, "this company has been working on its delivery service in Russia since 2009, but it is now that this focus areas has become a strategic one" [21, p. 78].

In the long run, the above-mentioned service should be one of Metro's growth drivers in Russia, given that "according to the latest research, the volume of sales using a delivery service accounts for 17% internationally" [21, p. 78].

Conclusions

The above illustrative examples lead to the conclusion that current trends in the interdisciplinary synthesis in e-commerce logistics are most likely to develop by converging with the latest competition concepts. The latter focus not as much on the instrumental provision for analysis and tactical decision-making processes, as is the case in traditional logistics, as on the conceptual and substantial expansion of new approaches and ways of using information technology and logistic delivery technologies as well as their changing balance, which ensures the innovation of the commercially successful uncompetitive value proposition [18, 19].

This focus area is radically different from the distinctive features of the transdisciplinary synthesis in logistics that were announced at its initial stage. In it, the general systems theory, cybernetics and the theory of research and forecast were supposed to deal with management problems, whereas institutional theory had to interpret and solve issues relating to corporate co-existence in Russia, the development of cross-sectoral supply chains and logistical infrastructure, among others.

The analysis found that institutionalism was in high demand in traditional commerce. While remaining valid, it no longer shows any real effectiveness because asymmetric market trading is still an acute issue today.

All of the above is less important in e-commerce, in which the market evolution of the product distribution system has entirely different patterns and produces different effects, whose solution does not require the application of institutional theory [18].

Importantly, the development of e-logistics and of innovative express delivery business models through the prism of progressive marketing theories and the latest competition concepts point not only to the changing vector of the transdisciplinary synthesis and of logistics' classification attributes, but also to the need to update its conceptual framework. The latter is closely related to the nonlinear development logic of e-commerce, the emergence of alternative logistical operations managers, crowdsourced delivery services, etc.

All of this allows researcher to substantiate the development of current and prospective practice-oriented research in online logistics, to highlight their specific nature and differences from logistical research in traditional commerce's consumer segment.

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Risks of the students' social Internet activity in a complex society

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Abstract
The relevance of the article is determined by an acute problem of increasing risks in social interaction of young people in the virtual space, receiving services and realizing their communication needs through Internet resources. In the conditions of a modern complex society, the comprehension of scientific and practical works, exploring the dangers and risks associated with the digitization of various aspects of human life, acquires special significance. The purpose of the article is a sociological analysis of the concept "risks of social Internet activity" of young people and its disclosure based on an analysis of phenomena and processes related to the behavior and activities of young people in virtual space. The paper presents data obtained in the course of sociological research related to the risks' characteristics of social Internet activity of young people. The authors show the need and recommendations for reducing the risks of social activity of young people in the Internet space. The materials of the article are intended for heads of educational organizations, organizers of work with young people, teachers, psychologists, specialists in the field of information security.
Keywords: youth, Internet, social activity, risks, regulation of virtual space.

1. Introduction

The concepts of a risk society [12], the riskiness of processes and phenomena [30], which determine the essence of uncertainty [13] and the "normality of catastrophes" [9], the ambivalence of the accepted managerial decisions [29] in the conditions of a complex society [20] acquire popularity among modern scientists to explain the modern stage of human evolution.

Understanding the risks in accordance with the approach of S.A. Kravchenko [19] the emergence of a situation with uncertainty, based on the dichotomy of reality and possibility is described as the onset of objectively adverse consequences for social actors (individual or collective), as well as the gaining of profit and benefits, which is subjectively perceived by actors in the context of certain value coordinates, basing on which one choose an alternative for the action. In that angle, let us note a certain risk of social Internet activity of young people.

Objective reality in a modern society, characterized by scientists with adjectives "network" and "information", in general, represent the high level of involvement of the population, in particular, of young people, in Internet communication, through which they not only gain access to relevant information resources, but also in many ways realize their needs in social communications, meeting other needs, obtaining virtual services.

It is also necessary to take into account that the modern youth's way of life is characterized by its close connection with virtual space, which often acts as a source of obtaining referential expert opinions on various problems of one's life, and virtual interlocutors have a significant impact not only on the content of leisure, information exchange, but also on the assessments formation, values, development direction of the individual.

Along with the positive possibilities of using Internet resources in various spheres of life, the risks of communication in the virtual space are also increasing, which is stipulated in local doctrinal documents of information security [16], as well as described by scientists and practitioners from Russia [24; 34] and other countries [2; 3; 4; 6; 7].

Currently, there is a fairly wide range of sources that describe various aspects of this issue.

The peculiarities of the Internet space, such as a specific social environment, social communications, education and personal development have been sufficiently revealed [35; 5].

The description of the dangers and risks of the Internet space includes the results of independent studies of its influence on psychological safety, problematic issues of the formation of Internet communities, Internet addiction prevention of adolescents, and prevention of youth involvement in extremist groups in a virtual environment [10; 25; 32; 23].

Essential aspects of personal activity in a virtual environment are disclosed in works which study the subject of Internet communications as a special consumer of services through digital technologies [15; 1].

A number of works reveal the specificity of Internet activity of young people as a special social group that go through cyber socialization, realize specific needs, common for adolescence [31; 14; 26; 27; 28].

To develop scientific knowledge, works that reveal the methodological aspects of studying the risks and dangers of Internet activity in general, as well as their features for young people, are very valuable. [11; 22; 8].

2. Methodological framework

In this regard, organizers of work with young people, authorities, administration of educational organizations, teachers and practitioners need more complete information about the risks of virtual educational space for the application of less risky learning technologies that involve students' communication in the Internet environment. In order to more fully describe the various aspects of this problematic situation a sociological study "Modern digital communications as a risk factor" (code name "Youth in the digital world") was conducted in 2017-2018 basing at the Financial University under the Government of the Russian Federation, under the scientific supervision of the Doctor of Economic Sciences, Kibakina M.V. In the course of the study, 527 undergraduate students of the first (65.1%) and second (34.9%) years, studying in the social, humanitarian, financial and economic directions in Moscow, as well as in the Moscow, Samara and Smolensk regions, representing 31 districts of Russia, were surveyed. The database was created in the professional statistical package for social sciences SPSS Statistics. The results of the study are verified at the error level of 3.4% and placed in the archives of the Department of Sociology, History and Philosophy of the University.

First of all, it should be noted that the respondents did not express the overwhelming majority of negative feelings about interaction with virtual space. Thus, 74.0% of students feel comfortable in a virtual environment (Internet space, "digital world"). Another 20.1% of respondents describe the level of comfort as more comfortable than less. Only 4.7% of respondents could not accurately indicate the level of comfort, and 1,2% say that they feel uncomfortable to some extent in the virtual space.

Modern student youth for the most part do not have language barriers for the consumption of English-language information and navigation in foreign Internet resources. 66.2% of respondents stated that they are fluent in English enough to successfully use Internet resources, and 33.7% say it definitively.

About a quarter (23.1%) could not definitively assess the level of their language training for these purposes. Finally, only one in ten (10.7%) said they have insufficient knowledge of English (1.8% indicated it definitely).

Characterizing the involvement of young people in the Internet space, it is important to note their high representation in almost all popular information resources.

To this end, respondents were asked, if they have any accounts on various Internet resources. The obtained data shows the proportion of young people who are represented on the resources, included in the list.

The most popular is the network "Vkontakte", in which 98.8% of young people are registered. The resource of Instagram is very popular (78.1% registered of the total respondent's number).

About half of the respondents are registered in Youtube (59.8%), Facebook (54.4%), and Telegram (52.7%). Relatively smaller share is registered in "Twitter" (33.7%), as well as in "Odnoklassniki" (10.1%).

To determine the priority of the Internet use, a normalized rate of access to virtual resources was calculated. Its values can vary from "1" - the maximum value, to "0" - the minimum value, and the value indicates the priority level of certain goals. The results of the research show a high density of information flow in various spheres of life, in which young people participate.

At the same time, now the priority for students in the virtual space is to obtain information (index 0.9645), social networking and chatting (index 0.9615), as well as the use of Internet resources for learning (index 0.8755).

At the average level, respondents have the use of the virtual environment for communication, receiving and sending mails (index 0.8020), as well as entertainment and recreation (index 0.7935).

Relatively lower priority is for young people to use the opportunities provided by the Internet to pay for goods and services (index 0.5595).

Experimental data allow us to characterize the activity of young people in virtual space, as risky, coupled with the presence of a number of dangers and threats.

Despite the fact, that the majority of young people (62.1%) do not remember the case when they felt threatened, while communicating on the Internet, or felt the danger from their virtual interlocutor, about a third of them were in such situation. And 17.2% say that this situation repeated several times.

It is also typical, that the Internet environment produced dangerous phenomena for mental health, reputation and material well-being. Thus, 37.9% of young people report that they had cases when negative, false and anonymous information was posted on the Internet about them personally or about their relatives. 36.2% of the respondents were in a situation when they faced cheating and fraud, while searching for work and using Internet resources. More than three-quarters of young people (75.2%) have negative experience, due to the fact, that important information for them on the Internet turned out to be untrue (fake, throw-in, simulacrum), 63.3% of respondents faced the cases, when ordered goods in the Internet stores were not delivered, or were of inadequate quality.

An alerting fact is that there are young people who do not care about the presence of the virtual interlocutor's criminal record (23.1%). Also, let's note that another 34.9% of respondents cannot clearly figure out their position on the importance of this information. Less than half of young people (42.0%) consider it important to know about the existence of the criminal past of the person which they interact with in virtual space.

Not less alerting the fact that the respondents show low ratings on the importance of basic socio-demographic characteristics of people, who enter into virtual interaction with them, like gender, age, place of residence.

At the same time, among young people there is a significant proportion of those who have some idea of the dangers to fall under somebody's influence in the Internet environment. For example, some respondents believe that some information resources conduct the formation of the public opinion, behavioral attitudes, and world view that vital for them. This is the opinion of the respondents about Facebook (43.2% of respondents), Yandex (34.3%), Google (31.4%), Wikipedia (28.4%).

Serious risks for young people include the dehumanization of human relations in a virtual environment, reducing them to primitive "likes", "posts", "reposts", the use of pictograms to express their thoughts, feelings, emotions. These threats are clearly manifested in the so-called risks of "gamization" and "McDonaldization", emasculating the humanistic, the very human nature of the relationship between people.

The risks for youth and juveniles are that criminals can use the game to steal personal information, incite to suicide or violence, bully, extort, provoking physical and psychological disorders such as anxiety, depression and insomnia. So, serious risks are borne by various clubs that provoke suicidal behavior (the "Siniy kit" group, the MOMO game and others).

As you know, the danger turns into a real threat, if a person cannot resist it. In order to find out the readiness of young people to reflect the negative impact with the help of referents, a rating of trust to subjects of real social interaction was defined in the event of a threat on the Internet.

The rating is determined by comparing the normalized indices of the expressivity level of the recourse patterns to various people, authorities. The normalized index was determined in the range from "1" - the maximum value, to "0" - the minimum value.

Ranking of trust in subjects of interaction from the angle of receiving assistance in the event of a negative situation on the Internet revealed the following picture.

"Friends and pen-friends" have the greatest trust level (index 0.7665).

Further on the descending rating are: "parents, close relatives" (index 0,6505); "authorities, law enforcement officials" (index 0.4765); "friends in the network" (index 0.2130); "those who respond in the network" (index 0,1625).

In the group of outsiders on the level of trust in solving problematic issues in the Internet environment are: "psychologists" (index 0.0980); "teachers" (index 0.0890); "religious figures" (index 0.0795).

The security of the educational Internet environment is characterized not only by the absence of threats for students, but also by their ability to effectively confront them, using adequate means of protection. In this regard, students are invited to assess the acceptability of various forms of reaction to the emergence of a threat to them in virtual space.

The results of the survey showed that 37.9% of students prefer to "not to pay attention" to the threat, choosing the riskiest behavior in a threatening situation. Another 27.8% do not reject such behavior. And only a third (34.3%) believe that this situation must be paid attention to, taking appropriate measures. The general index of the preference level for such a reaction form is 0.5180.

However, the most acceptable form of response to the emergence of a threat in the virtual space for respondents was the "attempt to understand" (index 0.7810). Further on the rating there are such forms of reaction as "I will try to calm down, relax, have a rest" (index 0.6040), "I will suddenly quit the situation, closing my account or changing my passwords" (0,6010), and "I will ask for help from authoritative people" (index 0.5000).

The lowest level of preference for students was given to such forms as "I will ask the authorities for help to protect from the threat" (index 0.3135), "write in the network for help" (index 0.2480), and "I will take revenge on the offender" (index 0.2455).

An important direction to improve the security of the virtual environment is the introduction of legal mechanisms to regulate the relationship between users.

However, for Russian students this is not so obvious. About half of the respondents (53.2%) agree with the need for legal regulation of the Internet, with 20.1% saying it definitively. Almost one in five (17.8%) cannot clearly define if they are "for" or "against". Also, 29% do not agree that the Internet needs legal regulation, with every sixth (16%) confirming it definitively.

However, it would be incorrect to diagnose significant signs of legal nihilism among Russian students on the basis of the made estimates. Most respondents, in the course of the study, stated that the formation of the sense of justice, honesty, decency among specialists in technical specialties or computer technology is definitely important (49.1%), or more important, than not (37.3%). The alternative opinion is held only by 7.1% of respondents (4.7% definitely against), with 6.5% undecided.

There is a rather wide range of opinions among the respondents in relation to the expansion of mechanisms for monitoring people through video cameras, inspections, reading of correspondence and conversations. Only one in ten (10.7%) agree with this trend in the system of modern security. Another fifth of respondents (20.1%) are more likely to agree with this than disagree.

The insufficient formation of the youth's position to the process of strengthening control over people on the basis of modern technologies reflects the fact that 29.6% of the respondents found it difficult to explain their opinion about this matter.

There is a large proportion of those who deny the need for greater control. 19.5% definitely do not agree with this, and another 20.1% rather disagree than agree with the process of expanding control.

What most respondents do not agree with is that it is necessary to limit the access of residents of other countries to the "Russian segment of the Internet". This was stated with some degree of certainty by two-thirds of respondents (68.1%). An intermediate position between "yes" and "no" is occupied by 18.3% of students. 13.6% agree with the need to limit access to the local segment of the Internet (4.1% are definitely for restrictions without any doubts).

Some optimism in the formation of a positive attitude of young people to the virtual environment is reflected by a significant proportion of those who believe that Russian specialists are able to organize a modern competitive digital Internet environment for economy. These optimists are represented by 17.8% of those who definitely believe in it, as well as 33.1% of those who believe rather than do not believe in the capabilities of Russian Internet industry experts.

Among the respondents, 24.3% cannot definitely assess the capabilities of Russian personnel to create a competitive Internet environment. There are also negative assessments of capabilities in this area. 8.9% said they do not believe in it, and another 16.0% rather do not believe it, than believe it.

The next group of risks of Internet activity of young people is related to their attempts to engage in entrepreneurial activity, using the appropriate opportunities of digital technologies in the Internet space.

The most likely risk that can be met on the Internet, while conducting economic activity, as 67.8% of the respondents believe, is the risk not to get money for the rendered services. 33.9% of respondents believe that the risk of being uncompetitive, incurring losses, bankruptcy is also possible in Internet entrepreneurship.

In addition, 28.7% of respondents believe that, when conducting economic activity on the Internet, there is a risk to meet with criminal assaults. Fewer respondents, 27%, believe that there is a risk of being investigated by the tax and law enforcement agencies. 18.3% of respondents say that, when conducting economic activity on the Internet, there is a risk of meeting with mentally abnormal people. Also, 10.4% of respondents believe that immersing themselves in the Internet space, there is a risk of breaking family relations or family ties.

Comparative analysis shows that girls are more afraid not to get money for the rendered services (involvement index 0.7030) than boys (involvement index 0.5000), while boys are more afraid of family relations break-up (involvement index 0.2140) than girls (involvement index 0.0890). In addition, girls are more afraid to meet in the Internet space mentally abnormal people (involvement index 0.1980) than boys (involvement index 0.0710). However, boys (involvement index 0.3570) are more afraid to become the object of investigations by the tax and law enforcement bodies than girls (involvement index 0.2570).

Speaking about the distribution principles of the risks possibility when entering Internet entrepreneurship, according to respondents, among the groups of people with different earnings, it can be said that people with low earnings most often allocate several risks: "the risk not to receive money for the rendered services" (involvement index 0.7000) and "the risk of not being competitive, incurring losses, going bankrupt" (involvement index 0.4000). People with average incomes more often than usual allocate "the risk not to receive money for rendered services" as the main one that a person can meet by joining Internet entrepreneurship (involvement index 0.6790).

For people with high incomes, "the risk of not getting paid for rendered services" is singled out as the main risk that can be met by conducting economic activity in the Internet space (involvement index 0.6670).

When characterizing the qualitative and quantitative parameters of real entrepreneurial activity in the Internet space, it should be noted that students are divided according to the indicator "engaged" or "not engaged" in Internet entrepreneurship. According to the results of the study, about one third (30.2%) of students are engaged in entrepreneurial activity on the Internet. Accordingly, the rest (69.8% of students) are not engaged in this activity

Various forms of economic activity on the Internet differ in their popularity for respondents.

The most widespread form of economic activity on the Internet among students is "copywrighting", with 6% of students constantly occupied in it. In addition, 11.2% have a single experience in "copywrighting".

The next important form of economic activity on the Internet among students is "advertising". 3.4% of the surveyed students are constantly occupied in it, and 15.5% of respondents have a single experience in "advertising".

Further along the rating, "advertising" is followed by such form of Internet entrepreneurship as "video blogging". 0.9% of the surveyed students are constantly occupied in "videoblogging", and 3.4% of the respondents have a single experience in it.

The last place in the rating among students takes "streaming", meaning streaming media, that allows you to receive video and audio in real time. None of the respondents "streams", however, 3.4% of the respondents tried it at least once.

Comparative analysis shows that Internet entrepreneurship is most popular among boys (involvement index 0.5710) than among girls (involvement index 0.2670). This analysis also allows us to state that the level of family income influences the activity of the participants in Internet entrepreneurship.

In particular, this type of activity is the most popular among people, which financial status is characterized like: "we don't have enough money, we have to save on food" (involvement index 0.5005). In the group of average income, the involvement index is significantly lower and is 0.2930, while in the group of the most affluent students this index is 0.2500.

In the course of the study it was found that practically all students (94.5%) encountered proposals for possible earnings on the Internet, and 40% had experience of earning in the network. Among those, who had experience in the Internet space at least once, are students of all areas of training, except for the military. In the next 12 months 33% of the surveyed plan to start self-employment.

According to 65.5% of students, self-employment on the Internet is a promising direction. Most students of economic, technical, legal, social, humanitarian and medical profiles indicated that Internet freelancing is a promising type of self-employment. Negative assessments were received from representatives of the military profile. The students' opinions from the agrarian and creative directions differ. It is interesting that the experience of freelancing on the Internet was mainly among the students of technical, medical and creative professions. Representatives of the military profile do not have such experience. The most promising areas of Internet entrepreneurship, according to students, are online sales and online shopping (41%), advertising and PR (35.5%).

The main motive, according to respondents, which pushes them to start the Internet entrepreneurship, is "earning income for everyday life" (71.3%). In addition, 43.5% of respondents believe that "the desire to engage in an interesting business" is also a motive for starting economic activities on the Internet. "The desire to develop, improve the entrepreneurial skills" is considered by 31.3% of respondents as a motive for Internet entrepreneurship.

Also, 29.6% of the respondents think that "the desire to have broad connections, to be among people who are in the "get-together" can act as a motive for the implementation of economic activity in the Internet space. According to the respondents' opinions, such motives as "the desire to earn a lot of money at once, to hit the jackpot, to be enriched" (28.7%), "to approve oneself, to reach a high status" (20%) and "to provide interested people with the services they need, to serve people" (8.7%), can also encourage a person to do business on the Internet.

A comparative analysis shows that boys and girls have similar motives for Internet activity in this area. However, the motive "to approve oneself, to achieve a high status", according to the girls' point of view, plays an important role (involvement index 0.2180), while boys do not sufficiently note this motive (involvement index 0.0710). However, girls do not support the motive "to provide interested people with the services they need, to serve people" (involvement index 0.0790), while boys support it (involvement index 0.1430). Other motives are similar.

Among the groups of young people with different levels of material wealth, there are also differences in motives. Young people with a low income most often distinguish two motives: "earning income for everyday life" (involvement index 0.6000) and " the desire to engage in an interesting business" (involvement index 0.6000). Young people with an average income more often than usual distinguish "earning income for everyday life" as the main motive of the engagement in the Internet entrepreneurship (involvement index 0,7040). People with high incomes singled out "earning income for everyday life" as the main motive to start earning in the Internet space (involvement index 0.7920).

In the course of the study, the students' knowledge about the possibilities of this type of economic activity was determined.

The majority of respondents (48%) know about streaming, as a way of earning in the Internet space. 43% of respondents know that can earn money in the Internet by programming. In addition, copywriting is also the way for earning money in the Internet space, which is known to a sufficient number of people, namely 43% of respondents. About 30,2% of the respondents know about videoblogging and 33,6% about advertising.

A comparative analysis shows that girls are better informed than boys about the forms of economic activity on the Internet. Girls are more aware of copywriting (involvement index 0.4360) than boys (involvement index 0.3570). Also, girls are better informed about programming (involvement index 0.4460) than boys (involvement index 0.2860). Moreover, the girls are more aware of the videoblogging (involvement index 0.3070) than boys (involvement index 0.2140). Also, girls are better informed about advertising (involvement index 0.3370) and about streaming (involvement index 0.5050) than boys (involvement index 0.2860 and 0.2860, respectively).

Among the groups of young people with different levels of income, the following differences are revealed. Young people with low income are informed about copywriting (involvement index 0.6000) and videoblogging (involvement index 0.5000). Young people with average income are informed about streaming (involvement index 0.5120). Young people with high incomes know enough about advertising (index of involvement 0.4170) and programming (index of involvement 0.4580).

During the study, a characteristic of students' interaction with business entities on the Internet was also obtained. This information is obtained from the students who have acquaintances with those, who are currently or formerly engaged in Internet entrepreneurship. Such participants are almost half (48%) in the study. More than 42% of students indicated that their acquaintances are engaged or were engaged in this type of activity for more than 1 year. Their specialization is sales, online store (47.37%). At the same time, this type of activity was not the main way to get income (68.14%).

In addition, the study received estimates from students about successful freelancers that they know. More than half of the young people noted that this experience was successful (66.38%). Those students who identified the experience of their friends as unsuccessful, were asked to indicate the reasons of the failure. The main reason, according to the students, is the lack of time (53.85%). Other reasons were loss of interest in the activity (43.59%), lack of knowledge (38.46%) and of new interesting ideas (33.33%).

The results of the research served as the ground for similar research projects in the youth field.

3. Results

Non-linear humanistic understanding of the Russian complex society development, which has the features of network and information, analysis of data from sociological research and social practice, highlight a list of social Internet activity risks of young people in general and their specificity in relation to students.

The first group of risks is related to the non-linear nature of hazards in a complex society. Thus, the development of information technologies, increasingly intrusive in the bio-psychological mechanisms of human life, led to the emergence of a new type of risks in the system of social communications associated with insufficient consideration of the characteristics of modern society as a supercomplex socioecological system. In this sense, the contradictions arise between the need to learn more and more increasing knowledge, skills, abilities, competencies and objective limitations of opportunities for a higher school student to take possession of them, which causes the risks of depression, destructive practices, and bad quality of educational activity among students.

The second group of risks is connected with the dangers posed by the transition to life in an open society.

At present, the risks of social Internet activity of young people, which reflect modern risks and vulnerabilities of the society as a whole [21] and educational policy in particular, are quite significant. Due to the substantial involvement of the Russian society in the world educational space, this situation can be characterized within the framework of the notion "global risk society". The essence of these risks lies in the manifestation of the contradictions between the practice of young people to follow, while obtaining education, the principles of scientism, formal rationalism and mercantilism, generating man made risks and vulnerabilities, and the need to minimize and manage these risks, which are "delocalized," "incalculable", "not compensable" [4].

Thus, the recognition by the Russian system of higher education of unified Bologna standards for different countries leads to the interest of entrants to study abroad, which increases by 10-20% per year [17], creating the risks of diminishing the opportunities for the development of the national human resources potential. For students, this raises the risks of maladaptation in another socio-cultural environment, loss of identity with the Russian society.

The third group of risks is caused by the dangers of the possible unintended negative consequences of the society self-organization, the ambivalence of administrative influences on the regulation of the virtual environment.

It should be noted that some of the risks, determined by the virtual environment, that provoke young people to illegal practices, are fueled by the insufficient regulation of the Internet space, where the emergence of various "fake", "trolling", "anonymous" technologies allow marginal citizens and groups to inflict substantial damage to the image of social institutions and organizations, subjects of government, individual subjects of social communication of young people.

Student youth is subject to the risks of virtual space globalization with preserved real states, political alliances, and the implementation by private political and legal subjects of their private interests. In this regard, students entering the system of national higher education, integrated into the civilizational processes of human development, become participants of institutional conflicts caused by the need to implement the principle of indivisibility of the security of a complex society at the level of individual countries, globolocal (local, enclave) groups of states and their educational spaces. In this sense, the intercountry mobility of Russian universities graduates, which has grown substantially after the adoption of the Bologna principles by the national education, is ambivalent in nature, including the unintended risks, which also manifest themselves in the form of conflicts between the goals of the educational process (including the provision of socio-economic complex with the necessary specialists) and results (employment of these specialists in the markets of other countries).

Preventing the dangers and risks of Internet activity of young people will make possible to realize the positive potential of the humanistic theory of a complex society, which lies in creative nature, the potential for developing and taking measures to ensure the development of the society on the basis of modern diagnostic and project tools of sociological science. This helps to move to an in-depth study of the social Internet activity risks of young people, and the reasons of their arising.

4. Discussions

When using the concept of risks as a methodological basis for understanding the current stage in the development of the society, it is necessary to rethink organizational and technological, managerial aspects of reducing the dangers of social Internet activity among young people within the framework of risky issues.

There is, in particular, the need to introduce a reflective way of making managerial decisions to prevent the negative impact of Internet resources on the formation of attitudes and behavior of young people in the context, when social actors account not only relevant but also potential risks of the emergence and rapid spread of extremist ideas, illegal practices, conflict destructive interaction with people and social groups, division into "friendly" and "hostile". For authorities, it is very important to develop holistic management technologies to manage the system, preventing the risks of illegal Internet activity of young people, and, if it arises, reducing its level, strength, intensity.

It is natural in this connection that in the documents of strategic planning of Russia, one of the tasks is to take measures to increase the protection of citizens and society from destructive information impact from extremist organizations and propaganda structures [34].

In the government programs of work with young people, it is necessary to pay attention to the formation of adequate understanding among young people of the factors provoking illegal and dangerous actions for them-selves and other people in the Internet environment in various spheres of life. It is also important to train young people in adapting to the risks of implementing life strategies in the context of transforming labor market, the system of professional self-realization, changing the nature of social communications in a networked society, and forming motives and competencies to overcome difficulties in the form of legitimate practices.

The work of sociologists is of particular importance for the harmonization of social relations from the angle of preventing the risks of Internet activity and monitoring information management bodies about the processes in the youth sphere.

5. Conclusions

Thus, the threats of the social Internet activity of student youth are quite diverse in nature and intensify in the case of students' ignorance of the negative aspects of communication in a virtual environment. In this regard, educators should inform students about possible dangers and risks, form the competence of safe use of Internet resources for social communication, meet information, leisure and virtual services needs. With the further development of digital technologies and virtualization of social interaction, it becomes increasingly important to reduce the risks of youth activity in the Internet.

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Education and Upbringing As Socio-Cultural Development Factors of Contemporary Society

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Abstract

The importance of the article is determined by the social significance of the problems of education and upbringing in transitional periods - periods of fundamental social transformations, since, despite the importance of economic, scientific, technical and socio-cultural innovations, they cannot be considered separately from the main character of the proposed transformations - man. Only the intellectual, professional and moral potential of man serves as a real guarantor of any changes, the implementation of forecasts and plans for the successful development of the whole society. The article gives a deep insight into the problem that emerged at the end of the XIX - beginning of the XX centuries in the Russian historical tradition of education, when the tasks of forming and educating the younger generation began to come to the fore. During this period, the most prominent minds of Russian science — philosophers, historians, psychologists, and figures in the field of culture and education — began to study the issues of education and upbringing. As a result of creative activity, in the period under review, a large number of scientific works, touching upon the problems of the formation and upbringing of a person, were prepared and published. The authors have proved that this period of time is the time of the revival of the humanization of education, its individualization, the formation of civic-mindedness, patriotic education and, most importantly, the spiritual and moral development of the individual in education.

Keywords: education, humanism, society, philosophy of education, upbringing, personality.

Introduction

Education is one of the most important social institutions of modern civilization. The pace of technological, economic, and political progress, as well as the state of culture and spirituality in society, and finally, the well-being of a person depend on the quality of education.

The new cultural and educational strategy proclaimed in the country today recognizes education as a priority in the state policy and considers it one of the decisive factors of economic and social progress, a powerful means of preserving, developing and handing down the spiritual wealth accumulated by mankind from generation to generation (Gerunsky, 1998; Zenkovsky, 1991).

The main areas considered by Russian philosophical and cultural thought should be the foundation for the development of the strategic direction and activities of contemporary society. First of all, a fundamentally new approach to assessing the role and place of a person in the world, in all spheres of social life should be referred to the most significant features that characterize the new stage of development of the education system in our country. It consists in the transition from declarations and slogans proclaiming the full and harmonious development of the personality as an end in itself to the realization that human life is the highest value in the world, and the education system must be adapted not only to the needs of the state, but also to the growing educational, socio-cultural and spiritual needs of the person, each person. It is precisely the lack of attention to a specific person's personality that has generated many speculative schemes of social reorganization, including reforms in education, which instead of an expected positive effect led to stagnation, ideological dogmatism and, as a result, to the collapse of numerous educational paradigms that collapse when they come into contact with real life. The almost unlimited tendency towards nationalization and the mechanical unification of schools of all types led to the domination of authoritarian pedagogy, and therefore to formalism, alienation of students from their teachers, reduced the interest in mastering knowledge and their quality (Kravtsov, 2002; Milyukov, 1993; Eisvandi et al, 2015; Ismail et al, 2018; Masalimova et al., 2019; Puspitasari et al., 2019).

The system of education, as well as the economy, did not avoid the “gross” approach. It churned out the corresponding “product”. Meanwhile, it is not enough to teach people how to work productively, you need to train them to think productively. The highest values of humanity are thoughts, and society is strongly influenced by its intellectual members. Speaking about the focus on the person, its two inseparable sides are implied. This is, first of all, a bright, demonstrative and entertaining conversation about a person, the creator of all stages of world civilization. About man who loves, works, suffers; about man who defends justice; about man - whose thoughts and activities gave the world great discoveries. No less important is the other side: the application of all means of instruction, thoughts and speeches of the teacher for the interests and needs of the younger generation. This is impossible without the long-expected shift of school education to knowledge about the modern society which we live in, about the global community of people, about modern civilization. It is clear that these problems are solved in one way or another with all subjects, with the whole structure of school science (Kalinina et al., 2018; Salakhova et al., 2018c; Sailaukyzy et al, 2018).

Sample and Techniques

The main line of development of the content of education today is its fundamentalization. It involves the organization of knowledge itself in such a way as to highlight the fundamental component in it. This presupposes the synthesis of elements of knowledge of specific sciences as the basis of a person’s ideological position. Therefore, the importance of the evolutionary-synergetic concept for general educational institutions is obvious: it is able to provide students with training for perceiving a single picture of worldview, the problem of the meaning of life.

The importance and practical significance in this regard of the heritage of philosophical and cultural science of the turn of the century only increases and therefore more attention should be paid to these problems while working out the main areas of development and in the process of forming future teachers, which are solved in the framework of studying philosophy and cultural studies in education (Mitin, 2016; Masalimova & Shaidullina, 2017; Salakhova et al., 2018a).

The search for an “ideal” model of the reform of public education in the 1980-s, attempts to limit local innovations in the most important parts of the school (in the broad sense of the word) ended unproductively. Ultimately, the need to abandon evolutionary development in favor of fundamental changes, the transition from the development of local education problems to macrosocial solutions was recognized. This means that the strategy for reorganizing the school is based on the interrelationship of educational institutions with culture, science, industry and social relations. The implementation of such a global strategy required a new socio-pedagogical and cultural-educational thinking, which allows seeing the problems of education in the context of a dynamically changing world, interrelated with the contradictions of the real dialectic of social development, both in the scale of individual countries and in the universal dimension.

The need for new educational thinking is dictated in part by the consumer order existing now. At the same time, it is well known that the quality and level of products is the same as the culture of producers, and the latter, we would like to note, is largely shaped by the education system. Hence the social need for humanitarization and humanization of the educational sphere, aimed at cultivating individuality in the most direct and exact sense of the word. As Pierre Bourdieu (2007), a French sociologist, wrote, “educational institutions in their totality, ranging from the organization of strictly individual work that they assume to the classification schemes that they deploy, always give preference to the original to the detriment of the prevalent and seek through the content of the material taught the manner of its presentation strengthen the tendency to individualism ...” (Bourdieu, 2007). The system of education, which cannot do this, leaves its students, at best, to perform a limited number of clearly defined duties, but does not give them the ability to think outside the box and, moreover, to make non-standard decisions. If earlier the primary concern of socialization was the adaptation of the younger generations to the existing order of things, now the task of preparing young people for the creation of a new society, incorporated by the efforts of the entire world community into the post-industrial civilization, has come to the fore.

At the same time, as academician N. Moiseev (1996) points out, "no matter how strong the tendencies towards the economic integration are, the world will stay separated and will be full of various contradictions of unpredictable acuity in the coming decades. But it will be a world of "new individualism", a society that will strive to ensure that the individual can demonstrate his creative abilities to a maximum extent." It is quite natural that this world of "new individualism" does not mean a return to the understanding of individualism as "every man for himself" (Moiseev, 1996). On the contrary, it means the elevation of the individual to the level of personal responsibility for everything that happens to him and around him. It is such individual who becomes today as the base element of all ongoing social changes. It should be especially emphasized that under conditions of a change in the social system, the direction of further development will be determined by the values of society (Moiseev, 1988; Moiseev, 2001).

The choice that Russia faces today is by no means only political or only economic one. This choice has a universal, socio-cultural, general civilizational sense: will Russia be guided by the main, determining human dimension of its development or will it continue to subordinate this dimension to impersonal-institutional parameters? At present, quite definite processes are taking place all over the world, characterized by the humanization and humanitization of man's knowledge. If the first half of the 20th century was marked by the priority development of physics, and then chemistry and biology, then the 21st century will become the century of the humanities about man and mankind. As the writer S. Zalygin (1987) rightly remarked, "we want all sciences, without exception, to acquire the expediency that is determined by the sense of measure, and this measure can be called truth. Ethics for all sciences is what is needed first of all. But such ethics should obviously be designed by the humanities, for ethics is the essence of humanism. The subordination of science and technology to the genuine and long-term interests of mankind, contrary to the interests of temporary, seeming interests, is a problem that people must solve today, without postponing" (Zalygin, 1987).

The problem of humanization of education is extremely important for secondary general and higher educational institutions. Its emergence in the field of education is not accidental and is associated with the humanization of our whole life, with an awareness of the role of man in the development of society (Salakhova et al., 2018b; Mitin et al., 2017; Mitin et al., 2018).

Results and Discussion

We understand humanization as an introduction of human criteria into education: criteria of high morality - professional activity, responsibility, beauty.

The formation of a free and responsible person should be placed at the center of the entire system of education. If, under the conditions of an authoritarian-repressive culture, the younger generation was given the role of the recipient of those norms and attitudes that the older generation set, then under new conditions, young people do not recognize this automatism and the immutable distribution of roles, which is determined by the disintegration and discredit of various forms of traditional authoritarian culture (Stepashko, 1999; Masalimova et al., 2014).

With all the internal factors of humanization of education, the socio-economic situation in the country, which determines the real prestige of education, professionalism and competence of each member of society, is crucial for building a humane and effective system of education, training and human development. Only a combination of external (socio-economic) and internal (psychological-pedagogical) incentives and motives will allow moving from good wishes to building efficient and effective educational and training structures that satisfy the needs of both society and a developing person.

Social efficiency of the system of education is a measure of conformity of its level, quality and scale with current and future needs, in both individuals and society.

The success of each reform of the system of education is determined not only by material, economic, socio-pedagogical and organizational reasons, although, in the end, this has always come to the fore. No less important is the problem of the conceptual guidelines of the reforms, the balance of its two sides: the substantive essence of the modernization, which really should introduce and assert the new, and preserve the identity of the national culture, rely on it, what we call continuity in the best sense of this word.

In the history of national education, three stages are clearly visible, which corresponded to pedagogical concepts and theories of a particular humanistic orientation, as a rule, alternative to the official line in the educational sphere of society. The anthropological and humanistic trend in the theory of education and upbringing in the 1920-s is represented by such names as P.F. Kapterev (1982), S.L. Rubinstein (2000), K.N. Wentzel (1982), and others, supporters of developmental education. While the idea of "class" upbringing was consistent with the idea of "class" education, the particularity of the interpretation of the problems of education and upbringing by educators-anthropologists in the 20-s of the 20th century was that their attention was paid not only and not so much to class, social political and ideological aspects of these problems, but to the natural-science and psychological aspects of the educational process, the search for effective incentives of personal development (Kapterev, 1982; Rubinstein, 2000; Wentzel, 1982). The main methodological message of supporters of this trend is that the action of external motivators can activate the deployment outside the original psychological structure of the organism, ensure the optimal development of its individual invariant, but not create anew the required personal quality. The goal of education is to restore and develop further the traditions of the Russian school and education. All trends are in line with the development of the humanistic tradition, in the history of which there are three leading ideas that have withstood the test of time and, unfortunately, have not yet been mastered in life practice. Among them - the idea of free development (representatives of the Renaissance, the Enlightenment, utopian socialists, theorists of free education); Kant's idea of a categorical moral imperative, revealing the essence of humanism (man is not a means, but a goal), also in the educational process; the idea of adapting the educational system to man, and not vice versa.

In the field of upbringing activity, the whole complex of problems is being rethought, united by the theme "a group of people and a person's personality". The principle of the subordination of personal interests to the public, brought to the point of absurdity, did not withstand the test of life, neither in the educational sphere, nor throughout the whole system of social relations. One of the characteristic features of the modern state of the problem of socialization is the fundamental change in its paradigm.

Understanding socialization as a process of social reproduction, in which an individual acquires the ability to distinguish himself as a subject of his own life and life creation, contributing not only to maintaining and reproducing the existing social system, but also changing it, focuses our research on the interaction of two opposing tendencies of social formation - communication and separation of personality (Masalimova & Chibakov, 2016).

Separation is a process of autonomy of a person in society. The result of this process is the need of a person to have his own views and the existence of such (value autonomy), the need to have his own attachments (emotional autonomy), the need to independently solve his personal issues, the ability to resist those life situations that prevent his self-change, self-determination, self-realization (behavioral autonomy). Thus, separation is a process and a result of the formation of a human individuality.

Communication and separation are socially necessary and inextricably interconnected forms of the social life of an individual, in which the main trends of his development as a person in society find their expression. The concepts of a person and personality are not identical. A person becomes as personality in the process of learning social functions and roles, developing consciousness and self-consciousness. Man cannot become as personality without other people, without communicating and interacting with them. Socialization of personality occurs only in society through the social activity of the individual. But each person has his own spiritual world, interests and value orientations, experience, therefore he constantly strives to be not only in society, but also himself. Personality is separated in order to realize and affirm its "I", its dignity. Communication and separation manifest today in the relationship of the individual with nature (Kalenik et al., 2018).

In the process of socialization, an individual acquires general civilized features as a representative of the social milieu as well as signs that are determined by the specific conditions of social communities whose members are individuals: ethnic, demographic, socio-professional, regional, class, estate, and others. The signs of personality of various levels, the purpose, focus and content enable it to carry out diverse social activities, to perform various roles and perform and free to make social choices, determine the meaning of life, the nature of the interaction with other people and social institutions. Comprehensive analysis allows one to comprehend personality as a system of social relations and individual positions, as a relatively independent unit of society and its culture. An individual character of personality expresses a set of features that determine the originality and uniqueness of its functioning and development, behavior, communication and activity.

Conclusions

The formation and development of personality in the process of education should be based on an anthro-oriented pedagogical paradigm. The anthropo-oriented pedagogical paradigm (from the Greek "anthropos" - man) is the educational paradigm of self-realization of the individual - the formula of modern humanistic pedagogy, modern humanistic education and upbringing. Thus, humanistic pedagogy, the lack of which we don't experience in the historical roots, comes from the recognition of human self-value, of course, in combination with the social nature of his being, which requires a definite system of values and norms of behavior. The most widespread type of educational institution that gives a person a start in life is a comprehensive school, which is currently in the zone of heightened public and scientific attention; it is general education, considered as the basic link in the system of continuous education (Salakhova et al., 2018a).

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Reading as the Development of Students' Sociocultural Competition in the Process of Studying Phraseological Units

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Abstract

The article is devoted to the research of reading proverbs in English, Spanish and Tatar languages in books and also the component of modality. The topicality of the research is determined by the fact that reading is an interactive process that goes on between the reader and the text, resulting in comprehension. The text presents letters, words, sentences, and paragraphs that encode meaning. The reader uses knowledge, skills, and strategies to determine what that meaning is. The category modality is also one of the most complex and contradictory concepts, from a variety of different interpretations. The topic of this article is relevant in modern linguistics for revealing the features and structure of modality in proverbs of English, Spanish and Tatar languages and their usage in the process of reading books. General and particular types with the use of proverbs are allocated in the article. On the basic of the results of the study of proverbs in English, Spanish and Tatar languages are presented in the article. Article submissions, the results of the research are of interest for scientists studying the process of reading and usage of proverbs in English, Spanish and Tatar languages. The results can be used both when studying intercultural processes and by culture experts, philologists, ethnologists and others groups interaction and analyzing cultural and research issues and processes of the studying languages.

Keywords: reading, the process of reading, modality, the component of modality, proverbs, classification, interpretation.

Introduction

Reading is a complex process; it is not about identifying words but also about understanding them. Reading requires attending to the environment, encoding and interacting with the stimulus in a meaningful manner and linking the meanings of the stimulus with existing knowledge and prior experiences. The purpose(s) for reading and the type of text determine the specific knowledge, skills, and strategies that readers need to apply to achieve comprehension. Reading comprehension is thus much more than decoding.

V.V. Vinogradov (1975) writes: "... you can only study a language outside the language environment subject to regular, daily, abundant reading" (Vinogradov, 1975). Reading literature in a foreign language is not only the development language skills and abilities, but also an increase in the socio-cultural level competence. Fiction, as a large layer of culture any nation, gives a great idea of history, life, life, customs and traditions of other nations. Since language is an integral part of culture, it should be given great attention to reading in the early and middle stages of learning a language authentic fiction as an extensive reading, as a means of obtaining sociocultural information about peoples, belonging to the group of the language being studied.

A proverb is a simple and concrete saying, popularly known and repeated, that expresses a truth based on common sense or experience. They are often metaphorical. "Sayings and proverbs are part of any language, any culture. They were used to convey knowledge, wisdom and life verity from the beginning of times and till today. It is impossible to imagine language, or even our speech without sayings and proverbs. Not only they considerably widen our vocabulary, adorn and enrich our speech, but they also carry considerable information on the most vital things, underlining their polymathy" (Ayupova et al., 2014; Parvizian et al, 2015).

'The problem of motivation /non-motivation of phraseological meaning and its dependence on the inner from transparence /non- transparence has not been solved' (Ayupova, Byiyk & Arsenteva, 2017).

In foreign Spanish studies, the development of modality problems is mainly carried out in two directions:

1) A verbal inclination is analyzed in detail, the majority of researchers identified with the category of modality (Kilis & Eskeva, 2007) and considered as one of the grammatical means of this category by only some authors;

2) The interpretation of the modality at the syntactic level is reduced, as a rule (Alonso, 1998).

Within the text linguistics, modality is considered as one of the main text categories (Galperin, 1981). There are six basic types of text modality:

1) Epistemological modality.
2) Hypothetical modality.
3) Estimated (axiological) modality.
4) The meaning of the conditioning modality.
5) Evidential type of modality
6) Emotional modality.

Thus, the modality has many aspects of study and is examined from various scientific positions. Comparing the languages of different language groups, it makes sense to create our own classification of the different types of modality in English, Spanish and Tatar proverbs based on the studied types of modality.

The research provides an analysis of the structural, semantic and functional-stylistic features of the PE with the modality component in English, Spanish and Tatar languages.

Research Methodology

The methodological basis of the research is the fundamental works of native and foreign researchers: V.V. Vinogradov (1975), A.V. Bondarenko (1966), L.B. Savenkova (2002), A. Kilis and M. Eskeva (2007), O.S. Akhmanova (1966), D.G. Tumasheva (1977), I.R. Galperin (1981), R.A. Vallecillos (2018), R.A. Vallecillos (2018), Tayebiniya, N. K., & Khorasgani, N. S. (2018), Pussyrmanov et al, (2018), E.I. Cherdymova et al. (2019), K.S. Ezhov et al. (2019), Simamora et al., (2019), V.V. Pushkarev et al. (2019), and etc.

A review and analysis of theoretical materials has shown that the method of conceptual analysis, comparative analysis, conspiratorial, linguocultural analysis, the method of component analysis were used in the course of the research.

Material for practical analysis, obtained by the method of random sampling, even with a superficial analysis demonstrates the implemented in the functional grammar of the approach to the study of modality in proverbs of English, Spanish and Tatar languages.

Results and Discussion

Thus, there is a need for changes in the requirements for the level of language proficiency, hence the emergence of new approaches to the selection of content and organization of scientific research material, and therefore comparative studies are being carried out at the present stage.

The modality is defined by V.V. Vinogradov (1975) as a constructive feature of any sentence, conveying the relation (relation) of the content of speech to reality. Proceeding from this definition, and also, following the Greek - Latin traditions, the messages receiving their pretense in the form of sentences were considered by modality, mainly by the nature of the establishment of communicative goals and were divided into narrative, interrogative, exclamatory and motivating. He traced the history of studying this category, outlined the range of means of expression modality, revealed its scope and specific content. He believes that each sentence contains an indication of the attitude to reality in linguistics.

The same opinion was expressed by another Russian linguist, I.R. Galperin (1981), considering modality as a category inherent in language in reality, i.e. speech, and therefore is the very essence of the communicative process.

The point of view, according to which the invariance of the modality is the relation of the content of the utterance to reality, is widely spread also. modality extends to the relation of the subject of the utterance to action and the attitude of the speaker to the authenticity of the content of the utterance (Sham, 2005). With this approach, many varieties and means of expressing the modality are declared secondary or altogether outside this multifaceted, but at the same time integral category. This point of view is presented in the works of A.V. Bondarko (1990), M. Greple (1973), G.A. Zolotova (1962), V.Z. Panfilov (1977) and some other linguists.

G. Lyons (1978) on the nature of modality distinguishes two classes of proposals: imperative (express an order or instruction) and interrogative (express additional modal signs, on those or other expectations of the speaker). He also finds in various languages various ways of grammatical expression of the speaker's attitude to the content of the utterance. In his opinion, at least three scales of the modality are relevant:

- the scale of "desire and intention."
- the scale of "necessity and obligation".
- the scale of "confidence and opportunity".

‘All researchers note obvious interrelation of the people and language, to track ethnic identity in system of set expressions which proverbs, sayings, phraseological units and other paremias. It is necessary to recognize that the Tatar proverbs, also as well as proverbs of other people of the world are used in two values: direct and figurative’ (Yusupova, Mugtasimova & Nabiullina, 2015).

D.G. Tumasheva (1977), studying the morphology of the Tatar language, notes the correctness of the selection of modal words in a separate language group and recognizes them as independent parts of speech. It affirms the objectivity and subjectivity of modal words and divides them according to this parameter into two large groups: the modal words used in the composition of the predicate and expressing an objective relation of statements to reality (bar, yuk, tiesh, kiræk, momkin, yariy, ihtimʌl, imesh, ikæn), and modal words used as an introductory word in the sentence and expressing the subjective attitude of the speaker (ʌhri, imesh, bugʌi, bælki, shɯʌyat’,ichmʌsʌm, ælbættæ) (Tumasheva, 1977).

In most English grammars (Swan, 1984; Close, 1979; Leech & Svartvik, 1983), we find information only on modal verbs and their semantics. M. Swan (1984), in particular, points out that modality in grammar (English) is considered to be such values as will (volatility), possibility or necessity. It follows that the verbs expressing these values are called modal auxiliary verbs "(Swan, 1984).

Summary

According to the research of modality in English, Spanish and Tatar languages based on our own classification we considered proverbs with an epistemological type of modality. Its markers are the verbs of knowledge, understanding, thinking, remembering, and constructions expressing the logical cause-effect relations of processes and facts (complex sentences with subordinate real or probable conditions). Let's give some examples:

In English:

Live and learn.

In Spanish:

A más vivir, más saber (a mas bibir, mas saber) - Live and learn

In Tatar language:

Яшьлегеңдә өйрәнмәсәң, картлыгыңда үкенерсең (yashlegendæ ə:irænmæsæŋ, kartligiŋdʌ u:kenerseŋ)- If you do not learn in youth, you will regret it in old age.

Өйрәну бервакытта да соң түгел (ə:irænu: bervʌkittʌdʌ soŋ tu:gel) - It is never too late to learn.

Verbs of speaking, action and perceptual activity, always in the form of an indicative mood, modal verbs *could, must, might* in the sense of supposition, modal words *certainly, perhaps, etc.,* words removal and comparison *as if, it seemed, it appeared, like*, another's speech (direct, indirect, generalized exposition of someone else's speech) are used in this type of modality (Galperin, 1981).

In English:

A bird may be known by its song - A bird is seen by flight; A broken friend is unreliable, but will never be sound

A cat in gloves catches no mice - Without difficulty, you will not pull out the fish from the pond. Do not wash your hands, you will not wash yourself.

Be swift to hear, slow to speak - Listen more, talk less

Do not poke your wolves when the tail is tekin - The leopard cannot change its spots. - The leopard cannot be repainted. The wolf moults every year, but everything happens (yes, the customs do not change). How many wolves do not feed, he looks into the forest.

In Spanish:

A donde te quieren mucho no vengas a menudo - (ʌ donde te kieren mucho no bengas ʌ menudo) - A frequent guest is not welcome brightly.

El amor todo lo puede - (el ʌmor todo lo puede) - There is no law for love.

El remedio puede ser peor que la enfermedad - (el remedio puede ser peor ke lʌ enfermedʌd)- Darn the hole until it's great.

A más vivir, más saber - (a mʌs bibir, mʌs sʌber)- Live a century, learn.

In Tatar language:

Татар - таш ватар - (tʌtʌr - tʌsh vʌtʌr)- Tatar will break a stone.

Татар - ташка кадак кагар - (tʌtʌr - tʌshkʌ kʌdʌk kʌgʌr)- Tatar can drive in a nail in a stone.

Рәхәтен кургәч, михнәтен дә кур - (ræhæten kurgæsh, mihnæten dæ kur)- If you like riding you should like carry the sleigh.

We also considered the emotional modality. 'Its components are:

emotionality, evaluativity, sincerity, interest, figurativeness, each of which is waiting for being discovered and studied in detail (Tarasova, Gizatullina & Mingazova, 2017). We found the following examples of PE with this component:

In English:

A burden of one's own choice is not felt;

For the love of the game;

He is happy that thinks himself so;

In Spanish:

Querer es poder- (kerer es poder) - Where there is a will, there is a skill.

Haz bien sin mirar a quien - (hʌz bien sin mirʌr ʌ kien) - Do good, without looking for anyone.

Saber es poder - (sʌber es poder)- Knowledge is power.

In Tatar:

Тычканга - улем, мэчегэ колке - (tichkʌngʌ - ulem, mæshegæ kolke) – Toys for a cat, tears for a mouse.

In the course of our study, we considered the conditioning modality. The main means of expression are modal verbs, their equivalents (be to, have to, be able to) and volitional vocabulary (wish, want, desire, long for, able, prohibit, impossible, etc.). Let's give examples in English:

Beggars cannot be choosers-To the poor and the thief, all clothing is fit

Children and fools must not play with edged tools. - Children and fools should not play with sharp instruments.

On the basis of evaluative (axiological) modality lie the concepts of "good" and "evil", "good" and "bad." The main means of expression are estimated epithets and vocabulary, in which there is an evaluation component of meaning, as well as key words-symbols that always represent the axiological position of the author (Galperin, 1981).

We found the following examples of proverbs with this component:

In English:

Better be alone in bad company - With kind friends, but avoid the crafty ones.

Better be born lucky than rich- do not be born beautiful, but be born happy.

A civil denial is better than a rude grant - Polite rejection is better than a rude agreement.

In Spanish:

Amar es tiempo perdido, si no se es correspondido - (ʌmʌr es tiempo perdido, si no se es korrespondido)- Love is nothing without sadness.

Amigo y vino, el mas antiguo – (ʌmʌr bino, el mʌs ʌntiguo) - An old friend is better than the new two.

*A beber y a tragar, que el mundo se va a acabar- (*ʌ beber i ʌ trʌgʌr, ke el mundo se bʌ ʌ ʌkʌbʌr*)* - Where there is a joy, there is a grief.

In Tatar:

Кем эшләми – шул ашамый – (kem eshlæmi – shul ʌshʌmiy)- Who does not work shall not eat.

Агач - жимше белән, кеше эше белән – (ʌgach - ʒimshe belæn, keshe eshe belæn) - The tree is famous for its fruits, and the man is famous for his works.

In the course of our research, we have considered the incentive modality. In the semantic aspect, it interacts with such modes of modality as the modality of necessity and obligation, the modality of possibility and impossibility. We found the following examples of proverbs with this modality component:

In English:

Bind the sack before it be full - know measure in all;

Business before pleasure - first thing, then entertainment;

Catch the bear before you sell his skin - first catch a bear, and then sell his skin;

Choose an author as you choose a friend - choose a writer the way you choose a friend;

Claw me, and I will claw thee - praise me and I praise you;

Don't count your chickens before they are hatched - chicks do not count in autumn;

In Spanish:

A mas honor, mas dolor – (ʌ mʌs onor, mʌs dolor) – A more honor, more pain.

La major felicidad es la conformidad – (lʌ mʌhor felisidad es lʌ conformidad) – The best happiness is compliance.

Lo major es ser franco – (lo mʌhor es ser frʌnko) – The best thing is to be frank.

Mejor es no menearlo – (mehor es nomeneralo) – It is better not to shake it.

In Tatar language:

Ике куян койрыгын берьюлы тотам димә – (Ike kuyan koirigin ber'yuly totam dimæ) - For two hares you will chase, you will not catch a single one;

Тимерне кызуында сук – (timerne kizuindʌ suk) - Strike while the iron is hot;

Усал булсаң асарлар, юаш булсаң басарлар – (Usal bulsʌŋ ʌsʌrlʌr, yuʌsh bulsʌŋ bʌsʌrlʌr) - You will be angry –will hang, you will be soft – will crush;

Кунак ашы – кара-каршы – (Kunʌk ʌshi - kʌrʌ - kʌrshi) – You have been fed at a party - in return and you feed.

Conclusions

Thus, we can say that the concept of modality has a multifaceted interpretation in linguistics that requires in-depth study. Since the category of modality is recognized as very complex, the attitude to it is ambiguous, there is no unified opinion on its nature. In linguistics, modality is viewed as a complex functional - semantic category, which is relevant to reality and to the speaker's opinion.

On the basis of our research we presented the table of the types of modality in English, Spanish and Tatar proverbs:

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Innovative Activity as a Tool for the Development of Industries in Russia (on The Example of Tourism and Hospitality Industry)

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Abstract

Nowadays the problem of innovative growth in all sectors of the Russian economy comes to the forefront of development. In this regard, the article is devoted to theoretical and practical issues of innovation in the tourism and hospitality industry. The main methods of studying the problem were the methods of system and retrospective analysis, expert assessments and sociological measurement. In the study, particular attention was paid to the typology of innovations, and that allowed emphasizing on the sectoral specificities of innovative development. Based on the global competitiveness of the countries, the influence of the innovation component on the development of innovative activity in different types of business was considered. The authors paid special attention to the segment of consumer innovations in the field of tourism and hospitality, demonstrating the successful application of FAN ID during the 2018 FIFA World Cup.

Keywords: innovative activities, consumer innovation, tourism and hospitality, FAN ID.

Introduction

The present stage of the Russian economy development is directed towards the activation of innovative growth in all sectors. This process requires a deep understanding of innovation as an effective tool in competition. The classical stage of development of the innovation theory is connected with the ideas of J. Schumpeter (1982), who specified innovations as changes in order to implement new products, markets and forms of business organization.

Russian scientist N.D. Kondratyev (2002), who considered the theory of large cycles and established the relationship between economic cycles and scientific and technological progress (STP), made a serious contribution to the theory of innovation.

With that, modern researchers, including S.Yu. Glazyev (1993), assign a special place to STP as a fundamental factor of economic development, expressed by a consistent change of economic order.

In turn, observations of current economic trends clearly show the enormous impact of the global crisis of 2008 on the entire course of subsequent development, the main feature of which is the continuing period of instability and low predictability (Dzhandzhugazova et al. 2018; Inchamnan, 2018).

Against this turbulent background, there has been an unprecedented acceleration in technological innovation and innovation growth. In this regard, two main aspects of innovative development should be noted:

- First, the unprecedented depth and complexity of innovations affecting all aspects of society.
- Secondly, a powerful pace of change, when changes in living conditions occur 10 times faster and occurs in almost every generation (Medvedev, 2018).

From the point of view of economic practice, it can be noted that new technologies transform all spheres of human activity and actually create a new environment, raising dozens of pressing economic, legal and ethical issues in parallel. It is obvious that we live in an era of innovative economy based on the creation of intelligent products (Dzhandzhugazova et al., 2017; Davoudi et al., 2018; Fartash et al., 2018; Akimzhano et al, 2018).

It distinguishes from the traditional economy based on material production and material resources as in it much of the value added is created by intellectual work. Already today, we have entered the era of innovation and we are witnessing large-scale changes that actually have no historical analogues. However, these changes were predictable. Academician N. Moiseev identified them when he made successful wording 'The Change of algorithms for the civilization development' (Moiseev, 1997).

Analyzing this capacious definition, we realize that the very idea of 'development' as a certain trajectory of movement forward is changing. Today, the category of 'development' cannot be identified any longer only with 'quantitative' growth, it is necessary to look for, as it is now customary to say, new meanings. At present, decision-making in the field of economic policy cannot be sufficient, it is necessary to look at the problem more broadly – from the point of view of the innovation policy implementation (Dzhandzhugazova, 2015; Ardakani et al, 2015).

However, the development of innovations is a major systemic problem, both for individual States and for the world economy as a whole. The new economy, which is based on information technologies, shows that the 'information revolution' is proceeding in the same way as the industrial revolutions of past eras. In particular, the growth stage is accompanied by high expectations, turning into unjustified optimism, which leads to the ruin of major players in the new sector of the economy with the subsequent transition to the evolution of development. The creators of innovations, in so doing, never receive the main dividends, but these are received by the companies that have managed to find a more effective and original way to use them. Innovative economy is a knowledge-based economy, which essence is not already determined by mass education, as it was in the twentieth century, but by the developed creative potential (Tastan & Davoudi, 2015; Dzhandzhugazova et al., 2016; Saidi & Siew, 2019).

The well-known futurist Alvin Toffler justified the phase of the 'The Third technological wave', stressing that the key product will be information, and mass, uniform production with giant industrial complexes will begin to transform into flexible production structures. In a very short time, all aspects of society's life – social relations, state structure, politics, media market, etc. – will begin to transform (Toffler, 2004).

At the same time, in the new economy the role of self-organization in technological development will dramatically increase. If the key marker of the XX century was 'high-tech'– high technologies in industry, agriculture, medicine and other industries, in the XXI century the 'high-hume'– high humanitarian technologies, aimed at the effective use of the empowerment of individuals and groups, will define the main vector of development (Dzhandzhugazova, 2013).

Research Methodology

The study of innovative processes requires the use of methodological approaches based on their grouping and typology, which allows emphasizing the sectoral specificities of innovative development. In turn, the use of dynamic analysis methodology allows showing the role of the innovation component in the ranking of the global competitiveness of countries and industries.

Currently, there are many approaches to the typology of innovation by their kind, scale, nature and place of occurrence, the nature of use, the degree of novelty and scope of application. In the last decade, there have been stand out three main types of innovation:

• product innovation – developing and promotion of completely new proposal of goods or services, or the improvement of existing proposals;

• process innovation – creating and implementing a new method or process in the sphere of development, production, distribution or delivery;

• business models innovation – improvement of economic parameters in the value chain, diversification of profit sources or transformation of models for the provision of products and services (Innovation in Russia – inexhaustible source of growth, 2018).

Results and Discussions

It is noteworthy that innovations differ in their scale. There are innovations aimed at improving processes in the overall system of continuous improvement, which, for example, Aeroflot and Toyota demonstrate. There are more significant (breakthrough) innovations such as the company Apple has, as well as radical innovations that transform the system as a whole, specific to the companies Spacex and Leaf. In the system of global cross-country competitiveness, the innovation component is an important indicator that reveals the innovative potential of national economies. Russia, despite all the difficulties of the current period, became able to increase considerably its innovation rating, raising it by 29 positions in 4 years (Fig.1).

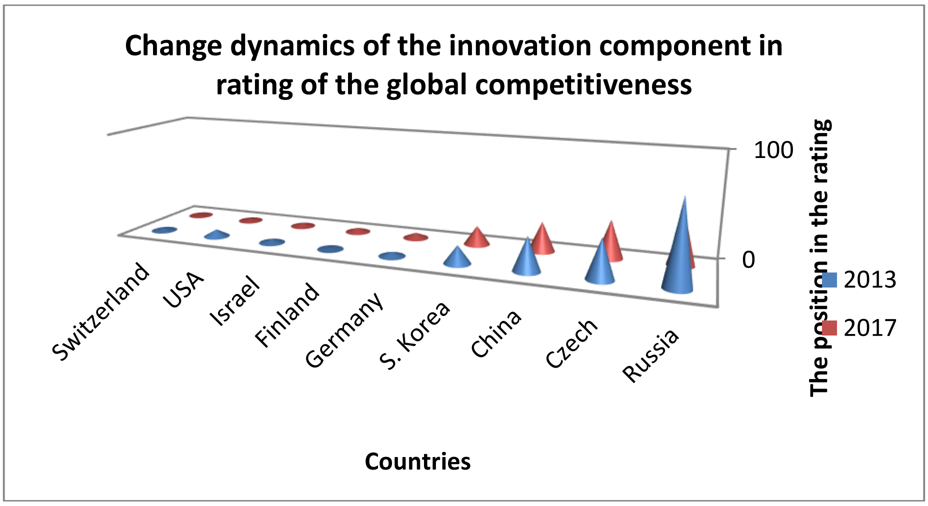

Figure 1. Innovative component of the global competitiveness rating (Schwab, 2017).

At that, despite the significant growth of the innovation component, in general, innovative development has not reached the desired pace and this is largely due to the uneven innovative growth in the sectoral aspect. In addition, the inequality of innovation development is to some extent objective, as all industries are divided by the dominant source of innovation into four groups or four scientific archetypes. (Fig. 2)

The archetype of efficiency	**The engineering archetype**	**Consumer archetype**	**The scientific archetype**
(of industry)	(of industry)	(of industry)	(of industry)
Mining	*Energy*	*Banking sector*	*Petrochemicals*
Oil-gas	*Engineering*	*Telecommunications*	*Pharmaceutics*
Metallurgy	*Construction*	*Software and IT*	*Healthcare*
Woodworking		*Transport*	
Textile		*Trade*	
Agriculture		*Hotels and restaurants*	
		Entertainment	
		Education	

Figure 2. Archetypes of industries by prevailing innovation type.

In this case, an important area of innovation is undoubtedly the tourism and hotel business, which has received accelerated development in the last decade marked by a number of large-scale international events. In commercial terms, the 2018 FIFA World Cup, held in 11 cities of the Russian Federation, was the most successful event. 5.7 million fans were attracted to the country, including 3 million of foreigners. The championship brought 850 billion rubles to Russia, which makes up 1% of Russia's GDP. There is no doubt that the success of the event largely depended on the mass tourist flows generated by the 2018 FIFA World Cup.

According to experts McKinsey, in 2018 the development of tourism helped to add 121 billion rubles to GDP and the flow of tourists from abroad increased by more than 20%. Hotels also made a significant contribution: their revenue at the time of the championship has increased by 30-40%.

It should, at the same time, be noted that the positive impetus given by the 2018 FIFA World Cup will continue for the next years, as fans who received a 'fan passport' (Fan ID, 2018) obtained a one-year visa-free entry into the Russian Federation. The FAN ID system, applied for the first time at the Sochi 2014 Olympics, proved to be excellent at the 2018 FIFA World Cup and recognized as a very successful innovation developed by the Russian company I-Teko commissioned by the government of the Russian Federation. Thanks to the fan' passport, foreign football fans were able to come to the championship without wasting time on visa formalities. This became possible thanks to the coordinated interaction of I-Teko with a number of Russian ministries and departments. I-Teko is a high-tech domestic company – integrator-developer of information solutions for corporate clients, which operates in the market since 1997 (Fan ID, 2018).

It is obvious that the FAN ID system is a comprehensive consumer innovation that provides a range of opportunities, including registration, accounting and issuance of fans' passports, services for the delivery and documents printing, as well as consulting services that are provided in special centers. The passport itself becomes an important multifunctional document for the duration of the competition, giving the opportunity to use transport, attend sports competitions and other mass events, as well as visit museums and exhibition centers. The cost of launching such a system amounted to about 5 billion rubles, which is certainly no little, but the effect of this innovation exceeded all the expectations, as in fact, diverse issues and problems, ranging from ensuring the safety of events to advertising the country's tourist opportunities and promotion of national cultural heritage were systematically and comprehensively resolved.

Conclusion

Based on the written above, we conclude that in the current conditions of the Russian Federation development it is necessary to ensure sustainable growth of well-being and competitiveness - every person, every family, and the whole society. The basis for realizing this goal are becoming National projects focused on the development of human capital, aimed at improving health, education, environment, culture, housing and the urban environment. All of them are designed to strengthen and complement each other, contribute to raise living standards and to cut complex demographic problems. At the same time, the national projects have a strong self-organizing beginning, which allows to support small business and entrepreneurial initiative of people, which will become the basis for strengthening the Russian economy competitiveness.

In General, in the implementation of national projects there must be formed such an institutional environment that will create conditions for the self-realization of people, including in new kinds of businesses, which offer high-tech workplaces. Their dynamic development and penetration into all spheres of human activity lead to rapid and profound changes in the architecture of markets, existing business models and organizational structures. The changes introduced are so profound that the world is entering the largest in history technological transition, when the wealth of natural resources and the labor cheapness are no longer the main factors of growth.

According to analysts, 'breakthrough' technologies and 'radical' innovations create conditions for a fundamentally different quality of development, which will provide from 60 to 80% of the predicted economic growth (Idrisov et al., 2018).

In conclusion, it should be noted that the consumer innovations, developed and applied in the sphere of tourism and hospitality, provide an opportunity to bring a tangible effect as for the state, in the form of GDP growth and the economy diversification, and for business in the form of additional income and profits. In addition, and most importantly, the innovations introduced will allow improving the quality of human life by usage of new technologies.

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Comprehensive Prevention of Deviant Behavior of Minors in General Education Institutions

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Abstract

The article contains a blueprint of comprehensive prevention of minors' deviant behavior in general education institutions. It has been proved that comprehensive prevention of deviant behavior of minors in the system of education should be based on an analysis of the main factors and causes of its occurrence. Comprehensive prevention is based on the principle of early prevention of deviant behavior of minors, which should begin as early as in pre-school age and continue throughout all stages of child socialization in an educational institution (from primary to high school). The authors modify the traditional scheme of preventing deviant behavior, where the main criterion of identifying a level is the degree of destructive risk, and substantiate a comprehensive approach - according to the levels of the social structure of an educational institution based on age, gender, psycho-biographical and individual approaches, where target groups of each level are characterized as an object and as the subject of prevention.

Keywords: prevention, deviant behavior, minors, general educational institutions, social and pedagogical impact.

Introduction

The problem of minors' deviant behavior is one of the most important among psychological and pedagogical problems. Destructive processes affecting various public spheres have led to an increase in the crime rate, not only among adults, but also among young people. Teenage deviation, manifested in various forms, takes on the features of a mass phenomenon, which is characterized by steady growth trends, widespread in such parts of the youth as adolescents and sometimes even in children. The importance of the development and improvement of the system of preventing deviant behavior is indisputable and obviously necessary in different social settings of contemporary Russia. Social tensions in the country give rise to a serious increase in various kinds of violations of social norms by minors: the scale of offenses and crimes, teenage alcoholism, crimes associated with drug trafficking and other manifestations of deviant behavior are constantly expanding (Cherdymova et al., 2019). This type of deviation takes on the character of an epidemic.

The aggravating risk factors for the formation of deviant behavior among minors are the restructuring of the family as a social institution (dysfunction of family systems), which gives rise to new social situations for students, as well as expanding the limits of accessibility of the media and other resources with a low level of information security for students. In addition, in most cases, destructive forms of behavior arise against the background of school maladjustment and learning difficulties, unreasonably harsh and inconsistent disciplinary practice, neuropsychiatric diseases, behavioral deviations, and an imbalance of the educational milieu.

In this regard, there is a pressing issue, both about studying the factors of deviant behavior in the adolescent and youth milieu of educational institutions, and about developing a system of preventive measures.

Sample and Techniques

Prevention is one of the main and promising areas in morale building activity. Prevention is a complex of various kinds of measures aimed at stopping any phenomenon and / or eliminating factors that contribute to it.

The term "prevention" is usually associated with the planned prevention of an adverse event, with the elimination of the causes that can have undesirable consequences.

From this it follows that prevention should be carried out in the form of planned actions aimed mainly at achieving the desired result, but at the same time at preventing possible negative phenomena.

The etiological nature of prevention consists in the action on the main factors (social, psychological, biological) that contribute to the formation of deviant behavior.

The comprehensive character of prevention consists in mutual interest and coordinated work of various departments, ministries and specialists. Prevention of deviant forms of behavior is a nationwide objective and its successful solution is possible only with the joint coordinated efforts of specialists from all services of the prevention system.

Prevention of deviant behavior is a complex of measures directed towards its elimination. All preventive measures are conventionally divided into general and special. Political and socio-economic activities are referred general ones that directed to further improving the well-being of people, improving their education, work and life, the progress of science, culture and all that contributes to the formation of new man, the comprehensive development of the individual. Special events, based on general ones, nevertheless have some peculiarities when dealing with various forms of deviant behavior.

Prevention of deviant forms of behavior should be based on the principles of science, social activity and systemic character, therefore should be comprehensive, differentiated and phased, and most importantly - be systematic and offensive.

In general, the prevention of deviant behavior involves a system of general and special measures at various levels of social organization: nationwide, legal, social, economic, medical, sanitary, educational, socio-psychological.

The World Health Organization (WHO) proposes to identify primary, secondary and tertiary prevention. The primary prevention is aimed at eliminating the adverse factors causing a certain phenomenon, as well as increasing the stability of the individual to the influence of these factors. With regard to deviant behavior, the primary prevention can be referred to as mass and universal prevention of actions that deviate from social norms. The primary prevention is focused mainly on the teenage period (Efimova, Salakhova & Seroshtanova, 2016; Efimova, Salakhova & Oschepkov, 2015; Preventing suicide, 2014).

The objective of the secondary prevention is the early detection and improvement of unfavorable individual and social factors with a high probability of causing deviant behavior. This is work with a risk group — primarily children and adolescents living in unfavorable or "aggressive" social conditions. In this regard, the secondary prevention can also be called selective intervention. It is directed to identifying high-risk groups and determining the methods of working with them. Such work embraces less wide circles of population than the universal prevention (Bandura, 2000; Tastan & Davoudi, 2013; 2017; Fortova & Eropov, 2016; Kalinina et al., 2018; Salim, Wadey & Diss, 2016; Radhy, 2019; Ezhov et al., 2019; Pushkarev et al., 2019).

The tertiary prevention solves special problems, such as the prevention of a recurrent problem, as well as the harmful effects of already formed deviant behavior. This is modification intervention, or an active influence on an even narrower circle of people with persistent or highly probable deviations in behavior (Salakhova et al., 2018c; Masalimova et al., 2019; Belicheva, 1994; Davis, 2001).

The areas of preventive work are the following:

1. Prevention, based on work with risk groups in medical and medical-social institutions. The creation of the so-called network of social support institutions.
2. Prevention, based on work in schools, the creation of the network of "healthy schools", the planning of preventive classes in the curricula of all schools.
3. Prevention based on working with families.
4. Prevention in organized youth groups and at workplaces.

5. Prevention with the help of the mass media.
6. Prevention, focused on the risk group in unorganized groups - in the territories, streets, with uncared-for children, neglected children.
7. Systematic training in the field of prevention.
8. Massive motivational preventive activism.

The importance of preventing deviant behavior is associated primarily with the direct correlation of deviant behavior of teenagers and crime in society: the more pronounced the destructive behavior in children and adolescents, the higher their proneness to commit a crime. Prevention of deviant behavior of teenagers should form an adequate level of socio-psychological competence. Teenagers should understand the limits of what is permitted and clearly distinguish between ways of solving problems that are important to them (Mitin, 2016; Masalimova & Shaidullina, 2017; Salakhova et al., 2018a; Bochaver & Khlomov, 2014; Ardakani et al, 2015; Salakhova et al., 2018b; Chan, 2018).

The leading principles for the prevention of deviant behavior comprise: a comprehensive character of preventive work; targeting (taking account of age, gender and socio-psychological characteristics); mass involvement; positivity; personal interest and responsibility of participants in psycho-prophylactic work; aspiration to the future; professional competence.

An important object of prevention is the diagnosis of the attitude of a teenager with deviant behavior towards people and towards oneself, towards the environment and upbringing. One can identify the four types of relations between a teenager and the surrounding social and pedagogical environment: an inert type of relations; an adaptive type; an acute-contradictory type; a conflict hostile type. The leading type of relations determines the nature of resistance to upbringing influences, compliance with negative influences and adverse conditions. On this basis, it is possible to establish the level of pedagogical neglect, which determines the degree of compliance of a deviant teenager to the educational process and the degree of stability of a negative trait in his character.

Focusing on preventive work, it is necessary to say that the system of educational and pedagogical activities should be based a long period of development and a wide range of activities of children and adolescents referred to a risk group. Along with educational, labor, social activities, preventive measures should touch upon the area of leisure. Psychological and pedagogical assistance to children and adolescents at risk should be combined into a comprehensive system of preventive and remedial and rehabilitation measures directed not only to developing cognitive and communication processes, but also to increasing independence in forming a system of value attitudes, in strengthening social position and personal manifestations (Mitin et al., 2017, Mitin et al., 2018; Brynin, 2010; Masalimova et al., 2015; Voiskunsky, 2010).

Results and Discussion

In connection with the significance of this topic, the authors have developed a plan for the comprehensive prevention of deviant behavior of minors in educational institutions. The comprehensive prevention of juveniles presented by the authors is multi-level. The authors modify the traditional scheme of prevention of deviant behavior, where the main criterion for identifying a level is the degree of destructive risk, and substantiate a comprehensive approach - according to the levels of the social structure of an educational institution based on age, gender, psycho-biographical and individual approaches, where target groups of each level are characterized as the object and as the subject of prevention.

The purpose of the comprehensive prevention of deviant behavior of minors is to ensure a systemic, comprehensive, coordinated psychological and pedagogical support of the educational process directed to preventing deviant behavior of minors in educational institutions.

The comprehensive prevention of deviant behavior of minors in the educational milieu is based on the following principles:

1. Availability and timeliness of assistance and support;
2. Humanism - faith in the capabilities of the child, a positive approach;
3. Reality - taking account of the real possibilities of the child and the situation;
4. Systemic approach - considering the child as a holistic, qualitatively unique, dynamically developing subject who is part of the wider "man-to-world" system;

5. Individual approach - changing the content, forms and methods of remedial and developmental work, depending on the individual characteristics of a child, the goals of the work, the position and capabilities of a specialist;
6. The activity principle in reforming - based on the leading type of activity, which is typical of an age period.

The plan of comprehensive prevention (hereinafter - the Plan) includes two main areas of psychological and pedagogical support and follow-up of the educational process in educational institutions:

1) general prevention (ensuring the involvement of all students in the life of the school and the prevention of their school difficulties and social disadaptation);
2) special prevention (to identify and provide assistance for all students who need special pedagogical attention, to carry out work with them at the individual level).

As the main activities of the psychological and pedagogical monitoring of the educational process aimed at preventing deviant behavior of students are the following:

- scientific and methodical;
- information and analytical;
- diagnostic;
- reforming and developmental;
- preventive activity;
- consulting;
- educational;
- social dispatch.

Methods and techniques for the prevention of deviant behavior of minors in educational institutions.

Diagnostic: using a package of pedagogical and psychological techniques to identify children at risk / prone to deviant behavior in an educational institution.

Psychotechnology of personality-oriented therapy: individual psychocorrection talks, group psychotherapy, autotraining, suggestive programs (conducted by invited experts).

Rehabilitation psychotechnologies (trainings): transactional analysis, psychodrama, intellectual training, personal growth trainings, reflection training, role-playing game, etc.

Organizational: pedagogical meetings, consultations, seminars, discussions in groups, round tables.

Informational: a reminder, poster information, information sheets, posters, booklets, ICT.

Stages

In addition to the functional division into the areas of psychological and pedagogical support and follow-up of the educational process to prevent deviant behavior of students, the plan provides for the division into independent stages in accordance with the periods of schooling to which the most complete and systematically organized processes of psychological and pedagogical support are “tied”.

Each cycle of such support has a certain structure, an implementation algorithm, which includes the stages of formulation, clarification and solving follow-up tasks and solves particular problems applying the required forms, methods and technologies.

Problem statement (the formation of a request) is determined as a request to the support service from the learner, teacher or parents regarding a certain situation or mental state of the student, and the results of monitoring or other diagnostic examination of schoolchildren according to the diagnostic program.

The objective of the support and follow-up specialists is to determine the state of the student’s psychological and pedagogical status at the moment from the point of view of the presence or absence of certain signs and prerequisites of deviant behavior.

A request received from teachers and parents must go through a certain “psychological processing”, a test of validity, before going on to the next level - clarifying the problem (determining the request). The objective of this level is to clarify the essence of the problems that have arisen in the child, to find their hidden causes. This level involves the use of talk methods, the analysis of the products of activity, studying the social situation of the child’s development, conducting in-depth psychodiagnostics, as well as collecting additional information from teachers, class teachers, parents that is required to clarify the child’s psychological status.

Determining the problem involves solving the task of fundamental importance - determining the student's holistic school status, summarizing and synthesizing information about him, and the organization of the synthesis work in this Plan is a psychological and pedagogical consultation, whose role is to determine the risk of deviant behavior and take measures to overcome it and also discuss the path and strategy of solving the problem, which provides for a number of psychological and pedagogical activities that bear a developing character (if marked problems of personality development were not found in the child) or correctional-forming (if such problems exist).

The main stages of the system of psychological and pedagogical support and follow-up in an educational institution:

– Diagnostic stage.

The purpose of this stage is to understand the essence of the problem and its target groups. The diagnostic stage begins with the registration of the signal of a problem situation, then a plan for conducting a diagnostic study is developed, which includes the primary diagnosis of the somatic, mental, social health of the minor.

– Exploratory stage.

The goal is to collect the required information about the ways and means of solving the problem, to bring this information to all participants of the problem situation, to create conditions for the child's awareness of the information (including the ability to adapt the information).

– Consultation and project stage.

At this stage, specialists in psychological and pedagogical support and follow-up discuss with all interested parties possible solutions to the problem, analyze the positive and negative sides of different solutions, build performance forecasts, help to choose different methods. It is important to pay attention to any ways of solving the problem that the student identifies himself, without expressing evaluative and critical judgments. Stimulating this kind of activity is one of the most important objectives of a properly organized follow-up process.

– Activity stage.

This stage ensures the achievement of the desired result. The task of the support specialist is to assist the implementation of the psychological and pedagogical plan, both for the teacher and the child, which often requires the active intervention of external specialists - psychologists, medical workers, lawyers, etc.

– Self-analysis stage.

The period of understanding the results of the service of psychological and pedagogical support for solving a particular problem. This stage can be final in solving a particular problem or starting in the design of special methods for preventing and correcting mass problems in an educational institution.

Levels of psychological and pedagogical support of the educational process aimed at preventing the deviant behavior of minors

The project proposed an approach based on the levels of social stratification of target groups.

Within this approach, the following three levels are distinguished:

1. "I myself" - a teen self-help program (personality level).
2. "Equal to equal" - modification of the program of modern youth crowdsourcing (peer level).
3. "I and We" is a program for the formation of skills for early recognition of the deviant behavior of minors (the level of the teaching staff).

"I myself" - the level of the individual (individual, including crisis, psychological and pedagogical support). The strategic goals of preventive work are the development of the personality of the adolescent, including: awareness of their own values and meaning of existence; the development of self-confidence; development of skills for successful interaction with others; development of skills and the skills necessary to achieve their goals, and as a result - the formation of a creative and active life position.

"Equal to Equal" – the peer level.

Three types of educational programs that have been applied and tried out are recommended for teenagers. The program "Adult – Child", in which all plans and decisions are made by adults, and students are invited for compulsory participation. The program "Adults with young people", in which adults plan, and minors carry out, execute their plans. The program "Child-to-Adult": students make plans, make decisions, find a way out of difficult situations, while adults only help and support them. This level involves training teachers / psychologists-trainers to organize and conduct training courses for active teen volunteers and training courses for teenagers-instructors from among those who have been trained for educational activities among their peers, the purpose of which is to teach teenagers to spread vital principles among their peers and not only to succumb to the negative influence, but also become a source of the positive influence.

"I and We" - the level of the teaching staff

The program "I and We" is the central part of the Plan, and in its content it serves as a program to form the skills of constructive behavior among minors. At the same time, it is impossible to design an effective prevention system without the teacher's working himself thoroughly through the problem (who, like all specialists of all professions that render assistance, is prone to emotional burnout and, consequently, to social maladjustment). Creating a psychologically safe educational environment at school requires improving the work for the prevention of teachers' professional breakdown.

The purpose of the program is to increase the socio-psychological competence of a teacher in the field of diagnostics, analysis and prevention of deviant behavior in an educational institution.

Objectives of the program:

1. to increase the level of psychological knowledge and psychological culture of teachers.
2. teachers' mastering individual and group ways and methods of personality-oriented diagnostics, aimed at studying the destructive processes and emotional states of teenagers at risk / prone to deviant behavior.
3. teachers' mastering behavioral patterns of response in crisis situations.

It is possible to identify the procedure for implementing a program to form the skills for early recognition of the minors' deviant behavior in an education institution (as a subject of prevention):

I. Organizational:

1.1. Motivating - "objectification" of collective and individual needs, the joint discussion of expected results and conditions of cooperation, clarification of professional expectations; team building.

1.2. Conceptual – the discussion of the place and role of the program in the context of the school. Determining the meaning and content of preventive activities, the role, status and general professional position of the subjects of the educational process. The development of the algorithm and content of the work of each teacher, psychologist, social teacher, doctor, etc.

1.3. The formation of a group of psychological and pedagogical support for the implementation of the program. Discussing the objectives and expectations as a result of its implementation.

2. Teaching:

2.1. Methodical training of the staff.

2.2. Practical training of the staff.

3. Implementation:

3.1. Preparation of diagnostic tools.

3.2. Practical implementation of the action plan.

4. Summarizing the results of the school year: June

4.1. Self-analysis and diagnostic - the program implementation analysis.

4.2. Control and evaluative - making decisions about changes in the program.

It should be pointed out that the duration of the stages depends on the conditions of the educational environment functioning in an institution, and their sequence seems to be optimal.

The main areas of support and psychological follow-up of the teaching staff (as an object of prevention):

1. Psychological prevention – the assistance in the full social and professional development of the individual, preventing possible crises (age and professional), personal and interpersonal conflicts, including developing recommendations to improve the social and professional conditions of the individual's self-realization.
2. Psychological counseling - assisting a person in his self-knowledge, adequate self-assessment and adaptation to the real conditions of the educational milieu, the formation of the value-motivational

sphere, overcoming crisis situations, professional deformations and achieving emotional stability that promotes continuous personal and professional growth and self-development.

3. Psychological reforming - active psychological and pedagogical influence directed towards the elimination of deviations in personal and professional development, harmonization of personality and interpersonal relations (Rubinstein, 2000; Rean, Belinskaya & Narovsky, 2013; Masalimova & Chibakov, 2016; Kalenik et al., 2018; Abilgaziyeva et al, 2018).

Conclusions

The implementation of the whole complex of measures provided for in the plan of events and activities allows one to determine the expected result: creating conditions for the psychological and pedagogical comfort of the student in an educational institution, providing social and psychological protection for minors, reducing the number of disadapted students; early detection of groups of minors in difficult life situations; preventing the complications of their life situations by engaging them in a timely manner in the assistance program; reducing the number of children with the manifestation of deviations, the prevention of destructive forms of behavior.

The mission of preventive work is the weakening and elimination of social and socio-psychological preconditions that contribute to the formation of deviant behavior among minors.

The plan of comprehensive psychological and pedagogical support of the educational process directed to preventing deviant behavior of minors presented in the article can be recommended as the basis for implementing one's own model, developed in view of regional and local characteristics and based on the pedagogical experience of any type of educational institution.

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Sociocultural Constants of Higher Education

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Abstract

The article reveals the problem of the formation of cultural knowledge in the system of domestic university education. The article starts the analysis with the concept of "culture", which is basic in understanding the specific features of cultural education. The results of the analysis of the development of cultural science as an independent direction and program of higher professional education in the domestic system of university education are presented in the article. It has been proved that cultural science is a world view discipline that is focused on the formation of key parameters of a person's culture. In addition, the article reveals the sociocultural essence of university education in the 21st century. It has been proved that university education is one of the leading socio-cultural institutions of contemporary society. The article describes the processes of formation and development of university education; processes of changing university models under the influence of the social environment; the foundations of a modern university in the global information society; trends in the development of university education in modern sociocultural conditions. The authors have identified specific features of modern Russian university education.

Keywords: education, university, culture, cultural studies, sociocultural space, aesthetic education.

Introduction

Observing the development of European culture for many centuries, one can say with confidence that its development correlates significantly with the development of universities. The development of Europe is largely due to the development of universities. The relationship between sociocultural transformations in society and changes in the life of universities testifies to it. At the same time, the phenomenon of the university occupies a significant place in European culture, for many centuries remaining the center of achievements of human civilization. During its long existence, the university itself proved its ability to be the intellectual center of not only Western, but also world culture.

At the present stage in the philosophy of education over the past few decades, large-scale debates have been held on the topic of the crisis state of modern universities and, which is no less important, the theoretical substantiation of the new university idea is carried out. The current state of universities is viewed by researchers from various angles. Many well-known authors introduce such terms as "university in ruins" (Ridings, 2010), "university death" (Strong, 2016) and others.

It should be noted that universities have an almost genetically fixed ability to overcome crises, and this is facilitated by the constant updating of the university idea, which helps universities adapt to different situations at different historic intervals.

The university as a keeper of academic tradition, as an organization with a high level of inertia in matters of innovation, appears in different images to representatives of the philosophy of education. Each researcher puts his own meaning in the term "university", and one can study this by understanding as deeply as possible the processes of the university's formative periods as a sociocultural phenomenon. This makes it possible once again to be convinced that it is the approaches of the philosophy of education that are capable of solving the problem of a search for a renewed university idea at a high theoretical level.

The concept of the university itself, which cannot be attributed only to the translation of knowledge within the walls of universities, is the subject of research in the field of the history of the university in European culture. From the methodological point of view, the philosophy of university education can be a source of heuristic ideas, with the help of which there was an in-depth understanding of the features of this phenomenon, which provide the university with flexibility before the changeability of new epochs. However, with the preservation of the fundamental university tradition, universities have their own focus on the needs of modern society. The ideological component of the concept of the university has always remained a kind of platform which university life was built on in different cultural epochs: "A university remains a university in so far as it unfolds its life around the problems of a real person, which is a carrier of specific socially, culturally, nationally and ethnically determined qualities" (Universities on the threshold of the third millennium, 1994).

Research Methodology

Since the end of the XVIII century. universities have become subjects of the development of national educational systems, among which a special place is occupied by the German and English systems. The key ideas of the university were approaches to the phenomenon of the university implemented in practice by W. von Humboldt (1985) and J.G. Newman (2006).

The idea of a classical university was finally formed only in the XIX – XX centuries. For example, the idea of a new, or neoclassical, university originates in the works of German philosophers of the 19th century. Regardless of the fact that the German classical philosophical tradition is represented by an impressive list of outstanding authors, the name of not only the theorist, but also the practitioner W. Von Humboldt is of particular importance. Such outstanding philosophers as I. Kant (1994), J.G. Fichte (1993) and others stood at the origins of the German tradition of understanding the university. The ideas of these thinkers were realized owing to the reform work of the German philosopher Wilhelm von Humboldt (1985). It was Humboldt who identified the conceptual foundations of university education. The basis of this concept is the idea that the public education system should have an intellectual focus on the dissemination of culture based on universal and fundamental education.

According to the model of the classical university offered by Humboldt (the term "classical university" entrenched in use in the 19th century), three main objectives of universal universities can be identified, which determine the meaning of its existence - it is about transferring, expanding and using knowledge, respectively, activities related to these objectives are teaching, research work and activities aimed at serving the community. Scientific activity, according to W. von Humboldt (1985), should be in the focus of the university, giving it responsibility for the progress of mankind, for scientific and technical progress (Yakovlev, 1995).

It is not surprising that the idea of a medieval university was reflected in the works devoted to a classical university. Among them, a special place is occupied by the work titled "The Idea of the University," authored by J.G. Newman (1801 - 1890) - English theologian, teacher, church leader, one of the eminent thinkers and writers of the XIX century. In it, the author dwells on some features of the knowledge studied at the university which distinguishes it from other educational institutions (Newman, 2006).

"The idea of the university" according to J.G. Newman (2006) is the most outstanding work devoted to this topic. This fundamental work largely laid the tradition of philosophical thinking about the university as the subject of social change in the life of society. As A.A. Gribankova (2011) writes in her work: "one of the fundamental ideas of this work is the comprehensive actual justification of the university's mission – the pursuit of the unity of mankind".

In J.G. Newman's (2006) opinion, the main goal of the university is the cultivation of intellect. He understood intellect as a relatively stable system of an individual's intellectual inclinations, commensurate with his mental abilities, as well as with the effectiveness of an individual approach to a situation that requires cognitive activity and has universal characteristics, with a style of thinking and a strategy for solving life problems.

J.G. Newman (2006) identified another trait characteristic of university knowledge: freedom and liberalism. In this case, the term "liberal" refers to knowledge and is, in E.V. Strogetskaya's (2009) opinion "a special idea that has always been and always will be due to the immutability of the essence of man, as the specific idea of the Beautiful".

In the university model developed by J.G. Newman, the university should be focused not only on science, but also on the approval of liberal ideas.

"Thus, the idea of a classical university proceeds from the idea of it as an institution which, through the accumulation, preservation and transmission of universal liberal (non-utilitarian) knowledge, provides the student here not so much with a profession, as with life guidelines determined by a worldview. The main mission of a classical university is to study the achievements of culture, the development of intellect and spirituality, considered as the ultimate goals of university education, the only ones that correspond to its nature", summarizes E.V. Strogetskaya (2009).

The researcher of the idea of a classical university in European culture, M. Frenay (2001), writes the following about this: "thinking, which will remain for the rest of their lives, are the ideas of J.G. Newman's (2006) university, their attributes are freedom, equality, peace, moderation and wisdom, and their carriers themselves will better fulfill their role in society, become intelligent, able and active members of society" (Strogetskaya, 2009; Frenay, 2001; Khorrami et al, 2015).

The social development that universities spread, according to J.G. Newman (2006), consists in the effective dissemination of knowledge, in fostering educated citizens. The university should be a place for universal knowledge. The goal of the university should bear not only a moral, but also intellectual character, thus calling for the spread and expansion, but not only the accumulation of knowledge.

In the XX century, a number of changes occurred in educational systems. The number of students and teachers has rapidly increased, the network of higher educational institutions has expanded, and the educational system itself has gained industrial traits: when a person becomes a product of an educational process aimed at satisfying the needs of an industry. Universities gradually began to work to meet the needs of industrial society.

Further discussions of the objectives, intentions and absolutes of the university as a social institution, which spread in the 20th century, attracted a wide range of prominent thinkers in various scientific fields.

The utilitarian orientation of the university in the XX century had both positive and negative traits – the personality was in the center of the educational process, which for industrial society meant a limitation of production skills. This made it possible to speak of such phenomena as "man of the masses" (Ortega y Gasset, 2005) and "one-dimension man" (Markuza, 2014; Suba'a Al-Sadi & Rahman Khan, 2018).

The mission of the university in the twentieth century, in the works of the Spanish philosopher and sociologist H. Ortega y Gasset (2005), was analyzed around the need to return the university to its true purpose as an institution responsible for the progress of mankind, for which the highest value is the person himself: the university should be an institutional projection of a student, two important characteristics of which are, firstly, the lack of the ability to receive knowledge, and secondly, the urgency of the knowledge obtained for life " (Ortega y Gasset, 2005). H. Ortega y Gasset (2005) believed that the main function of the university was to comprehend the fundamental, in terms of culture, disciplines. An impeccable university, according to Ortega y Gasset, is the university in which the faculty of culture becomes predominant. The same faculty, which is designed to introduce students to the cultural traditions of the past, based on an analysis of real historical events that have shaped university traditions. The student must become a professional in his field, and he does not need to be a scientist for that. For this reason, in Ortega y Gasset's theory scientific research is not one of the main functions of the university.

All of the abovementioned ideas can be found in the Russian idea of the university. Russian philosopher M. V. Lomonosov, already in the XVIII century, believed that the university could be the center of Russian culture. At the beginning of the XX century, A.A. Kizevetter (1929), a university history researcher, defined the essence of a university and its main tradition as the unification of the needs of science and human existence.

Speaking of the university, it is important to emphasize its cultural function. As Academician V.A. Sadovnichy (1995) asserts: “Universities never die, since they are, first of all, the product and embodiment of the spirit and intellect of their nation. If the nation disappears - and its universities will disappear ... As long as the universities live, the nation lives too. That is why universities are a national treasure in civilized countries”.

Results and Discussion

The first attempts to study the problems of education from the point of view of sociology at the turn of the XIX-XX centuries were the works of E. Durkheim (1976). In the works of P. Sorokin (1913), M. Weber (1994), M. Scheller (1994) the links were identified between the education system and society, the dependence of education on changes in the socio-cultural environment. Since the second half of the 20th century, the studies of university education have become a part of general sociological theories. Higher education is considered as a factor of social development, its changes occur under the influence of growing trends in post-industrial society, the transformation of the university into one of the main social institutions of society (Markuza, 2014; Kalenik et al., 2018; Tastan et al., 2018; Kalinina et al., 2018; Masalimova & Chibakov, 2016). Representatives of the structuralist paradigm in the sociology of education P. Bourdieu (1988), J. Coleman (1990) put the problem of social inequality in the first place.

At the turn of the XX-XXI centuries, studies by R.D. Benford and D.A. Snow (2000) and M.B. Scott and S.M. Lyman (1968) were conducted on the issues of changing university education under the influence of modern processes of informatization and globalization, adaptation of traditional universities to them. In particular, the formation of a single educational space contributes to global changes in universities, which creates competition between traditional universities and other organizations that provide educational services (Benford & Snow, 2000; Scott & Lyman, 1968; Masalimova et al., 2019; Zhampeisov et al, 2018; Tejeda & Dominguez, 2019; Salakhova et al., 2018a; Masalimova & Shaidullina, 2017).

The analysis of higher university education also occupies a large place in the domestic philosophical, sociological, pedagogical, and psychological literature. The methodological foundations of the theory of domestic university education were laid in the 19th century by B.N. Chicherin, S. Trubetskoy (Chicherin, 2004; Trubetskoy, 1995). In Soviet times, the studies of L. Vygotsky, F. Filippov and others helped to consider not only the problems of higher education as a social institution, but also the motivation for choosing a profession, questions of value orientations of young people, their lifestyle, organization of free time (Vygotsky, 1957; Filippov, 1980).

Contemporary studies of G. Ashin, A. Bulkin, B. Wolfson and others identify social factors and trends determining the development of higher professional education (Ashin, 2001; Bulkin, 2001; Wolfson, 1999).

As a conclusion, we would like to cite the following thesis: “For a thousand years there has been a basic didactic model (with certain reservations). But for this thousand years the university was born and died not once or twice. The university at the time of the Middle Ages, the university at the time of the Renaissance and Enlightenment, and, finally, the future university of the XXI century. - they are different universities. They can be derived from one another. Each of them was born and died as the successive concept of man exhausted its use when he entered a new socio-cultural dimension” (Salakhova et al., 2018b; Masalimova et al., 2014; Mitin et al., 2018; Salakhova et al., 2018c; Mitin et al., 2017).

The last few decades in the philosophy of education there has been an animated discussion about the crisis of the university and the need to search for a new idea. This article presents the results of the analysis of the origin of the university in European history in order to demonstrate the nature of the transformations of the university idea, which could be heuristic to substantiate the modern university idea for a globalizing society of the 21st century. The article proves that a university, in order to secure the status of an important sociocultural phenomenon, must embrace the modern “spirit of the times” and the corresponding concepts, suggesting its role in modern sociocultural dynamics.

Conclusions

In contemporary society, universities are the highest level of tertiary education. The objectives of the modern university are beyond the scope of the educational process itself and are associated with the implementation of a multitude of cultural, social and political functions. These features of university education are formed from the beginning of the formation of a university in European culture: combining the learning process with research, developing culture, producing new knowledge, providing services for the nearest, sociocultural environment. The history of the university development as a specific system of education and upbringing indicates that the mechanisms of education are determined by a specific socio-historical situation. The university acts as a peculiar model of culture. The contradictions that arise in culture influence the changes in university education, giving rise to a new socio-cultural model of the university. Serving as an important element of medieval culture, the culture of the Renaissance, the New time, the Newest history, the university consistently passed through several stages of its development.

Today, universities are changing, adapting to the new needs of the global information society. On the one hand, they again gain their original function - to be the guarantor of universal values and cultural development, on the other hand, traditional universities today are in tough competition with many new diverse organizations - providers of higher education. These trends give rise to a new controversial model of the modern university. Modern crisis tendencies in the development of the university have caused numerous social / cultural / political changes. The most significant of these are related to the weakening of traditional institutional foundations and guarantees of the influence of universities. But universities retain their traditional uniqueness, which allows diverse universities to respond to: a variety of unmatched needs of the contemporary world.

Recent decades are characterized by reform processes of university education in all developed countries of the world. Each country has accumulated its own traditions in the organization of universities; certain national models of universities have been formed that respond differently to the challenges of modern society. The trends of globalization, the information and communication revolution are bringing together the national systems of university education, which is reflected in the programs of national educational reforms, in the process of the formation and development of a single global educational space. The conducted analysis of university education systems allowed us to identify characteristic trends in the development of universities, despite their numerous national characteristics. Centralization is reflected in designing a nationwide higher education policy. Despite the reduction in public funds, university education not only remains one of the priorities of national development, but is becoming increasingly important. Decentralization of university education is directly related to the autonomy of universities, their ability to meet the requirements of economic development, as well as social, demographic, and spiritual needs of individual regions.

The changes that have taken place in Russian university education have become not just a part of the socio-economic and political transformations of the Russian society of the 1980s-1990s, but are also largely due to the global processes of reforming education under the influence of rising crisis elements. The convergence of national higher education and foreign educational systems, the inclusion of Russian universities and universities in the Bologna process in general, the adoption of foreign models of organization and management of universities - these and other processes are ambiguous. On the one hand, they contribute to the integration of Russian universities in the educational space of the modern world, on the other hand they are fraught with threats of losing the traditional values of Russian universities, which for more than two centuries of their development have taken a worthy place among universities of other countries.

The same features are typical of both modern Russian higher education, and universities of other developed countries: the reduction of budget funding, the introduction of new paid forms of educational services, decentralization and regionalization of education, the rise of university autonomy. In contrast to the West, these trends occur against the general background of the socio-economic, political and socio-cultural transformations of the entire Russian society, which makes the problems of Russian universities more difficult to solve than at universities of other countries.

Thus, the transformation of modern universities is influenced by changes in society, culture and knowledge. As the analysis of modern theories shows, the position and organization of universities today is arousing much controversy. Production, development and dissemination of culture – the university's objectives in the past century – recede and the main issues are adaptation to modern social change, cooperation between the university and the state, on the one hand, and the global world, on the other. Modern universities significantly expand their functions in society, gradually forming a new image of the university of the XXI century.

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Educational and Industrial Cluster as a form of Advanced Spesialist Trainig

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Abstract

The article deals with the idea of developing a conceptual framework for enabling the function of educational and industrial clusters as a form of forward-looking vocational training in secondary vocational education sector. It also emphasizes the importance of improving the system of secondary vocational education to support and assist innovative socio-economic development of regions. General scientific methods like systemacy and dialectic were used to make an analysis. At the stage of the model creation and its implementation the authors of this paper used some particular methods such as empirical for information collection, its accumulation, recording and processing. The rational method was used for interpreting received data. Concrete sociological methods were employed at the initial stage of investigation and at the stage of a pilot testing. This article made a short review of a cluster creation, showed its features, and specified its goals and basic strategies. Special attention was given to an educational and industrial cluster, its structure and operation, and the creation of regional Center for Advanced Vocational Training. This paper also described the stages of the educational and industrial cluster development and presented some learning outcomes.

Keywords: secondary vocational education, advanced vocational training, educational and industrial cluster, integration and interaction.

Introduction

Modern Russian society has experienced constant and significant changes in recent years creating the need to reform the system of general and secondary vocational education and highlighting the problem of continuous vocational training. Special concern in the concept of the long-term socio-economic development of the Russian Federation until 2020 (The concept of long-term social and economic development of the Russian Federation for the period up to 2020, 2011) is addressed to education and shows the following interconnection: modernization of the educational system → innovations in economy → dynamic economic growth → prosperous and secure country (Zhukov & Palyanov, 2014).

The successful realization of the desired goals is possible if a balanced, dynamic and integrated system responsible for training professionals for industrial, commercial and social sectors is developed. Particular attention is paid to the creation of multitype educational clusters able to integrate the potential of multilevel educational institutions and core enterprises of certain regions.

This paper reflects authors' approaches to the development of strategic concepts concerning the functioning of educational and industrial clusters (EIC) as forms of a forward-looking vocational training in the environment of close interaction among educational institutions, employers and social partners.

The authors of this study state that cutting-edge vocational training in the system of secondary vocational education should be based on some major foundations including the principles of proactive training, socio-economic responsibility, self-development and flexibility (Mavrina et al., 2018), as well as close integration and cooperation between educational institutions and real sectors of economy in the environment of creation and development of educational and industrial clusters.

This paper considers some issues concerning the creation of educational and industrial clusters in regions, i.e. the classification of the most widespread types of clusters, their features, prerequisites for their creation and desired outcomes. This article also presents authors' approaches to the idea of proactive advanced training in the environment of educational and industrial clusters formed on the basis of educational institutions. These clusters ensure learners' interests and enhance their competitiveness to meet the demand for innovative socio-economic development of regions.

The fundamental nature of this study is ensured by theoretical and methodological backgrounds to the forward-looking training in the environment of cluster approach implementation aimed at improving the quality of learners and teachers' training in the system of secondary vocational education. The reformation of the secondary vocational education system is carried out to guarantee the scientific and technological development priorities of the region.

The scientific novelty of the study consists in the development and implementation of modern scientific approaches, methods, new forms for acquiring professional competences in a context of integration and cooperation among training and professional institutions, employers and social partners with the necessity of teachers advanced training and retraining.

Problem Statement

Russian education is undergoing a new stage of deep transformations associated with the need of system changes in specialist training and conflict resolution between the training quality and the employers' demands to employees in the context of scientific and technological development of priority industries. The strategic issue of professional education in the Russian Federation is determined as follows: to develop a system of forward-looking lifelong training aimed at implementing the major priorities of scientific and technological advance, ensuring the international level of' professional qualification and specialists' ability to lifelong advanced training and retraining (Bibik, Lebedev & Palyanov, 2013; Tastan & Davoudi, 2017; Malakhova et al., 2018; Palyanov et al., 2016a; Ajallooeian et al, 2015; Al-Jahwari et al, 2018).

The problem statement of this study is associated with the lack of scientific works about forward-looking advanced training in the system of secondary vocational education. Moreover, there is no unambiguous definition of the concepts "proactive (forward-looking) advanced education", "proactive (forward-looking) advanced training" and "proactive (forward-looking) vocational education" in pedagogy.

Proactive advanced education or forward-looking education is a new and not enough studied scientific category associated with such categories as advanced lifelong education, proactive (advanced) vocational education and personnel advanced training (Malakhova et al., 2017; Palyanov & Kholina, 2015; Palyanov et al., 2016c; Villalobos, 2018).

The idea of personnel advanced training is in changing the relation to a man and treating him/her as a valuable person and a subject of his/her own activity. This human vital activity is closely associated with technological advance, economic and social development, which, in turn, requires new skills, new professions and constant advanced training and retraining (Mavrina, Nikolaev et al., 2018; Tastan et al., 2018; Malakhova et al., 2018; Lee, 2019). The main components of proactive advanced and lifelong education are as follows: personnel keeping ahead training to ensure socio-economic development of the region, self-development, self-determination and self-employment; fundamental education as the basis for further personal development in the educational environment with its multi-level educational programs. These programs should meet such requirements as complementarity of basic education and advanced studies (advanced training, occupational retraining, informal education for adults), versatility of educational programs ("matching" of the content of educational programs, their levels and stages, their continuity and integration) and flexibility of forms to get education (full-time, extramural form of study, distant, the system of free-excess education and etc.) (Novikov, 2000; Nikitin et al., 2016).

Best practices of Russian industrial plants demonstrated the importance of forward-looking training for different branches of industry and commerce. A special organization and structural model was developed for a petrochemical complex in Tatarstan with the purpose of training qualified professionals.

This model includes theoretical and methodological backgrounds (approaches, principles and functions) and the structure of the educational process. The feature of this model is in the introduction of supplementary pre-professional education in schools, and professionally-oriented psychological support and special on-the-job training with the analysis of the correspondence of learning outcomes with the industry demand (Zhuravleva, 2011).

The desired purpose set in this study is possible to achieve if the system responsible for vocational training of qualified personnel for industrial and commercial sectors is balanced, dynamic and integrated. Moreover, it is necessary to develop an efficient system of vocational guidance and self-determination in a close cooperation of educational institutions (schools, secondary vocational colleges, universities) with industrial plants and companies working in a real sector of economy. The best period for self-determination and vocational guidance is school years (Milinis et al., 2016).

When developing the system of secondary vocational training one should take into account a range of factors affecting it. Among these factors are: technological advance; the quality of engineering activity; market relations of educational organizations with employers and business-structures; the inability to ensure quality field experience; the specific of urban areas development (Sinenko et al., 2017b; Smirnov et al., 2012).

The search for new models of vocational training for industrial sectors was caused by the above mentioned factors. This model should be based on principles of integration, keeping ahead education, the concept of economical production, the regional model of scientific and technological initiative and educational and industrial clusters.

Methodology

The development of the model of proactive advanced professional training for the system of secondary vocational education needs some infrastructure changes. The creation of different types of educational and industrial clusters in regions is among these factors.

The origin of the first cluster as the unit of economic agglomeration of interconnected industrial plants dates back to the XVIII century. The study of spatial competiveness in the context of cluster theory is associated with M. Porter (Chernova, 2014). M. Porter claimed the 'cluster approach" to be one of the most efficient mechanisms for structural development of economy (Gasanov & Kanov, 2013).

Cluster models differ from each other by their variety and terminology. You can find such terms as "educational cluster", "vocational and educational cluster", "industrial and educational cluster", "educational and industrial cluster", "regional-industrial educational cluster", "research educational and industrial cluster", "industrial and research educational cluster", "innovative cluster", "educational and regional cluster" et al.

The variety of terms to define the same concept confirms, on the one hand, that the terminology in this field is still not fixed. On the other hand, the use of various terms proves the incomplete identity of notions defined by these terms as a result of different approaches to the creation of educational clusters in different subjects of the federation. One can distinguish three grounds for this variety. In one cases emphasis is put on the territorial allegiance (regional or sub regional), while in other cases this can be ignored. In some cases full attention is paid to a certain structure of a cluster (multilevel clusters), while in other cases for some reasons this structural feature is not of great importance (e.g. it is possible to create clusters with polytypic structures). Sometimes the scientific component of a cluster plays a vital role where the members are universities and some research organizations. However, in some cases it is not so important (Ananyina, Blinov & Sergeev, 2012; Sinenko et al., 2017a).

Different approaches are used in above mentioned cluster types. This variety of approaches is vast for their correct classification.

In the framework of our study the main emphasis is placed on the interaction and cooperation of vocational educational institutions with regional and municipal enterprises. Taking into consideration the State program of the Russian Federation "The development of industry and its competitive recovery" (The order of the Government of the Russian Federation of 15.04.2014 No. 328, 2014) which determines the ways and means of ensuring consolidation of Russia's positions in the world arena and dynamic economic development on the basis of its integration with the international technological environment, the most appropriate term is "educational and industrial cluster" which reflects its innovative nature and can be used as a tool for regional development.

Educational and industrial clusters are formed in the subjects of the Russian Federation to ensure the demand for human resources ready to work with new technologies in priority sectors of regional economy, in social spheres and core industries and able to foresee technological development. The analysis of regional strategies and development programs showed that the number of educational and industrial clusters in one region varies from one to seven.

The formation of educational and industrial clusters is based on three processes:

- horizontal integration of vocational education institutions belonging to the same level (network formation, affiliated branches et al.);
- vertical integration of vocational education institutions belonging to different levels: universities, secondary vocational institutions, comprehensive schools (formation of educational complexes);
- combined integrations ("horizontal" and "vertical") - the creation of multilevel educational institutions and their networks and branches, educational consortiums et al. (Ananyina, Blinov & Sergeev, 2012).

In the course of this study the following factors were considered as backgrounds to the creation of educational and industrial clusters:

- the availability of a big sectorial, regional or federal production complex with a status of a special economic area;
- the availability of dynamic developing associations of regional employers;
- social partnership experience with employers in the regional system of vocational education (Palyanov et al., 2018b).

The processes of educational and industrial cluster development had been formed when approaches used to solve the problems associated with human resources in regional industrial sectors were not always relevant and efficient. Some of these approaches are still used beyond the creation of educational and industrial clusters.

The first approach is used to solve the issue associated with specialist training carried out by employers using their own resources. Some big companies which are aware of the foreign experience concerning staff training put this experience in their own practice. They use different forms of in-house advanced training and retraining and establish their own training centers, departments, corporate universities et al. Some specialists complete their probation period abroad. But there are only few companies that can afford such costly experiments. The quality of on-site training provided by representatives of small and medium-sized businesses leaves much to be desired (Sinenko et al., 2017a).

The second approach entails the cooperation of employers with educational institutions to find effective mechanisms ensuring quality training. Employers often make an application to institutions of vocational education for training of specialists in certain fields. However, the experience of such cooperation is not always assessed as positive. The quality of specialist training is far from employers expectations and graduating students lose their motivation to cooperate with each other. It is to be noted that some educational institutions get employers involved in the development of syllabuses and programs that satisfy the production needs (Sinenko et al., 2017a).

The third approach entails the conclusion of the treaty between and educational organization and employers which declares the needs for specialist training. Some employers together with educational institutions conduct some seminars, conferences and participate in scientific investigations and publications (Sinenko et al., 2017a).

The most widespread forms of cooperation within the framework of this approach are probation periods with the prospects of further employment at industrial plants and practical training.

The efficiency and the application of the above mentioned approach mainly depends on employer's readiness to cooperate with the system of vocational education of a region.

The use of the third approach allows overcoming many drawbacks since it expands opportunities for integrating educational and industrial structures, and creating production-and-training centers and training-and-scientific complexes. The function of these centers and complexes is to carry out multilevel training and the first state of higher education in the system of secondary vocational education using educational programs and integrated curricula. This type of integration allows using rationally facilities and equipment, implementing more qualitative and efficient the Federal State Educational Standard, ensuring continuity of education, creating united educational environment saturated with professional context.

The forth approach allows establishing social partnership between economic sectors and educational spheres, whereby the regional bodies of state administration take responsibility to control and manage this collaboration. The key task to be solved is to find means to encourage employers to interact and cooperate with institutions of vocational education and training (Sinenko et al., 2017a; Malakhova et al., 2018).

The most adequate institutional display of this approach is the formation of regional structures dealing with the coordination between employers and institutions of vocational education and training on a regional scale. A special regional personnel policy council is set up at in many regions at the initiative of the local administration responsible for interaction and cooperation between the system of vocational education and industrial sector.

An integral component of a regional manpower policy is the system of direct contracts and treaties between educational institutions, involved in vocational training, and industrial plants and organizations. This enables not only "the meeting" of common interests between industrial plants and institutions of professional education but also their collaboration to solve a wide range of social and economic problems such as retraining of the unemployed and reduced people to fill vacancies with qualified personnel.

The further development of the fourth approach is the creation of regional educational and industial clusters functioning on the basis of long-term strategy planning and integration between economic and educational spheres.

The structure of an educational and industrial cluster can be composed of two spheres:

- inner, including multi-level and multi-type institutions of vocational education solving the problem of human resources as well as infrastructural organizations and departments specially formed within the cluster structure (such as regional resource centers of vocational education, councils of experts, certificate authorities et al.)
- external, incorporating all social partners cooperating with institutions of vocational education, first of all leading employers of core industries, as well as regional bodies of state administration, education authorities, employment service, organizations and associations (Ananyina, Blinov & Sergeev, 2012).

Basic strategies of an educational and industrial cluster are:

- economic (the formation of efficient educational services meeting the consumers' demand promptly and well, investment vehicles) investment instruments of development;
- social (elaboration of special guarantees for qualitative specialist training);
- marketing (transfer of leading educational technologies, educational guidance);
- legal (development support of normative legal base of partnership, guarantee of partners' subjective attitude);
- educational (joint development of educational and technological activity);
- firm guarantee of factual and technological basis of public and private partnership among all participants of an educational cluster (Safin et al., 2014).

The author's approach to the creation and operation of educational and industrial clusters is based on the idea of the integration between institutions of secondary vocational education as a core of an educational and industrial cluster and industrial plants of a real sector of economy both at regional and local level. The need to form clusters is very urgent in remote areas (in our case Urai, Khanty-Mansi Autonomous Area, the Tyumen Region), mono-industry towns (Novokuznetsk, the Kemerovo Region) and Centers of advanced vocational training (Kemerovo).

The key function of Centers for advanced vocational training is monitoring and prediction of the demand for labour force in regions, arrangement of conditions for implementing flexible, profession-oriented programs with possibilities to follow individual educational trajectory, training, advanced training and retraining of citizens, teachers and training officers engaged in the system of secondary vocational education, implementation of vocational education programs and arrangement of conditions for conducting final learners' assessment using a mechanism of a demonstration exam.

The main goal of cooperation in the framework of educational and industrial clusters is to arrange conditions for qualified vocational training of professionals required for certain industrial sectors of the region. In order to arrange favorable conditions it is necessary to design and develop specialized structures operating in the framework of educational and industrial clusters consisting of following components: multifunctional centers of applied qualifications (MCAQ), regional industry resource centers (RIRC), inter-regional industry resource centers (IRIRC), production-and-training centers and departments, industrial parks, innovative production centers, training areas, re-engineering centers et al. These centers and areas compose the institutional infrastructure of a cluster (Kasatkina, Pakhomova & Rudneva, 2015; Nevzorov & Drobchik, 2018).

The purpose of creating innovative structural and infrastructural components is to attract the learners' attention to the problem of modern production and to get them involved in management of some complex processes and industrial plants typical for modern sectors of regional innovative economy.

Results and Discussion

The efficiency of an educational and industrial cluster is characterized by following parameters:

– final product – educational service able to train a specialist meeting all demands of the professional standard;
– intermediate product – academic and methodological complex consisting of theoretical and practice-oriented modules satisfying all requirements concerning variability, modernization, networking cooperation focused on the prognostic vector of the demand for professional personnel in regions, areas and mono-towns;
– target product based on a triad principle: 1) for educational institutions; 2) for industrial plants; 3) for socio-economic development of a region (Palyanov et al., 2018b; Masyukov, 2018b).

The variety of these products for an educational institution is presented by educational programs for clusters, variable internship areas, self-developing modules of proactive advanced learners' training. Industrial plants should be aware of own demands for graduating students hired by a company. The efficiency of educational and industrial cluster functioning as a mean of socio-economic development of regions was assessed by: fixing forecasting technologies; specifying the demand for specialists in regions, areas, towns and cities; developing regularity framework of cluster interaction and cooperation as a form of social partnership; establishing communicative environment with the purpose of maximal use of social partners' potential.

The structure of an educational and industrial cluster was as follows.

Firstly, strategic cluster partnership of secondary vocational education organizations with industrial plants set up a base for an educational and industrial cluster.

Secondly, the main task of an educational and industrial cluster was to organize and train high-qualified personnel for certain sectors of economy. For this purpose the structure of this type of clusters consisted of partnership production-and-training components including regional industry resource centers, inter-regional industry resource centers, production-and-training centers and departments, industrial parks, innovative production centers, centers for acquisition of manufacturing processes, training areas, re-engineering centers et al.

Thirdly, the main idea of generating partnership structural components is to create favorable conditions for maximal learners' concentration on the management, operation and control of complicated science intensive production and manufacturing processes typical for modern branches of innovative economy.

Fourthly, high level of territorial connectivity of all participants (social partners) is typical for educational and industrial clusters.

*The features of an educational and industrial cluste*r are associated with following guidelines:

– cluster participants are not consumers of a final product, they only consolidate and develop the best educational technologies which guarantee high quality of a final product, i.e. professional qualification and social success;
– the parties of social partnership interact and cooperate on the basis of voluntary multilateral

agreements sharing material and technical resources and intellectual asset (Romanova, 2016).

The simulation technique was used to provide a full picture of an educational and industrial cluster. The developed model of an educational and industrial cluster is multidimensional and structural-functional. It is made up of 5 structural modules. The multidimensional nature of the model is presented by several components of learning process (profession-oriented training, internship areas, educational technologies and methodological support). The model structure is composed not only of components, but also ensures functional relations among them. The functionality of these relations is caused by mutual interests and demands of social partners and participants of a cluster (Mavrina, Nikolaev et al., 2018). Let us consider the modules composing a cluster.

Module I. It includes the field of vocational training carried out by institutions of secondary vocational education. This activity is fixed in the treaties between the educational organization and industrial plant. The identification of needs of the educational organization and social partners are of considerable importance when the model is elaborated.

The educational organization also specifies the employers' demands (social and cluster partners) for the level of specialist training in the specified field as fixed in the treaty. The employer should be fully aware of the learning environment in educational institutions dealing with secondary vocational education.

Module II. It includes the list of industrial plants composing the educational and industrial cluster that are establishing or ready to establish internship areas. The creation of internship area on the basis of an industrial plant is essential for educational organizations engaged in vocational training. It demonstrates the cooperation of an educational organization with partners (members of this cluster). It is vital to improve the quality of vocational training and strengthen the specialist training program to increase the number of trained specialists ready to work at industrial plants.

Module III. It specifies the educational and technological support of a cluster interaction and is sensitive to the needs of a production-and-training complex and social partners. The use of technologies for partners of a production-and-training complex varies depending on professional standards where specialists' competences, their skills and labour functions are specified. The creation of regularity acts, scientific forecasting, technologies of quasi-professional activity, networking cooperation, RR-technologies, technologies of cluster and information exchange, technologies of remote internship areas are used as key metadisciplinary technologies to achieve specified goals of a cluster interaction between institutions of secondary vocational education and industrial plants. This module as two other ones considers the demand for innovative educational technologies by institutions of secondary vocational education and industrial plants required for regional sustainable development.

Module IV. This module specifies the methodological and regulatory support of specialist training inside a cluster. It was suggested to develop following basic regulatory instruments: "Regulations about an educational and industrial cluster", "The glossary of an educational and industrial cluster", "Regulations about inside-cluster interaction" "Regulations about cluster cooperation", "Regulations about internship areas", "Conception about an educational and industrial cluster" "Road map of educational and industrial cluster operation", "The program of educational and industrial cluster development" et al.

Module V. This module includes the function of interdepartmental interaction of social partners with each other inside a cluster (educational institutions, industrial plants, administration of territorial entity). Educational institutions, industrial plants and administration of territorial entity often performed the same functions but had own differences and nuances defined by regulatory acts and treaties. Institutions of secondary vocational education performed organizational, educational, coordinating, professional functions and programming. Organizational, educational, executive, coordinating, professional and logistical functions were typical for an industrial plant, while administration was busy with managerial, executive, coordinating and prognostic activities. Such separation of functions in the framework of an educational and industrial cluster was compulsory since the fifth module is a key one in the structure of interdepartmental inside-cluster interaction.

The authors of the project have been elaborating the model of an educational and industrial cluster of a municipal level since 2016. It was tested on the basis of Urai Polytechnic College which belongs to institutions of secondary vocational education. This college carries out its educational policy as a prognostic model of a cluster type. Urai Polytechnic College has close coordination with "Urai Oil-Field Equipment» company, one of the leading industrial plants locating on the territory of Urai. The company policy is aimed at solving the problem related to qualified specialist training at institutions of secondary vocational education. Another policy direction is the support of town administration of Urai located in Khanty-Mansi Autonomous Area of Tyumen Region. This cooperation allowed creating an educational and industrial cluster and forming a Coordination Council consisting of town administration, Urai Polytechnic College, Board of Education, scientists and specialists in the field of education from Kemerovo, Novosibirsk, Omsk, Tomsk (Palyanov et al., 2016b; Palyanov et al., 2016c; Palyanov et al., 2018a).

A constituent assembly of the leadership from secondary vocational education institutions with employers and social partners was held in 2018. The key issue discussed at this assembly was the structure of an educational and industrial cluster. It was proposed to form this cluster on the basis of two educational institutions; both of them are located in Kemerovo Region. One is Novokuznetsk Mountain Transport College and the second is Kuznetsk Industrial Training School. The assembly was conducted with the support from the body of local self-government.

The team of Kuznetsk Industrial Training School developed a model of a mining and smelting cluster integrating the potential of educational institutions, core enterprises and social partners. The prerequisites for creation of a cluster were the experience of a long-term efficient social partnership between training school and employers, and the availability of a large-scale production complex of mining and smelting plants (Open joint-stock company "EVRAZ-UnitedZSMK").

The model proposed by the team from Kuznetsk Industrial Training School allows integrating the potential of all cluster participants: comprehensive secondary schools on the basis of Kuznetsk Industrial Training School dealing with vocational training in specialized classes for in-depth study in the areas of technology and production processes; institutions of secondary vocational education that meet the requirements of a real labour market for qualified specialists: industrial plants – customers that carry out employer-sponsored training on a contractual basis and subsequent integration in productive employment in enterprises. Particular attention is devoted to special teaching strategies, notably to the individual educational path and differentiation on the basis of planned monitoring and regular evaluation of progress achieved by individuals. The participants of the cluster deal with some forms of social assistance and develop the structure of training and production complexes. They also ensure on-the-job training and the completion of a graduate internship.

The development of professional competences on the basis of international competition "Young professionals" / WorldSkills Russia is one of the guidelines in the system of secondary vocational education. WorldSkills Russia is the most large-scale professional skills competitions by WorldSkills Russia standards tailored to students of secondary vocational educational. Advanced Vocational Training Centers (AVTC) was founded in 2019 in the framework of the federal project "Young professionals (Competitive recovery of vocational education)" and is aimed at developing networking cooperation and disseminating best practices in training of the most promising and on-fire specialties (TOP-50).

Siberian Polytechnic College in Kemerovo will have obtained the status of Advanced Vocational Training Center of Kemerovo Region by 2019. This college has been the area for holding Regional qualifying championships by WorldSkills Russia standards since 2014. It has also been the leading educational establishment in the field of "Automation and chemical technologies since 2016 as well as the leading Regional Resource Competence Center in the IT-field and chemical industry since 2018.

On grounds of Kemerovo Region vector of development one can observe transition of industry to digital platforms and opening of the Advanced Vocational Training Center on the basis of Siberian Polytechnic College. This college has experience in training, retraining and advanced training of learners, graduating students and unemployed people. Therefore, the choice of this college is reasonable and economically viable. In the context of the deteriorating socio-economic situation in the region caused by structural changes of employment, boost of technological innovations and IT implementation in production the college will contribute to increasing the number of self-employed people and employees having a second job. However, even the most efficient organization is impossible to solve all global challenges associated with regional employment.

The model testing of Advanced Vocational Training Center operation will allow consolidating actions and efforts of all institutions of secondary vocational training, employers and business through networking cooperation for the purpose of supporting and assisting economic development in the region. The main principle of the center functioning will be the idea of concentrating efforts on the development and mainstreaming of the supplementary vocational training program for students, pupils, teachers, workers and unemployed people with the support of logistic, information, training resources provided by industrial sectors and educational organizations.

The role of a comprehensive school as the participant of this cooperation and interaction in the educational and industrial cluster environment is in the formation of learners' vocational self-determination as a core of a system of continuous and life-long vocational training. The forms of interaction of schools with educational organizations, industrial plants and universities can vary. The cluster-networking form of Educational Complex ("Our school", Novosibirs) interaction between school and kindergarten is unique.

The Educational Complex "Our school" puts into practice the ideas of continuous education. Considerable significance is attributed to the implementation of following directions: «Pre-school and school education», «School of effective management», «Film-making», «Children -adult production», «Educational consulting», «Traits diagnostics and professional tutorials», «Educational tourism and educational and recreational activities», «The development of educational and pedagogical technologies", «Cluster and networking interregional project» (Nikolaev, 2018).

«Our school» develops and implements research and expeditionary projects that are presented by ECO Center "Development" from Altai. The themes of the expedition shift focuses on practical vocational guidance and vocational self-determination, e.g. "Summer play school", "Summer language school", "School of effective management", "Summer counselors' school", "Summer cinema school", "Summer artistic skill school", "Summer design school" et al.

The use of cluster-networking forms of interaction and cooperation allows schools to implement successfully joint projects developed together with the Center for Testing and Professional Diagnostics of MSU (Moscow), EKO-Center "Development" (the Altai Republic), Russian Analytic School (Moscow), IK " Pedagogics of Mental and Action approach (Moscow), organizations and enterprises of Novosibirsk (public limited company "Sinar", limited liability company «Sibagro Trade» and groups of companies Trend Mark, educational institutions of Novosibirsk, the Altai Republic, the Buryat Republic et al. (Nikolaev, 2018).

Conclusion

Thus, it was established that the country's economy transition to innovative development requires system changes to secondary-level vocational education that can guarantee professional training of middle-ranking specialists, as well as qualified workers and office employees. The solution to this problem is the integration among educational institutions, industrial enterprises and social partners.

The developed model of cutting-edge vocational training in the environment of educational and industrial clusters is aimed at the implementation of the priorities associated with the scientific and technological development of regions and improvement of the integration and cooperation among secondary vocational institutions, employers and social partners. This model also takes into account the requirements of the changing labour market, therefore, the vocational training is presented in this model as a unique combination of theory and practice and can be introduced in the institutions engaged in secondary-level vocational education.

The development and implementation of educational and industrial cluster models will eventually lead to the achievement of following outcomes:

1. The participation of all social partners in the design and implementation of a comprehensive and coordinated strategy for regional development.
2. The design, planning and approbation of technologies associated with the interdepartmental interaction and cooperation between social partners and participants of educational and industrial clusters: the creation of regulatory acts, scientific forecasting, quasi-professional activity, cluster and information exchange, interaction, networking cooperation and PR technologies.

3. Science-based statistically-valid forecast management of the demand for professions in a region or municipality (short-term 105 years, medium-term 5-10 years).
4. The design of learning and methodological grounds for an educational institution based on the integration and coherence of educational programs with goals of a region development, consumers' demands (employers' demands) for educational services.
5. The creation and development of a laboratorial and internship base for vocational and technological specialist training. Educational organizations, production plants, production off-site areas can be used to carry out so-called quasi-vocational learners' training.
6. The foundation of an integrated information center incorporating educational, technological, production and managerial potentials of social partners –the participants of the educational and industrial clusters.

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Promotion of Mooc's Ideas in University Education: Status And Prospects

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Abstract

The number of students enrolled in the massive open online courses (MOOC), universities and colleges that recognized and included MOOC in the educational process around the world is increasing every year, indicating an unprecedented success in the educational space. MOOC gave many students the opportunity to study in leading universities of the world on academic disciplines, topics, listen to lectures of famous scientists - researchers, thereby ensuring the openness and accessibility of higher education. This article provides an overview of the research of foreign and Russian specialists, in which the significance of online education in the development of universities, the scope of coverage of the audience, and countries with an analysis of specific examples of participation in promoting MOOC ideas has been studied. It also identified various problems in the implementation of MOOC in university education: a low percentage of students who did not complete the MOOC courses, a variety of motives, and expectations of participants in online courses, not only students, but also universities, the lack of an evaluation system, etc. The authors of the article consider that MOOC are innovative technology that has changed the traditional approach to university education in the transition to a digital society, an educational platform that allows you to practice and experiment Temporary forms and methods of education, to test new courses and disciplines, educational programs, to improve the participants in their professional and pedagogical, intellectual, cultural, social and personal abilities.

Keywords: massive open online courses (MOOC), university education, MOOC in higher education, ideas of open education, personalized assessment in MOOC, cMOOC and xMOOC, online education.

Introduction

In the traditional system of higher education there are global changes associated with the large-scale development of online education. In 2006, for the first time, massive open online courses (MOOC) were launched, which by gradually building up their potential, audience and pace, were the harbingers of new changes and transformation of higher education. For the first time, the concept of MOOC in 2008 was introduced by Dave Cormier in the description of the course "Connectivity as a theory of learning" by Siemens and Downes. At the beginning, the online -course has been designed for a group of 25 students who have made payment for the course and passed it to get credit. But the course was also available for those users who had registration. As a result, the course covered more than 2,300 people. In 2011, Sebastian Thrun and his colleagues at Stanford University developed the course "Introduction to Artificial Intelligence" with open access, which attracted about 160,000 students from 190 countries. MOOC has given many people the opportunity to study at leading universities of the world in popular academic disciplines, listen to lectures of famous scientists and researchers, thereby ensuring openness and accessibility of higher education (The New York Times, 2012).

According to the report of the Sloan Consortium for the period from 2012 to 2014, it is clear that the attitude of universities and colleges to MOOC was uncertain:

Table 1. The ratio of universities and colleges to the introduction of MOOC in the educational process (in %)

Year	Joined MOOC	Ready to join	Did not make decisions	Not joined
2012	2.6	9.4	55.4	32.7
2013	5	9.3	52.7	33
2014	8	5.6	39.9	46.5

As can be seen from Table 1, the number of universities and colleges that have recognized and included MOOC in the educational process is increasing. The main reasons for the increasing interest of educational institutions in MOOC were:

– important directions to improve the quality of education and university reputation;
– means for obtaining economic profit for the provided educational services;
– the possibility of obtaining funding from the state for promoting the development of MOOC (Sun & Jiang).

The growing popularity of the MOOC is confirmed by statistics on the number of students and universities. In 2016, 700 universities in the world offered 6850 courses. During this period, Coursera was one of the largest platforms of the MOOC, with more than 23 million students (Shah, 2016).

The participation of different countries in the creation and promotion of the MOOC, as well as institutional use of the MOOC in the national education system can be clearly seen in Table 2.

Table 2. The spread of MOOC in the world

USA	Europe	Asia-Oceania
Cousera (2012): 1905 courses	FutureLearn (2012, UK): 351 courses	KMOOC (2014, Korea): 18 courses
edX (2012): 975 courses	Open Classrooms (2007, France): 25 courses	JMOOC (2013, Japan)
Udacity (2012): 141 courses	OpenHPI (2012, France): 30 course	Xuetang (China)
Peer to Peer Univ. (2009)	iversity (2013, Germany): 93 courses	NPTEL (2006, India): 96 courses
NovoEd (2013): 77 course	ALISON (2007, Ireland)	Rwaq (2013, Saudi Arabia)
Canvas: 345 courses	MiriadaX (Spain): 168 courses	
	OpenLearning (2012, Austria)	

MOOC in the higher education system have spread fairly rapidly in the USA, Europe, Asia-Oceania, for example, since 2008 Cousera and edX in the USA, FutureLearn in the UK, iversity in Germany, MiriadaX in Spain, KMOOC in Korea and OpenLearning in Asia-Oceania.

In 2017, almost 800 universities offered students more than 9,400 MOOC, and the number of students enrolled at Coursera reached 30 million students and the courses offered were 2,700 (Shah, 2017). The total number of participants in online courses in 2017 reached 81 million (Class-Central.com, 2017).

The basis of the concept of promoting MOOC is the idea of open education - "knowledge should be freely transferred from person to person, the desire to learn should be supported without any demographic, economic or geographical restrictions" (Yuan & Powell, 2018). Since 2002, the idea of open education has begun to be supported by universities, although the popularization of the idea itself began in the 20th century. The Massachusetts Institute of Technology (MIT) created the OpenCourseWare project in 2002 and the Open University introduced the OpenLearn project in 2006. Based on the idea of the MOOC, prestigious world universities create open educational platforms: edX - University of Massachusetts, Futurelearn - Open University. Many researchers recognize the role of universities in promoting online courses, the MOOC, for example: Coursera in 2018 collaborated with 149 universities in the world. Thus, the MOOC is changing the scenario for the development of the higher education market, and the composition of players in the educational market.

Literature Review

Large-scale online learning is an occasion to rethink traditional university education. Many teachers and authors of online courses have noted that online education has changed their view and attitude to the traditional system of education (Pushkarev et al., 2019). They began to actively experiment different pedagogical approaches in organizing the process of teaching students, such as: “flipped class”, case projects, essays, project method, mutual assessment, video lectures, team work on projects, blended learning, etc. (Ezhov et al., 2019; Cherdymova et al., 2019) But these experiments are fragmentary, more dependent on teachers, on their level of digital competence and possession of modern technology, and personal interest in the introduction of new techniques as part of their discipline. Despite the emergence of a large number of pedagogical literature on digital teaching and learning in higher education, and the use of MOOC courses, there is no general discussion about how new technologies can change educational and learning processes (Langseth, 2018).

The predictions about the explosive effect, the tsunami effect, and the subversive potential of MOOC on traditional university education and the destructive effect on the university system did not materialize (Leckart, 2012; Friedman, 2012; Brooks, 2012).

But at the same time, as the statistics show, the increase in the number of students of the MOOC didn’t ensure an increase in those who completed the full course. According to R. Mayer, the percentage of students at Stanford, Massachusetts and California universities who didn’t complete the MOOC course of study is 80-90%. Of those who chose the program at the University of California, only 7% of the 50,000 students completed the course. Almost the same percentages of withdrawn students are noted on the results of the Coursera analysis - only 2% of those enrolled are issued certificates of full completion of the course, of which 0.17% are certificates with honors (Meyer, 2012).

S. White et al. (2017) explain the reasons for the high dropout rates of MOOC students by the following factors: the motives of the registered MOOC participants are diverse and have even greater differences with those who study at university programs; perseverance, diligence, persistence, and independence for all participants in the process of training in the MOOC manifest themselves in varying degrees; Expectations of participants from MOOC courses and the actual situation may be incompatible, for example, the duration of the courses, the deadline, the complexity of the tasks, etc .; not all students could plan completion of the course; MOOC courses are free and there are no assessments, penalties for non-compliance, which provides an opportunity for self-decision and independence (White et al., 2017).

There is another point of view of researchers about the lack of assessment as a reducing factor of motivation and interest of students to complete the course. The authors believe that at this time, the need to introduce assessment in the MOOC educational environment as a new and important solution for further development still needs to be studied, since one of the important gaps of the MOOC remains the lack of a qualitative, trustworthy, effective tool for assessing students' knowledge. As a promising direction, a personalized assessment within the framework of the MOOC, standardized formal assessments that apply to all to the same extent is not quite the right way to achieve the optimal learning goals of each participant in online education is considered. In this regard, the development and integration of personalized assessment in MOOC is a very relevant topic for future research (Xiong & Suen, 2018).

D. Clow (2013) offers a motivation model for students to complete the MOOC course in the form of a funnel, which consists of levels: awareness-registration-activity-progress. In his model, J.P. Howarth et al. (2016), complements the “completion” level.

Despite the low number of students who completed the full course, the MOOC of large-scale education platforms like Coursera, EdX, and Udacity, and FutureLearn have become university partners. Mac Andrew writes that the MOOC is the most advanced business model and universities, characterized as a more conservative model, retaining its status quo, carrier and custodian of academic traditions. They in collaboration introduce innovative approaches and ideas, and non-standard initiatives education. Mac

Andrew believes that it was universities that changed the business processes of online education companies: "Universities are not only carriers of academic tradition and system-wide efficiency, but also have an incredible potential for innovation and non-standard initiatives, only by realizing this truth, one can realize the potential of transformations existing in the system of higher education" (Quentin, 2018). "Universities continue to dominate the profitable segment of the market, and this once again proves that changing culture is more difficult than changing technology" (Sherman, 2018). Many MOOC providers are interested in cooperation with universities as providers of quality educational programs. For universities, the MOOC provides open access to a large audience of educational programs, the opportunity to experiment in the application of new technologies in teaching, expand ways of entering the education market, strengthen their awareness, position in the educational market of changing cyberspace, and form a brand. In addition, the placement of university MOOC on the international educational platform is one of the powerful ways to promote the culture of different countries, effective tools to strengthen the recognition status at the global level of national higher education systems. For example, universities in Asia — China, South Korea, Malaysia — create MOOC courses and promote them on popular online platforms as strategic objectives of the state, with the prospect of forming a higher education system that is recognized at the level of the world community and capable of creating worthy competition systems (Fadzil, Latif & Munira, 2015).

Results and Discussions

The MOOC platform recently began to place full courses of educational programs, which allows students to fully complete the course or partially. These forms of education on the MOOC platform make it possible to change the traditional system of education at the university. The difference between cMOOC and xMOOC from each other opens up new opportunities for online education.

Different concepts and pedagogical approaches to the idea, organizations of open education have created two different areas of the MOOC:

CMOOC is based on the theory of connectivity; based on a constructive approach to learning. The idea of the theory of connectivity was that the rate of emergence of information and new knowledge increases each time and one person cannot process all this. The appearance of a multitude of educational resources on the Internet does not guarantee the objectivity of all information; therefore, "trusted sites" and "correct" networks are created. The main focus is on joint training, and communication in social networks, in the process of which new knowledge is created based on the contribution and participation of each student (Tonybates.ca, 2014). There are no traditional curricula, programs, schedules of the educational process; courses unite like-minded people, independent of each other, who are not limited to the university, but the main subject is set by the introductory lecture; have access to platforms that allow traditional audiences to go beyond the boundaries, invited lecturers who are located in different countries, universities (Anderson & Dron, 2011). By the number of its audience, the cMOOC is much inferior to xMOOC. Researchers at cMOOC point out several possible problems associated with cMOOC: the learning environment can become chaotic, not always controlled; the environment requires a high level of digital literacy from users; the pace of learning, opportunities, level of education of the participants are different, so it may take a long time to achieve the goal; from the beginning of the course, participants, at their own discretion, change the form, rethink the given topic, which makes it difficult for the teacher to control the trajectory of the discipline. Since the participants themselves regulate their own curricula, their content is in accordance with the aim pursued, therefore the course generates its own trajectory (Sung-Wan, 2015);

XMOOC is based on the theory of behaviorism; the xMOOC model expands the pedagogical model through the use of video presentations, questionnaires and testing, thus the teacher has relative autonomy regarding the choice of structure, forms, methods of educational material, taking into account the capabilities of the educational platform.

The cMOOC and xMOOC models have completely different philosophical approaches and audience orientation. "The cMOOC is best suited for independent students who are willing to establish interaction within an open network of like-minded people and generate new knowledge based on this interaction in the digital environment. "The xMOOC organizes the learning process based on the prepared materials with predetermined results to be achieved and tests as evidence of the successful completion of the training" (Sherman, 2018).

The cMOOC participants are primarily interested in creating network communities, therefore, they need feedback on the discussion of common topics and questions, and xMOOC members strive to receive an assessment and a certificate (O'Toole, 2013).

Today, xMOOC leads in terms of audience reach, number of courses offered, and popularity among universities (Xiong & Suen, 2018). It is known that most people are interested in obtaining certificates, filling gaps in knowledge, and forming new competencies. But over time, the cMOOC can influence the transformation of the traditional learning model, since for the new network generation, this model is more in tune with their educational needs, reveals their creative possibilities, develops their individuality, uniqueness, and critical thinking. Therefore, universities face serious problems - in the future, traditional forms of organizing student learning will gradually lose their importance and pedagogical potential; every year the worsening situation of uncertainty in society, on the labor market requires a revision of educational programs, educational technologies; search for new methods and forms of education in order to meet the expectations and demands of the new generation of youth with universal educational activities updated by new basic educational standards of the Federal State Educational Standards (ФГОС).

For many universities, the MOOC acts not as a technology destroying the university system, but as a complementary innovation that improves the traditional system of higher education, practicing and experimenting with new forms and methods of online education. For the Massachusetts Institute of Technology, the MOOC is an experimental space where they study which technologies and teaching methods are effective for teaching modern students (Bates, 2013). At San Jose State University, the MOOC is included in traditional homework training sessions (Jarrett, 2012). In Australia, "many universities are actively using virtual reality, but the traditional approach to learning and teaching retains its position" (Sherman, 2018). One of the reasons for considering the MOOC in higher education as an additional form of traditional education is the large waste of teachers' time on preparing classes, recording online lectures, visiting online events, and participating in discussion forums (Kolowich, 2013), although the main motive for the participation of professors in the MOOC is the desire to expand people's access to higher education around the world.

Another reason for the participation of universities in the MOOC can be considered a desire to increase the internal potential, the digital competence of their teachers, to create high-quality online courses to attract talented scientists and students. In the future, a change in the position of universities towards the targeted use of their own high-quality, accredited MOOC courses to increase tuition fees is expected, which will lead to a choice between accredited courses inside the campus and open-access courses of the MOOC off-campus (White et al., 2017).

The Use of MOOC Universities in Russia

In Russia, universities have recently begun to actively launch their online courses that are accessible to everyone. The quality of online courses, student activity, and site structure includes the results of the CourseBurg (2018) study "How the platform's MOOC lives in Russian realities" (courseburg.ru, 2018). Of all the MOOC platforms, the most popular among Russian students is coursera.org: the number of monthly visits is "897,838 thousand people; average visit duration (min) - 0:10:08 - the longest; in terms of bounce rates, the lowest is 35.98%. " The "Open Education" platform is almost 3 times less than the "Coursera" in all respects. Edx which is the platform of the Massachusetts Institute of Technology, Harvard and Berkeley universities, compared to Coursera, is not quite popular; the site's attendance is almost 5.5 times lower. Of the Russian platforms, the most visited are "Openedu.ru" and "Universarium.org" (courseburg.ru, 2018).

Openedu.ru was created in 2015 on the initiative of 8 universities - the founders of the Association "National Open Education Platform". The Openedu.ru platform publishes online courses for members of the Association that meet the requirements of international standards and their own requirements for developing online courses. The association cooperates with partner universities, in which part of the educational programs are partially implemented on the basis of the online courses. At "Openedu.ru": students can use the materials of the online course for independent work, and the received certificates on the results of the course can be taken into account by the teacher in the current and final student knowledge control.

According to the analysis of the research data from CourseBurg Platform, MOOC in Russia offer users a diverse range of courses with or without a certificate, educational programs are distinguished by convenience and quality, and many online courses are developed by renowned professors and are of interest to a wide range of people. Despite the active position of Russian universities in creating online courses, the user rating of online courses for self-education lags significantly behind the United States and India.

Conclusion

The modern system of higher education should provide students with applied skills, academic knowledge, and advanced education, which will provide them with employment, relevance and competitiveness for their future work. Due to the fact that higher education increases the relevance of the use of digital educational technologies in the process of training future specialists, it is necessary to teach them to competently create and use a digital ecosystem.

The MOOC allows you to expand the knowledge gained by students in one discipline, and at university, to listen to materials, positions of professors, and leading scientists in a specific field of science of other universities. In cMOOC, a more advanced student can interact with other users and participate in or initiate the formation of new knowledge, thereby contributing to science, increasing the level of self-education. CMOOC audience is notable for its diversity of contingent, global coverage, unification of representatives from different professional fields, culture, languages, religious affiliation, age, hobbies, attitude to the world politics, life, knowledge and practice in the studied discipline, subject, unique life experience, and this symbiosis enriches social experience, provides an opportunity to go beyond the standard training session, expands the communication culture of all participants in the process. Perhaps, in a diverse socio-cultural community, situations of contradictions, discussions, conflicts may arise. And they can't always occur between the participants, but also in the student himself, when he learns in the educational process, compares himself with others, his capabilities, abilities, knowledge, experience and skills. The student feels a change within himself - personally sees his own and joint results, his expectations from university education are justified, and this is an indicator of the ideal level of high-quality higher education. For universities, student success is one of the strategic, key goals of higher education.

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Technology of Accounting for Migrant Students' Needs in Physical Culture Bachelors' Education

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Abstract

The topic of the article is relevant as the increasing number of international students in educational institutions determines the need to introduce changes to the system of physical culture teachers' professional preparation, in particular, having them pay special attention to the educational needs of students belonging to different ethnic groups. The goal is to figure out the basic purpose and meaning of the professional preparation of a physical culture teacher capable of including students belonging to different ethnicities into society's education system. The leading methods of investigation are the analysis of the existing system of physical culture bachelors' preparation and the design of a new educational module taking into account the polyethnic character of educational environment. The article contains the results of the study of physical culture teachers' professional preparation system, determines what are the main purpose and meaning of a subject's inclusion into polyetnic society environment, suggests an educational module "Work of a physical culture teacher in a polyethnic educational organization". The findings can be used in the physical culture teachers' preparation for work in polyethnic educational organizations in the framework of the vocational, higher and additional professional education.

Keywords: Bachelor in Physical Culture, polyethnic educational organization; physical, mental, social health; educational environment, socio-cultural space.

Introduction

More than 55% of educational organizations in today's Russia are polyethnic and of different types (Usha, 2012). Polyethnic educational organization is an organization of general secondary, higher and additional education where a student has certain educational needs determined by their ethnicity, meaning that a teacher shall possess all competences to satisfy the abovementioned needs when planning and organizing the education process (Ivanova, Burkhanova & Samarin, 2018). Figure 1 illustrates special educational needs of other ethnic groups representatives depending on the type of a polyethnic educational organization.

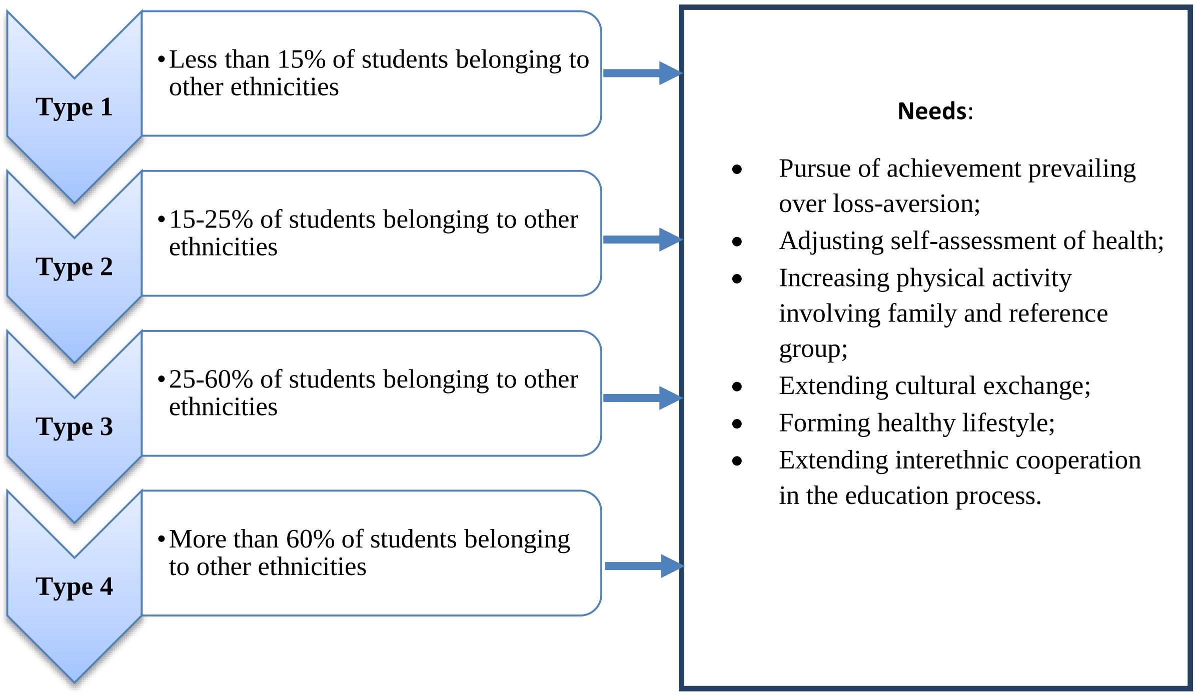

Figure 1. Students' specific needs in polyethnic educational organizations

Taking into account the abovementioned data, there is a need to organize such physical culture teachers' preparation that will allow for an effective socialization of migrants, formation of polyethnic community, restorative mediation in multinational community, and migrants' inclusion into Russia's socio-cultural environment (Ivanova et al., 2017). Nowadays, this kind of physical culture teachers' preparation is not implemented systematically, only as a part of practical training or in the course of studying theory and methodology of physical culture, design of educational space, social pedagogy and psychology. However, considering the current situation, such preparation shall be implemented systematically, based on fundamental humanistic values (Bystritskaya et al., 2018; Eisvandi et al, 2015).

Methodological Framework

It is international community's close attention to education and health of children in polyethnic society that has determined the need in such a study.

The analysis of the bachelor physical culture curricula and programs has shown that the subjects included therein, deal with special educational needs of students of different ethnicities really briefly, and mostly do it in the cross-subject sphere. The materials that students obtain at lectures and seminars explain the issue rather superficially and suggest that students should study different cultures' pedagogical traditions themselves.

As the result of the study, content of an educational module has been suggested; it takes into account all the given information and summarizes the studied materials considering bachelors' work in the multicultural space at a deeper level.

The hypothesis of the research is based on an assumption that studying special educational needs of students in polyethnic educational organizations in the framework of physical culture bachelor courses will allow graduates to work efficiently within polyethnic educational space.

Results

Globalization made migration an easier process while an individual's consciousness has been broadened to the extent where a person no longer belongs to a nuclear space which is their house, city or district, but is a citizen of the world (Ivanova, 2016; Ivanova, Bystritskaya & Grigorieva, 2015; Volkov, 1999, Bicheva & Filatova, 2018; Robani & Salih, 2018; Baykalova et al, 2018). Meanwhile, there is also an increase in migration of school and preschool age children when they find themselves subjects of education process in a new place. As proved by many scientists, (Bikimbetov, 2006; Bystritskaya & Grigorieva, 2015; Sultanova, 2014) effective adaptation of migrant children and teenagers to the school education space largely depends on their inclusion into the new society's socio-cultural environment. Studying cultural subjects helps a lot, as in case of music, physical culture, art, the influence of language barrier on social and academic accomplishments is minimal.

Physical culture terminal values are those of Person, Cognition, Nature. Other values that are important for a teacher's work in polyethnic educational organizations are Labour, Family, Friendship, Kindness, etc. (Ivanova, 2015).

However, it is commonly believed that physical culture lessons are based on the Health value only. A person's own health is the reason for attending physical culture lessons, their family's health is why people try to establish healthy lifestyle together with their family, children's health is the reason why parents send them to sport clubs, friends' and colleagues' health is why ski trips and other sport events are organized. Belonging to a different ethnic group makes one master both their national sports and those that are popular in their place of residence. The former allows one to preserve their national and cultural identity, follow their national traditions and self-identify as a part of a great people. The latter supposes that a subject represents their ethnic culture in multinational society and a subject's level of culture and education, behaviour and social and academic achievements let other people make a judgment about the whole nation.

Considering the abovementioned, we can state that health should not be considered in its narrow sense as physical health only. To better determine and satisfy students' educational needs in a polyethnic educational organization, one shall account for mental and social health, too. This shall be done at physical culture lessons, as well. (Fig. 2)

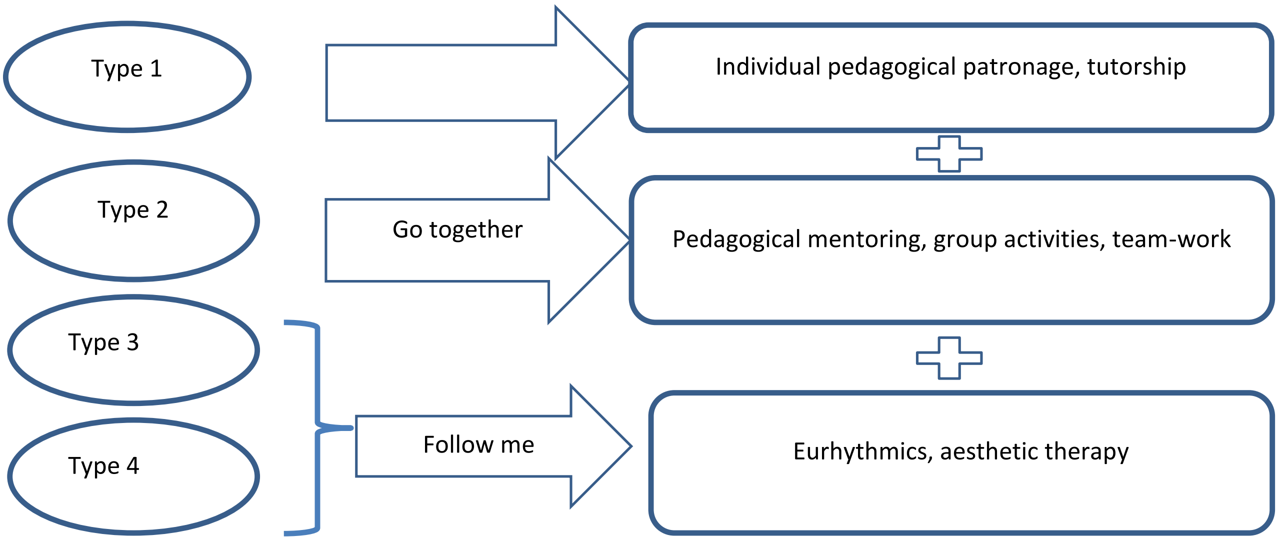

Figure 2. Technology of determining students' special educational needs by a physical culture teacher in a polyethnic education organization.

As shown by figure 3, the indicators of health are as follows:

- physical health:

1) level of physical development;

2) level of physical preparedness for activity and body functional preparedness for physical exercise;

3) level and ability for mobilization of body adaptive resources that ensure its adaptation to various environmental factors (Kalyuzhnyi, 2009);

- mental health;

1) stability of mental processes;

2) stability of emotional state;

3) inclusion into work; (Vilensky, 2012);

- social health:

1) social identification;

2) social adaptation;

3) organization of social activities;

According to A.N. Leontyev (1999), an activity developing certain qualities in people, is the activity where those qualities are necessary. It can be also referred to the mechanism of including students into the polycultural educational space and the activities aimed at achieving congruent health. Physical health is realized in academic activities and education process in a polyethnic educational organization in the form of high performance, physical endurance and tolerance to unfortunate factors such as noise, sedentary lifestyle, tiredness. Mental and social health indicators are one's wish to participate in mass sport and health events as well as the ability to initiate conflict free communication when participating in those. But it is physical health that allows one to take part in such events (Yadryshnikov et al., 2018; Escalera Chávez et al., 2019).

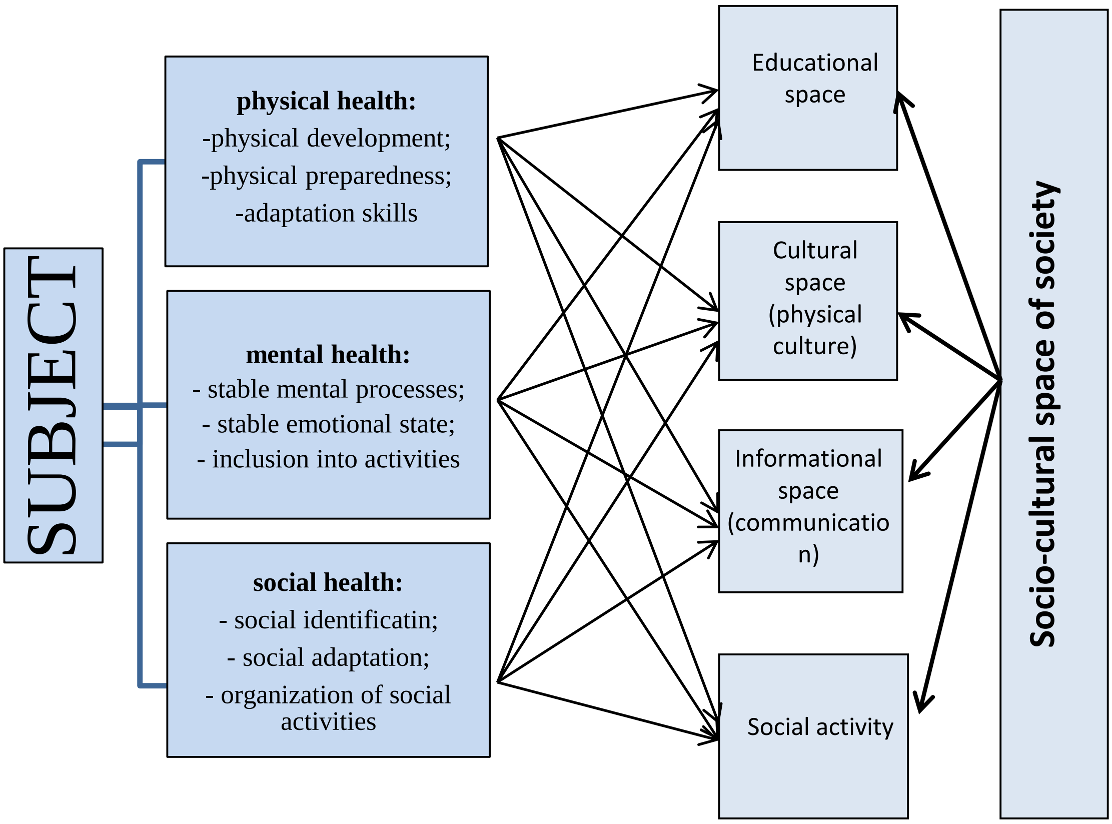

Figure 3. Mechanisms of a student's inclusion into polyethnic society

Let us consider the advantages of physical culture as a cultural subject in terms of accounting for the indicated needs of children and teenagers in polyethnic educational organizations:

1 – since at physical culture lessons non-verbal means of communication prevail over verbal ones, language barrier can be reduced to an insignificant factor conditioning academic results, cultural practice, communication and sport activities. Communication is organized in the form of physical activity by means of verbal and non-verbal explanations and visualizations;

2 – sport's unifying function in its broader sense explained in the Olympic Charter, allows to switch from potential conflict to a peaceful rule-regulated sport competition, decreasing general tension and proneness to conflicts of educational space;

3 – a person's physical culture as a part of society's culture reflects modern tendencies of a person's development in society. Following such tendency (healthy lifestyle, perfect body, etc.) allows the subject to combine the role of a representative of an ethnic group and that of a person that has been successfully integrated into the new socio-cultural space.

4 – body language and suppleness of a body are not stiff anthropological constructs. Their development is not subject to evolution but happens consciously and deliberately. Taking into account the indicated socio-cultural objectives, a subject is interested in achievements, physical perfection, mental comfort, fruitful social interaction that shows that physical, mental and social health are the meaning of a person's physical culture. Decrease in physical perfection subject to the lack of physical exercise in a group of people with common interests, causes mental discomfort and discord including the destruction of certain social ties.

The meaning and purpose of a subject's inclusion into polyethnic society has been proved to be their congruent three-component health. Ensuring this kind of health is what students' preparation for work in that field shall be aimed at (Prokhorova & Semchenko, 2018).

As the result of the study, an educational module "Work of a physical education teacher in a polyethnic educational organization" has been designed and integrated into the curriculum of the department of physical culture and sport of the Minin University (Ivanova & Ivanov, 2018). It consists of mandatory and optional subjects.

Mandatory subjects:

1. Technology of physical education and sport in a polyethnic educational organization.
2. Social education in a polyethnic educational organization.
3. Scientific and pedagogical bases of profession in a polyethnic educational organization

Optional subjects:

1. Organization of pedagogical support for families in a polyethnic educational organization.
2. Project and creative types of academic and educational activities in a polyethnic educational organization.

The final part of the module is pedagogical practical traning in a polyethnic educational organization.

The module is implemented with the help of modern educational technologies such as project and dialogic education, learning through play, special attention is paid to the national aesthetic therapy method and sport eurhythmics (Dmitriyev, 2011; Ivanova, Dmitriyev & Bystritskaya, 2015).

Discussions

The study is in line with the scientific results achieved by other authors that considered different aspects of a teacher's work in a polyethnic educational organization. For example, analyzing the development of specific multicultural education space in Russia, scientists point out that this process will be accompanied by new pedagogical issues:

- adequacy of verbal communication;
- studying other ethnic cultures;
- integration of family and school education based on the integration of various cultures' values.

However, pedagogical issues related to physical education are not singled out (Volkov, 1993; Mukaeva, 2012).

Although various authors have defined new functions that teachers shall fulfill in a polyethnic educational organization (Dmitriyev, Bystritskaya & Neverkovich, 2013), such as an intercultural communication consultant and a mediator, they did not dwell on the problems that can arise when those functions are fulfilled at PE lessons considering their specific character. Health as the meaningful basis of physical education was underlined by the majority of specialists in this field, V.K. Balsevich, G.I. Popov & N.I. Sannikova (2004) and S.D. Neverkovich (2014) among them. However, factors impeding effective development of health in students were considered without due regard to the intercultural interaction between students and their ethnicities. In other words, the results of the present study describing the specific character of such preparation represent an important contribution into the theory and technology of a PE teacher's work in a polyethnic educational organization. They also encourage to develop PE curricula based on the demand in specialists capable to quickly adapt to new work conditions.

Conclusion

Active migration is the reason for the growing number of polyethnic educational organizations that appear even in the regions with homogeneous ethnic population, so-called mononational regions. Due to the ethnic diversity of the population, new polyethnic educational organizations will inevitably emerge.

Inclusion of non-native children and teenagers into the new socio-cultural environment and the socio-cultural space of polyethnic society is effectively integrated into the cultural subjects. In order to include migrant children and teenagers into the educational space of polyethnic educational organizations, PE teachers shall account for both special educational needs and the need to ensure students' physical, mental and social health. The meaningful basis of a PE teacher's work and preparation is the development of culture-oriented mentality based on the main humanitarian values: health, labour, person, cognition, friendship.

PE teachers' preparation for work in polyethnic educational organizations shall have a systemic character and include the following types of content: psychological, pedagogical, technological, creative, scientific and practical.

Recommendations

The specific character of PE teachers' preparation revealed by the study showed the necessity to improve the education system including bachelor and master studies, additional professional education and the structure of educational practices. Changing the content of education shall be aimed at developing physical culture specialists' personal and professional potential that will allow them to easily adapt to work in polyethnic educational organizations. In other words, studying special educational needs of polyethnic students will improve both PE teachers' preparation and, thus, their work after graduation. The results of the study can prove helpful for university teachers that prepare students for practical pedagogical training and working as a teacher. The obtained data can also be used by the teachers of further education courses that have to rearrange the content of their courses depending on the changing conditions of the teacher profession. This knowledge should be also implemented in the elaboration of new standards and programmes.

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Improvement of the Mechanism of Complex Assessment of the Enterprise Activity Using Integrated Reporting

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Abstract

The article is devoted to actual issues of improvement of the traditional model of accounting as a tool of communicatory interaction between users under changes in the economy and society. Consideration of integrated reporting as a new paradigm of reporting helps comprehend key factors of value creation, today and in the future, basing on financial and non-financial indicators. The paper describes the concept of "integrated reporting", approaches to its compilation and structurization, determining key aspects in integrated reporting. Also the compilation of integrated reporting is proved herein not to be the final stage, and therefore methods, tools, approaches should be applied for effective data analysis and for making more reasonable management decisions. Based on researchers' combined experience, a methodology is proposed for determination of the enterprise's activity quality by indicators of integrated reporting to comprehensively assess the enterprise state.

Keywords: integrated reporting, financial reporting, IFRS, accounting system, integrated assessment mechanism, integrated financial reporting.

Introduction

For correct and effective management decisions in current conditions, the accounting and reporting system should be permanently improved to meet needs of different user groups and, consequently, to increase enterprises' production capacity, competitiveness in existing product markets and access to new ones. Today financial reporting under domestic and international standards is considered to be the main instrument for this. The purpose of financial reporting is to highlight complete and reliable information about the current state and results of the enterprise's activity. Due to financial reporting, the validity and effectiveness of managerial decisions can be ensured in a market economy. The financial reporting analysis results in qualitative and timely assessment of the entity's financial state which is a precondition of management decisions on function of certain management areas and strategic development of the company. Proper development and measures on improvement of the validity and balance of management decisions allow enterprises in the long run to increase their market value and to reveal opportunities of long-term sustainable development. At the same time, insufficient resources, changes and constant fluctuations in the global political system make many enterprises face significant financial difficulties based on inefficient formation or distribution of such available resources as financial, intellectual, industrial, and human; insufficient analysis of sale markets and poor forecast of long-term growth. The current state of the economy and directions of economic changes require for a qualitatively new approach to managing existing and potential opportunities for sustainable development, forecasting possible risks and consequences, determining ways to minimize consequences of these risk events. The desire to increase market value, investment attractiveness and conditions for sustainable development become the primary goals of business development. Over the past decades, a tendency towards global unification of financial reporting is observed. On the other hand, a constant increase of social responsibility to the society requires from enterprises to create an accounting systems providing the necessary information to assess its social and environmental performance. Therefore, the enterprise reporting transparency and comprehension should be increased, expecting the accounting system to be further developed and, as a result, to be improved. This information is provided by integrated reporting, which is not common yet at the present stage of economic development. That's why the chosen topic seems to be relevant. However, not only preconditions of integrated financial reporting are important, but also methods and tools of its process and analysis. A financial state is a key element that determines strategic development of the enterprise and its sustainable development. However, a financial state is an integrated indicator that reflects only one aspect of the enterprise's activities, and the current economy provides for multilateralism, dynamism and complexity of all systems. So, not only the financial state should be determined, but also comprehension of the quality of the enterprise's activity by financial and non-financial indicators should be formed.

Literature Review

So issues, very relevant today for modern enterprises, are considered to include rationality and efficiency of analysis approaches and techniques for the enterprise financial state, and determination of integrated financial reporting indicators.

Theoretical issues on the estimation of the enterprise financial state are studied by many well-known foreign and domestic scientists: O.A. Lisnichuk (2014), V. Potiy and A. Volyanska (2012). Scientific researches of these scholars show the ambiguity of methodological approaches to the analysis of enterprises' financial accounting, since they often have a limited scope of application, and are mainly aimed at revealing bankruptcy signs, attractiveness of investment, privatization, and creditworthiness.

Issues of the preparation of integrated reporting and solving problematic aspects of transition to such reporting are considered separately. This is reflected in the works by K.V. Bezverkhiy (2016), V.E. Vlasyuk, A.O. Sinyuk and A.T. Pidgirniy (2016), A.S. Kravchenko and V.O. Shevchenko (2014), R.O. Kostyrko (2014), V.V. Tomchuk (2017), M.O. Maksymchuk (2016), G.Yu. Isanshyna (2018), O.V. Zygriy (2014), R.O. Tolpezhnikov (2017). However, published scientific papers do not contain a single approach to managing the enterprise's financial state. Such scientific works can be conditionally divided by the essence of the scientists' decisions into two main areas: improving the organization of enterprise management in general (including financial state); improving financial management tools and scientific works on financial state assessment on the basis of an integrated financial reporting, unstructured list of indicators, which may serve as a basis for such an analysis.

2.1. The Purpose of the Article

The purpose of the article is to study preconditions for the concept of integrated reporting and to justify a methodology of determination of a complex indicator of the enterprise activity quality.

Results

The International Integrated Reporting Council (IIRC) determined a general concept of integrated reporting, such as "process that results in communication, most visibly a periodic "integrated report", about value creation over time. An integrated report is a concise communication about how an organization's strategy, governance, performance and prospects lead to the creation of value over the short, medium and long term" (Domashenko, 2013). In order to coordinate financial analysts' activities, the International Integrated Reporting Council (IIRC) developed the International Integrated Reporting Framework in 2013 (Integrated reporting: financial analysts' perception, 2016), which outlines its formation principles and concepts.

According to definition of the Ethics and Integrity Guide by the Global Reporting Initiative (GRI) "an integrated report is, above all, a strategic analysis, management reporting, platform for the company management" (Integrated reporting: financial analysts' perception, 2016). The International Integrated Reporting Committee (IIRC) declared its goal to create a model that integrates and interconnects two types of reporting, both financial and non-financial, into one integrated business reporting. Such a model does not mean that two reports are just combined, it is the result of a more complicated process that detects the relationship between the two "packages" of information; provides the duplication and cross-references level required for understanding and guarantees a strategic focus (International Standard Integrated Framework, 2014). Ernst & Young representatives provide a general definition, considering the integrated reporting as a concept, created for better formulation of a wide range of indicators intended to measure the long-term value and role of the organization in society (Tomchuk, 2017).

The most comprehensive study of the concept of "integrated reporting" was developed by K.V. Bezverkhiy (2016) who determined four main directions from the definition of this concept (Table 1).

K.V. Bezverkhiy (2016) provided the following definition of the economic essence of the integrated reporting as "a report that includes both financial indicators contained in the financial reporting and estimated financial indicators not contained in such reporting, as well as non-financial indicators presented at the request of the accounting service by other structural subdivisions of the enterprise".

Table 1. Definition of the concept of "integrated reporting"

Direction	Definition according to the direction
Integrated reporting as a new paradigm	Integrated reporting is a new paradigm, that is, this direction implies systemic radical changes in the reporting of enterprises
Integrated reporting as a reporting form	Reporting which includes financial and non-financial indicators united in a single, clear format
	Reporting, formed under principles of sustainable development, reflects strategic directions of enterprises
	Corporate Reporting
Integrated reporting as an instrument	Integrated reporting as an instrument for dialogue between the enterprise and the external environment
	Integrated reporting as an instrument for presenting the results of an enterprise
Integrated reporting as information	Information that contributes to the generation of value (capital) in the period

However, the study of issues, the definition and implementation of integrated reporting are rather controversial. For example, V.V. Tomchuk (2017) identified integral reporting as a new element of the accounting system, focused upon revealing aspects of activity affecting strategic stability and long-term prospects. According to the author, integrated accounting does not have a clear structure, but necessary elements such as strategic reports, financial and non-financial reporting, and results of the enterprise. The balance between flexibility and standards; focus on value-related information rather than on target markets of productivity; analytical data on the external environment are considered to be main criteria of integrated reporting. And key indicators that should reflect the integrated reporting are the value, opportunities and risks.

Today the issue of the integrated reporting preparation, forms and application is believed to be very important, both for foreign and domestic enterprises.

In international practice, the following three approaches are applied to standardized reports:

1. The first approach is based on the Global Compact (UN Global Compact, 2011) and envisages preparation of a Progress Report on the implementation of the principles of the Global Compact;
2. The second approach is based on the Global Reporting Initiative (GRI) system, envisages a Sustainable Development Report, disclosing information about the company's activities not only in the economy, but also in environmental, social fields. Taking into account the requirements of the GRI 4.0 Guidelines (G4 Sustainability Reporting Guideline, 2017), integrated reporting should disclose essential aspects in terms of components: economic - covering aspects of economic performance, market presence, indirect and economic impact, procurement practices; environmental – disclosing information on the use of materials, energy and water, on emissions, discharges and wastes, confirmation of compliance with environmental requirements of products, services, transport, environmental assessment of suppliers, mechanisms for complaints filing on environmental problems, etc.; social - taking into account the system of indicators on labor relations and labor safety, respect for human rights, relations with society and responsibility for products.
3. The third approach is based on the use of the IR system (International Standard Integrated Framework, 2014) based on the International Integrated Reporting Framework and on the principles of strategic direction, future orientation, information structuring and clarity, stakeholders' expectations, reliability and substantiality, and, unlike the previous approach, the brevity. This approach expands the list of assets (production, human, financial, social, natural, intellectual) and highlights the following components: review of the enterprise and its external environment; enterprise management; strategy and resource allocation; business model of the enterprise; current activity; development prospects.

Authors A.S. Kravchenko and V.O. Shevchenko (2014) mentioned that "the use of various standards for the integrated reporting compilation in international practice is one of the most active and debatable issues". Yu.V. Domashenko (2013) distinguished components of the regulatory reporting such as financial reporting, top-management notes for the financial statements, sustainable development reports, and corporate management reports. P. Kutsyk and M.V. Koriagin and P.O. Kutsyk (2016) pointed out that integrated reporting was a component of financial reporting, non-financial reporting and management reporting. P.Y. Atamas and O.P. Atamas (2015) more thoroughly summarized the content of integrated reporting, which in their opinion should consist of eleven sections: 1) appeal of the top-management to interested users; 2) the company's characteristics; 3) reporting parameters; 4) corporate management, liabilities and cooperation with concerned parties; 5) financial indicators; 6) economic indicators; 7) indicators of social activity; 8) characteristic of economic activity; 9) risks and opportunities; 10) other significant issues; 11) organization of internal and external control of reporting quality. Consequently, we believe this detailed structure still to be the most understandable and practical for today's economic realities.

Although the use of integral reporting is not a prerequisite for our enterprises, the desire to be part of the world economic community makes us consider prospects of implementation of integrated reporting. But at the same time, studies are required not only on the integrated reporting implementation, but also on possibility to effectively analyze and develop appropriate methods and approaches. In this regard, the question arises on the theoretical substantiation and practical use of the principles of the analysis of the enterprise financial state based not only on financial reporting, but also on evaluation of non-financial factors, significantly affecting results of the enterprise activity.

Thus, integrated reports can be issued just for internal users or published for all interested in such information to make decisions (internal and external). Despite certain shortcomings of integrated reporting which later can be turned into advantages, many companies use it in practice, however by domestic enterprises not so wide like for example, in Europe. Thus, the authors (Atamas & Atamas, 2015) stated that

8.3% of enterprises published non-financial reports, 13.2% provided environmental and social indicators in the explanatory notes to the financial reports. Besides, various formats of integrated reporting complicate analysis and comparison of indicators. Integrated reporting eliminates individual differences between financial and administrative accounting, because integrated reporting partially reveals to the general public the information traditionally considered as internal. Therefore, domestic enterprises are not ready to disclose their information. As a result, integrated reporting and financial reporting are significantly different.

Imperfect elements of the existing model of financial reporting are evident:

– currently financial statements do not solve its strategic objectives, mainly because they reflect past events and only costly financial indicators;
– failure to adequately reflect intangible assets, human resources, social capital, environmental responsibility, currently considered as key resources in the competitive fight in the global market;
– lack of unanimous opinion on the asset valuation and liabilities. Estimation by current and historic cost causes controversy among economists;
– problems of assessment and recognition of liabilities and disclosure of information about financial instruments.

Consequently, the integrated reporting in a certain way changes the concept of "financial state" of enterprises. A coefficient analysis is not enough anymore for determination of key parameters of enterprises' activity. Today's realities indicate that integrated reporting, in spite of legal and methodological risks, provides a more detailed perspective on the enterprise's activities expecting an approach to be formed for determination of a complex indicator that characterizes the quality of the enterprise's activity, that is, the formation of a complex indicator. Thus, the typical understanding and economic content of the concept of "financial state" gradually should be expanded and transformed into the complex concept of "the enterprise's activity quality", resulted from interaction of all elements of the enterprise financial relation system and determined by production and economic factors and characterized by a system of indicators showing allocation and use of financial resources.

M.V. Koriagin and P.O. Kutsyk (2016) noted that "formation of forecast indicators... selection of types of forecast indicators, forecasting bases, forms and formats of forecast reporting also play an important role in construction of an effective system of integrated reporting" (Pushkar & Garkin, 2014). According to O.A. Lisnichuk (2014), systematic aggregate indicators used for the complex characteristics of solvency, can be divided into three groups: indicators characterizing the structure of balance assets and their compliance with its current liability - absolute liquidity, coverage ratio, specific net working capital in assets, equity maneuverability, and share of current assets; indicators that characterize the efficiency and intensity of use of enterprise resources to achieve their goals and to repay existing liabilities: return on assets, asset turnover, return on equity, sales profitability, and current revenue; indicators characterizing the policy of managing the financial structure of the enterprise capital and indicating its dependence on third-party sources of financing: financial autonomy and coefficient of independence from loan capital.

Unlike traditional financial reporting, the implementation of the Integrated Reporting Model involves non-financial components in order to improve the quality and to show significant impacts of environmental, social and governance factors (ESGs). That is, to describe the use of natural resources, the protection of human rights and the impact of business on social phenomena and climate change, to show risks and opportunities, and to connect logically ESG factors and financial results. The new model is considered as a possible way to see a fuller picture of the enterprise activity, reflecting risks and opportunities and more consistently combining ESG factors and financial results.

Thus, the gradual implementation of integrated reporting requires for a particular list of indicators to be justified (enabling comparability of indicators) and analysis tools to be unified (for practical use of integrated reporting in decision-making) because the main requirements for the new concept of reporting are:

– satisfaction of information needs for daily management of long-term operations;
– reflection of the relationship between non-financial factors and long-term results of the enterprise's activity, determination of economic and social value of the business;
– emphasizing on indicators of business performance assessment not in short-term prospects but in

long-term and systematic inclusion of these indicators in the decision-making process.

Authors V.E. Vlasyuk, A.O. Sinyuk and A.T. Pidgirniy (2016) substantiated in their paper the possibility of reducing risks of information distortion through the introduction of a leverage of financial and non-financial management. Yu.V. Domashenko (2013), considered the strategic analysis of financial reporting in terms of forecast reports with forecasting models for financial reporting formed depending on different conditions of the enterprise's activity. However, a strategic analysis was also proposed to be conducted by traditional indicators of financial and managerial reporting. Such analysis is complicated and requires for additional information.

The financial reporting, which now has practical elements and forms, was often studied, and this resulted in wide experience in its analysis and use of results of this analysis. For example, according to the traditional analysis of the enterprise financial state, the following general methods are distinguished: horizontal, vertical (structural), trend analysis, analysis of relative indicators (coefficients), comparative analysis, and factor analysis. In practice, rather PEST, SNW and SWOT analysis; script analysis; portfolio analysis and others are used for an analysis of financial factors. Indicators of financial resources, solvency, financial stability, profitability, and turnover are used to assess the financial state. To assess the quality of financial management, the indicators are used as proposed in the Statement on Management Accounting "Measuring entity performance" SMA 4D: net profit and earnings per share; market value of the company; return on investment (ROI); residual income (economic value added - EVA can be considered as a modified approach to determining the residual income); cash flow.

Consequently, great experience of the integrated assessment of the enterprise's financial state is accumulated in the international and domestic theory and practice. These are such well-known complex indicators as the Altman Index, the Springside Model. However, foreign models of analysis are their non-efficiency for domestic economic conditions because of their continued modification and improvement.

Methods of assessing the financial state on the basis of traditional financial reporting have already been sufficiently studied and investigated (Dubinska, 2017), and their modification depends on the specific conditions of the enterprise, its branches of economics, and the country of origin. However, as noted by many scholars, traditional financial reporting does not provide complete and exhaustive answers and substantiation for good management decisions, and in today's business environment, when the enterprise's additional value and their competitiveness at a market are considered to be one of the key issues, one the main directions is strategic development requiring for more advanced information support that is outside of financial reporting. Therefore, the concept of formation and use of approaches, tools and methods at the enterprises becomes relevant for analyzing integrated reporting.

Summing up the existing developments and requirements of international standards, we consider it expedient to base an integrated reporting system on an approach aimed at implementing a global initiative and a concept of sustainable development, according to which integrated reporting should contain information about different types of assets. Therefore, having analyzed the achievements of previous researchers, we identified six components of capital, which should be demonstrated in the integrated reporting (Table 2).

Table 2. Key valuation aspects in the integrated reporting (Dubinska, 2017; Kravchenko & Shevchenko, 2014; Kostyrko, 2014; UN Global Compact, 2011; Atamas & Atamas, 2015)

Key indicators for activity assessment	Basic forms of financial and non-financial reporting	Information disclosure
Financial aspect		
Indicators characterizing the efficiency of using equity and loaned capital (indicators of financial state)	Statement of financial state; Cumulative Income Statement; Statement of Cash Flows; Equity statement; Notes to annual financial statements; Capital investments, withdrawal and depreciation of assets; Income tax return	Information about assets, liabilities and equity, income and expenses, cash income and expenses, equity elements, etc.

Key indicators for activity assessment	Basic forms of financial and non-financial reporting	Information disclosure
Production aspect		
Indicators characterizing the state and efficiency of using the company's fixed capital, the state and flow of inventories	Statement on financial state; Notes to annual financial statements; Capital investments, withdrawal and depreciation of assets; Report on fixed assets and their flow, depreciation; Report on the production and sale of industrial products	Information about composition and flow of fixed assets, production indicators and industrial production by type
Human (personnel) aspect		
Indicators characterizing human resource, staff training and development costs, labor productivity, employees' competence, work outcomes	Labor Report; Report on working conditions, privileges and compensation for work in harmful working conditions; Income tax calculation accrued (paid) to individuals, and the amount of tax deducted; Information on employment of citizens with additional guarantees in employment; Report on Employment and Employment of Persons with Disabilities	Information on the number of workers, the use of working hours of full-time employees, the composition of the wage fund and other benefits, work conditions, benefits and compensations for working in harmful conditions and for special works
Intellectual aspect		
Indicators characterizing intellectual capital depend on used evaluation methods, and may include: the cost of intangible assets, capital structure, income indicators, value added	Statement on financial state; Notes to annual financial statements; Capital investments, withdrawal and depreciation of assets	Information on the state and flow of intangible assets
Natural (ecological) aspect		
Indicators characterizing ecological capital are divided into several groups: 1) indicators of the efficiency of operational environmental activities; 2) indicators of the efficiency of investments in environmental activities; 3) indicators of the efficiency of environmental activity financing.	Statement of financial state; Cumulative Income Statement; Notes to annual financial statements; Report on the air protection; Costs on environmental protection and ecological payments; Waste management; Environmental Tax Declaration	Information on the results of environmental activities, harmful emissions into the atmosphere, water, waste utilization, estimation of expenses on environmental protection, etc.
Social aspect		

Key indicators for activity assessment	Basic forms of financial and non-financial reporting	Information disclosure
Indicators characterizing social capital, trust level, values, interaction intensity, rules of interaction in a team, socio-psychological climate, stability	Statement of financial state; Cumulative Income Statement; Notes to annual financial statements; Report on injuries at work; Labor Report; Report on working conditions, benefits and compensation; Salary report by occupations of employees; Report on costs of workforce maintaining	Information on the composition of the wage and salary fund, work conditions, benefits and compensations for work in harmful working conditions and for special works, etc.

However, the main purpose of integrated reporting is not only to use it as a tool for information organizing. Its main purpose is to become an effective decision maker. Therefore, in our opinion, the integrated reporting-based decision-making process, first of all, should be based on the possibility of a comprehensive assessment of the enterprise state. As already noted above, integrated reporting contains indicators, hard to be estimated.

Many financial and non-financial indicators in the structure of integrated reporting require from the enterprise's activity quality to be assessed by an interval scale with a score from 0 to 1 meaning quality improving, that is, the closer to 1 - the quality is "better, higher", respectively, the closer to 0 – the quality is "worse, lower" in a component of integrated reporting (IR), and, consequently, the quality of the enterprise in general. This is because the enterprise's financial reporting belonging to each analytical group are equal and have the same measurement units, and the integrated reporting indicators may have different measurement units. Such a change of measuring represents a positive trend in the quality assessment. However, there are many indicators with a negative tendency, since the growth of quality components is determined by a degree approaching to zero, such as, for example, the employee turnover rate. Thus, the measure of quality assessment M may be characterized by a positive (+) or negative (-) trend of quality growth, and for the interval scale from 0 to 1 is defined as:

$$M_{(+)i} = \frac{P_i}{P_b} \times w_i : M_{(-)i} = \left(1 - \frac{P_i}{P_b}\right) \times w_i \qquad (1)$$

where $M_{(+)i}$ – value of P_i indicator of quality with positive growth, i = 1,..., n; $M_{(-)i}$- value of P_i indicator of quality with negative growth, i = 1,..., n; Pb - basic value of P_i indicator of quality; w_i - employee turnover rate.

The employee turnover rates are calculated using expert assessment. For this purpose, the hierarchy analysis method was used, which is believed to be the most appropriate among modern methods of expert assessments, since it allows not only to rank indicators of the enterprise's state quality, but also to check local and global priorities of experts for consistency (Dubinska, 2017). To determine employee turnover rates, the matrix of pairwise comparisons is drawn up, taking into account that according to the hierarchy analysis method, for obtaining reliable results of the survey, the number of experts should not exceed 7 ± 2.

For each component of the enterprise's activity, a list of indicators is formed that most objectively reflects its impact on the quality of the enterprise's activity in general. Quality assessment of each of the six components is defined as the average. It should be noted that Pi and Pb are determined by measurement.

The activity quality assessment was calculated under the formula:

$$S = \int_a^b f(x)dx \qquad (2)$$

where a = $\{M_{fine}, M_{product}, M_{personnel}, M_{environmental}, M_{intellectual}, MP_{social}\}$; b = $\{M_{product}, M_{personnel}, M_{environmental}, M_{intellectual}, MP_{social}, M_{fin}\}$; f (x) - a continuous and inalienable function on the segment [a, b]; S - an area of a polygon bounded by the function f(x), straight lines x = a and x = b and a segment of the O_x axis between the points (a, 0) and (b, 0), which length is close to zero. In this case, the area of a polygon can be expressed as a double integral

$$S = \iint f(x,y)dxdy \qquad (3)$$

In other words, the numerical value of the activity quality assessment is the sum of areas of sectors of a radial diagram, thus the sector radius is equal to value of the quality assessment for an appropriate activity aspect (financial, industrial, environmental, etc.), measure value on a scale from 0 to 1 is designed for each indicator.

The practical methodology of integrated assessment of the enterprise activity quality on the basis of integrated reporting in general consists of 5 stages:

Stage 1. An analysis concept is formed, goals are set and essential factors affecting the enterprise activity are defined. The measure (the list of criteria) of the enterprise's activity quality is determined depending on the specifics of the enterprise's activity and criteria are formed by each aspect of its activity;

Stage 2. An array of data by indicators is formed and an expert group is assigned for determination of the importance of each of the indicators.

Stage 3. A value of the activity quality assessment is calculated with the sum of areas of sectors of a radial diagram, thus the sector radius is equal to value of the quality assessment for an appropriate activity aspect. A diagram is developed to show development of each aspect of the enterprise’s activity.

Stage 4.An objective comparison (with benchmarking method) of the obtained results of the activity quality assessment with the assessment of the activity quality of the reference enterprise in the industry.

Stage 5.Formation of practical recommendations for integrated management of the enterprise’s activity quality.

The practical methodology of complex assessment of the enterprise activity quality on the basis of integrated reporting provides the opportunity to implement an integrated approach to the enterprise’s activity quality management. That is, it allows to evaluate financial and non-financial indicators, to assess their consistency and to give recommendations, based on the importance and influence of each component on the overall quality of the enterprise’s activity.

Conclusions

Thus, the desire of domestic enterprises to enter international markets helps in promotion and distribution of integrated financial reporting, involvement of new investors, improvement of own state, comprehensive demonstration of different aspects of their activities, and provision of deeper use of internal potential. Reporting and analysis of the enterprise’s activity quality prepared under the above method facilitate its compilation unification, reduce information risks, emphasize on indicators of business performance evaluation not in the short-term but in long-term, improve the quality and value of the information provided to make managerial decisions.

The advantages of implementation of integrated reporting usually are:

– improvement of the quality of information available to financial capital providers to ensure a more efficient and productive distribution of economic resources;
– development of a more effective approach to corporate reporting, which combines different areas and has information about all factors significantly affecting the company's ability to create value over time;
– increasing accountability and responsibility for many assets (financial, production, intellectual, human, social, reputational and natural) and improving understanding of their interdependence.

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The Influence of German Law of Pandects on the Basis of the Private Law of Baltic Provinces in the 19th Century

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Abstract

The purpose of this research is to study the process and the main trends in the development of Baltic legislation in the field of private law and the views of the Baltic scientific thought on these processes and on the influence of German law of pandects on the basics of private law in the Baltic province. The author uses the term "law of pandects". The term "law of pandects" in scientific research of the sources of private law in the Baltic States appears immediately after the entry of judicial reform of 1864 into force. The need to comprehensively study the sources of Baltic law is shown, since The Baltic legal system remained closed for a long period. There are analyzed the works of K.E. Erdman, F.Serafim F.K. von Savigny R, Zimmerman and other researchers.

Among the main findings obtained in this paper, the following points should be highlighted:

- it hardly makes sense to talk about the creative component of German dogmatic orthodoxy for the Baltic private law earlier than the first half of the XIX century, since the new scientific line, designated as pandect methodology, or Pandeptics, in Germany itself develops only in the second half of XIX century;
- German pandectists lined up a new system of private law. The basis of the initial construction of the system of private law was the notion of a legal institution grouping several legal norms around one common legal phenomenon;
- The influence of the Germanist scientific school on changing the vector of the scientific thought of the Baltic private law is undoubted. F-G. von Bunge becomes the largest representative of the Baltic jurisprudence, in whose works the historical and Germanistic doctrines of German legal thought were combined.

Keywords: law of pandects, Judicial reform of 1864, private law, Roman law, legal sources, systematization of law, codification of law, ideology of Baltic private law,reception, legal doctrine.

Introduction

In a scientific study of private law sources of the Baltic States, time immediately after the entry of the Judicial reform of 1864 into force is described as "pandectization" in the literature [1]. However, the "pandectization" of private law in the Baltic States was not some new, previously unknown phenomenon. Such an example was shown earlier by F.K. Savigny with his "pandectization" of the "General State Laws for the Prussian States" (1794) [2] and J. Unger - "The General Civil Code for the German hereditary lands of the Austrian Empire" (1811) [3]. The latter even insisted that the science of private law in Austria was once again considered as an integral part of German pandectistics [4].

From the point of view of the science of German jurisprudence, the private law of the Baltic states, after its codification, now belonged to the area of particular local laws, and although it was perceived as German, its content and position were hardly discussed outside. In this sense, according to experts, it turned out to be isolated from common law and its scientific consideration.

At the same time, the pre-codification period of Baltic private law development is characterized quite differently. There is even a statement that the Baltic private law and the doctrine were direct remarks from the German primary sources [5], as one of the curious branches of Germanic law development [6].

However, talking about the creative component of German dogmatic orthodoxy for the Baltic private law hardly makes sense earlier than the middle of the XIX century, since the new scientific line, designated as pandect methodology or pandectics, develops itself only in the second half of the XIX century in Germany. It received its name in honor of one of the main available sources of Roman law - Pandekts from "Corpus Juris Civilis" of Justinian. Such a designation as Begriffsjurisprudenz (literally - the jurisprudence of notions, concepts) is also widespread in the scientific literature. F.C. von Savigny considers to be the founder of pandetistics who concluded that the analysis of the history of law served only as a means of identifying implicit legal principles, institutions and general rules, and on the basis of the material obtained, legal science should be engaged in building a fully-fledged civil law system. It was his work "The System of Modern Roman Law" that marked the beginning of a new direction in the active creative processing and systematization of the pre-existing legal dogma. Such a departure from genuine historical research marked the final emancipation of the dogmatic scientific paradigm from purely historical legal analysis. According to R. Zimmerman, the historical school finally transformed into a pandect school at this example. From now on (the middle of the 19th century), the pandect version of the dogmatic paradigm became the main format of scientific research in the field of private law. Developing new ideas, some representatives of the German legal science, such as B. Windsheid, began to urge lawyers to clear German law of the literal reading of Roman legal sources. In their opinion, the study of the history of law had an exclusively instrumental value and was useful to the extent that it helped to better understand the current law. That is why from the middle of the XIX century the efforts of researchers began to be directed mainly to the creative development and improvement of the revealed systematics in Germany [7].

At present, it is almost impossible to establish how seriously the pandectists themselves believed that they actually reconstructed the true logical and structural perfection of Roman law, and not artificially introduced an element of systematization into it and thereby distorted it. In any case, the enthusiasm to discover the true meaning of Roman law conflicted with a pandectual passion for systematization and generalization. The current law in ancient Rome was casuistic, inductive, alien to all generalizations, and strictly practical. Thus, pandectistics returned German law to Roman law, not to the present one but to artificially reconstructed and systematized [8]. Moreover, the idea of perfect systematization was not so much the fruit of historical analysis as an echo of the natural law doctrine, which considered it possible to build an ideal in its reasonableness legal regulation [9].

Many researchers point at these contradictions within the pandect doctrine [10].

Accordingly, under the flag of the discovery of the true meaning of Roman law, pandectists actually introduced an alien element of systematization into it. Be that as it may, it is quite obvious that the hidden, but supposedly implicit systematics found in Roman law were lurking by the wide creative activity of the pandectists themselves, the ultimate goal of whom was to create a complete system of private law, capable to solve all problems of the that time. Moreover, it is in this controversial, but essentially creative manifestation of the German pandect scientific and legal paradigm of the XIX century proved to be quite productive for others to borrow, in particular the dogma of Baltic private law. Thus, the German pandectists lined up a new system of private law. The basis of the original construction of the system of private law was based on the concept of a legal institution grouping several legal norms around one common legal phenomenon. The system of law was not built through the accumulation of legal norms themselves, but indirectly through the systematization of legal institutions [11]. It was a complex and gradual process, during which legal institutions were formed, changed and disappeared under the influence of objective necessity, without any subjective or accidental influence [12]. According to this scientific paradigm, the authorship of the new theory could not belong to a specific researcher but they could only “discover” the already existing, previously unnoticed by society [13].

Methods

The methodological basis of the study is a set of scientific cognition methods. The dialectical method made it possible to study the processes of the formation of the Baltic private law and ideas about it as an objective phenomenon. A concrete-historical method was used to identify the unique features, characteristics and peculiarities of private Baltic law in the 19th century. Sociological and legal method allowed revealing the interdependence of social development factors with the development of legal phenomena. The comparative legal method made it possible, by comparing various sources, to reveal the peculiarities of the genesis and subsequent development of the Baltic private law and the influence of the German pandect right on its development. The formal legal method was used in the analysis of legislative material and theoretical concepts about the essence of Baltic private law and German law. Chronological and diachronic methods allowed determining the main (boundary) points of reference in the development of ideas of scientific thought about the Baltic private law. The method of terminological analysis contributed to the definition of legal concepts, categories and their meanings in Baltic and European law in the context of the studied sources. Formal logic, induction and deduction methods were used in formulating the conclusions of the study.

The theoretical basis of the research is the conceptual provisions of the general theory of law, science of history of state and law, the works of domestic and foreign researchers on the history of domestic and European law, in the field of philosophy, linguistics of the pre-revolutionary, Soviet and modern periods.

Various groups of sources were used while writing research:

1) Legislation of the Russian Empire of the XVIII-XIX centuries (Acts on the subordination of the Ostsee region to the Russian Empire (capitulation) of 1710; edicts of 1795 signed by the czar to the Senate on the accession of individual Baltic territories to the Russian Empire; Code of local legalizations of the Baltic provinces of 1845, Code of civilians legalizations of the provinces of Ostsee 1864 and others).
2) European codified legislation in the field of private law of XVIII-XIX centuries.
3) Local Baltic law in the sphere of current private law on the territory of the Baltic provinces at the codification time in the middle of the XIX century.
4) Codification draft of the Baltic private law of the XIX century, prepared by Samson von Himmelshtirn, F-H. von Bunge and other Baltic jurists.
5) Current documents of government institutions of the Russian Empire of the XVIII-XIX centuries from the funds of the Russian State Historical Archive (RSHA):
6) Works of representatives of Russian, European and Baltic jurisprudence of the XIX-XX centuries.

The scientific novelty of the study lies in the fact that it is the first work in modern Russian science of the history of law and the state, devoted to the analysis of the influence of pandect right on the basics of the private law of the Baltic provinces in the 19th century. From the middle of the XIX century the building concept of the private law system has been undergoing some modernization. The "pyramid of legal concepts" comes to the place of legal institutions where each particular rule is deduction from a more general legal concept, which, in its turn, is an emanation from an even more general legal concept etc., up to the most universal concepts and the idea of law as a whole [14]. The adequacy test of a particular legal rule consisted in checking how it fitted into this jurisprudence of concepts. Instead of considering legal concepts as inductive generalizations of particular political, legal and value reactions to specific social facts and recognizing the variability of generalizations themselves following transformations in the social and cultural basis, pandectists began to consider legal concepts based on the generalization of the norms of ancient Rome law as axioms rent from those political and legal considerations that in due course pushed the Roman praetors, judges and lawyers to choose the appropriate norms. However, the peculiarity of German pandection development was that there was no common civil code during the period of the formation of its theory in the German states. Therefore, there were no conditions for the active development of such a direction as legislative formalism (in the spirit of the French school of exegesis). Instead, conceptual formalism, which had become a characteristic feature of the German legal science of the XIX century, assumed dominant significance [15].

The practical value of such a pandect methodology was that it was possible to obtain legal answers to any questions by inverse deduction from the legal concepts derived by scientists through the formal logic of legal concepts. In the opinion of pandectists, the law itself should had been developed with the help of reverse deduction from concepts, thereby revealing the national legal spirit [16].

Both pandectists and Germanists camps of German jurisprudence insisted on the closeness of the legal system. However, pandectists insisted on building a closed system based on Roman law, while the Germanists tried to create a closed system of truly national private law [17]. It must be said that the discussion of the “buried system” was most directly reflected in the practice of the Baltic codification of private law. Not all Baltic lawyers accepted these ideas with approval. Therefore, K.E. Erdman, in particular, directly considered the codification of 1864 to be the frontier after which the Baltic private law system was isolated from the previously existing ius commune tradition [18]. He believed that the codification sent the Baltic legal science to a completely new direction, “an internal commentary of its own right” [19]. According to modern researchers, K.E. Erdman, reservedly criticizing the consequences of codification for the private law science of the Baltic States, in fact, wanted a little more. He, like some other Baltic authors of jurisprudence, for example, F. Seraphim [20], dreamed again of combining the science of provincial law with the science of the German common law of that time. Practitioners and scholars of the Baltic provinces tried to maintain a connection with the common law tradition and opposed separation from the development of common law. Thus, M. Luts-Sotak writes that KE Erdman in his scientific work consistently opposes the territorial and legal isolation, that he supports the trends of German pandection of that time and that he takes part in them [21]. For K.E. Erdman's science was not limited to territory or nation: “In general, the nature of science is such that it should not be limited to your nation. After all, the truth you found pretend to be the truth for all the people. ”

Another representative of the emerging science of the Baltic private law X.X. Dabelov was negative about the teachings of the German Historical School of law. He looked at the history of law as something secondary and sharply argued about it in his writings with F.K. von Savigny. However, H.H. Dabelov, perhaps unbeknownst to himself, did not escape the influence of this school. For example, in his article on the methods of studying the local law, he argues as if we are facing the most direct supporter of the historical school. The necessity for a thorough historical development of individual elements of the current law was the essence of X.X. Dabelov [22]. These thoughts directly influenced the initial views of his student F-G. von Bunge. In his first published work, F-G. von Bunge quite consistently talks about the need for a historical study of law. His subsequent works also reason from the concept of the historical school of law. It is enough to pay attention to the title of the doctoral dissertation of F.-G. von Bunge “On the Saxon Mirror as the source of the middle (meaning the 2nd half of the 14th century – R.M) and the processed (meaning the beginning of the 16th century – R.M) Livonian knightly right” where the problems of Saxon law reception by local Baltic law were investigated. However, the knightly right [23] in the said work of F-G. von Bunge was already referring to the latest works of the Germanists of that time (for example, K.F. Eichhorn), although their influence on the course of the author’s thoughts had not yet been influenced. In his lecture courses on the private law of Livonia and Courland, published in the first quarter of the 19th century, the material is presented as a history of sources of private law, which makes it possible to speak about the influence on the “early” F-G. von Bunge German historical school. However, we can talk about influence indirectly, most likely through his teacher X.X. Dabelov because he got acquainted with the works of the founder of the historical school, F.K. von Savigny, and the theory of the German Historical School a little later, in the late 20s. of the XIX century, judging by the autobiography of F-G. von Bunge. An example of the German historical school determined the course of further scientific research of F-G. von Bunge. As A.E. Nolde mentioned: “This was the history Bunge began his activities with, and this was the history he finished with”. It can be said with confidence that in the works on the history of the Baltic knight’s right, F-G. von Bunge thoroughly researched and demonstrated the interrelation of German law with the early Baltic law. However, he also determined the chronological limit of the direct action of German law in the Ostsee region without becoming an absolute apologist for the German influence on local law [24].

The influence of the German Historical School methodology is also traced in the scientific courses of the Baltic private law of F-G. von Bunge, where the author conducts a scientific analysis of current local law, based on the history of law. In this respect, the obligatory historical introduction of a preliminary analysis of each institution of Baltic private law is quite significant, which according to the thoughts of F-G. von Bunge, it was necessary to clarify the law in force. F-G. von Bunge clearly borrowed such a system of presentation from academic advising on German law.

At the same time, the aforementioned courses of private law designated a new factor of influence on the scientific thought of F-G. von Bunge. It is not difficult to notice that in these works he focused precisely on local law (but F-G von Bunge leaves subsidiary law - Roman, the law of the Russian Empire beyond the scope of the study). Consequently, the works of the Germanists, as a new trend in German scientific thought, had a definite impact on the change of scientific approaches of F-G. von Bunge. It was from the Germanists that he borrowed the construction of the presentation of the Baltic private law. Applying the comparative method against the background of the development of the German law of F-G. von Bunge was able to identify the general and the particular in the development of the Baltic private law, showed the singularity and originality of some of its institutions. Actually, the scientist did not hide this influence. Describing the techniques of his work in his autobiography, F-G. Von Bunge, in particular, pointed out: "When I started to do some literary work, I first collected sources related to this topic ... After that, I studied Germanist related works and only after that ... I began to make a manuscript" [25].

The techniques and methods of scientific analysis of the Germanists school allowed F-G. von Bunge to draw a precise distinction between the institutions of the local Baltic law and those that were derived from Roman law. In other words, this made it possible for the first time to show the limits of the Romanist reception in Baltic private law. In this sense, the works of F-G. Bunge already were little different from the works of the Germanists, who a priori gave priority to national law in their research, 'that survived after the reception of the Roman law." These works, moreover, became a peculiar milestone in the development of the actual scientific thought of the Baltic private law after which the previous postulates on the Romanization of the local law, such as those found in the writings of Samson von Himmelstiern, lose their scientific significance. After the appearance of F-G. Bunge's works the attempts to Romanize local law become impossible. In addition, the Baltic private law was became to be considered not only as a replica of German, but also as a curious and valuable material. And in this sense, the influence of the Germanist scientific school on changing the vector of the scientific thought of Baltic private law seems indisputable. F-G von Bunge is thus becoming the largest representative of the Baltic jurisprudence whose works combined the historical and Germanistic doctrines of German legal thought.

The influence of the Germanists historical school is traced in the Baltic legal thought not only by the example of F-G. von Bunge's works. Almost simultaneously with the latter, and independently of him, another representative of the Baltic private law science, Reinhold von Helmersen, publishes his work on the history of the main principles of Livonian inheritance law. It becomes clear already from the preface of his work that the methodology of the research of R. von Helmersen is also based on the provisions of the doctrine of the German historical school and the Germanists. We will not see in his work any admiration for the Roman law. On the contrary, he pays all his attention exclusively to local national sources which, according to the author, are the basis of the current Baltic private law. It is quite natural that R. von Helmersen comes to completely different conclusions regarding the development of Baltic private law than those that were present in the works of supporters of conservative traditionalism, such as Samson von Himmelstiern, influenced by the idea of the Romanization of Baltic law [29-31].

In 1836, R. von Helmersen publishes another his work on the history of Livonian law in which the author's close connection with the ideas of the Germanist doctrine becomes apparent. Throughout the work, R. von Helmersen repeatedly refers to the works of Karl Friedrich Eichhorn and other representatives of the Germanists. At the same time, R. von Helmersen uses research methods peculiar to German studies even to a greater extent than F-G. von Bunge. The latter very often turned to the works of R. von Helmersen in his scientific studies and argued with him. As acknowledged by contemporaries, the works of R. von Helmersen had a significant impact on the subsequent development of the Baltic private law doctrine precisely in the direction of the Germanist orientation. However, because the author limited himself to purely historical research of only one system of the Baltic private law (Livonian), and did not publish more works, he turned out to be forgotten by modern historiography. The latest research works on the history of the Baltic legal thought, as directly withiin the Baltic countries, not to mention Russian, are completely silent about the works of R. von Helmersen.

The translation of the book by H.F. Mühlenbruhh entitled "Doctrina Pandectaru" from Latin into German implemented by a professor at the Dorpat University, K.O. von Madai, had a great influence on the dissemination of the ideas of the early German pandectists among the Baltic jurisprudence. Subsequently, F-G. von Bunge, the editor-in-chief, borrowed quite a lot of material from this translated work while designing articles during the codification works of the Baltic private law [26, 28].

K. O von Madai himself hardly experienced the serious influence of the Germanists. This was partly because K. O von Madai was not entirely clear about both the very essence of German private law and the fundamental differences between the doctrines of German jurisprudence. This was particularly evident in his work on the vindication of movable things in Esthonian Landrecht. We can more likely acknowledge that K.O. von Madai marked the beginning of a new direction in the development of the Baltic scientific thought coming from the message about the synthesis of auxiliary (meaning Roman) law with the local Baltic law and the emergence of existing legal structures thanks to this synthesis. And in this regard, of course, we cannot but admit that the spirit of German pandeptics is fully embodied in this scientific direction, since before K.O. von Madai no one in Baltic jurisprudence dared to approach the study of Roman law as a living organism, "but saw Roman law as something ready and complete, not subject to the closest investigation". The cautiousness of K.O. von Madai [27] in accepting the concept of the Germanists about the basis underlying the development of national law has repeatedly manifested itself in his controversy with the F-G. von Bunge who deliberately ignored Roman law as a source of the Baltic private law.

Conclusion

Summarizing the above and marking the end of the study, it is necessary to make the following conclusions:

1. The influence of the new trends in German legal thought, and in particular the representatives of the Germanist school, was reflected in the doctrine of the Baltic private law, especially noticeable in the works of F-G. von Bunge.
2. Small number of doctrinal studies in the field of Baltic private law and the absence of the depth of study of theoretical issues that were characteristic of German jurisprudence in the science of Baltic private law is explained by the factor of the relatively late formation of legal science itself in the Ostsee region in the XIX century. However, there is noticeable progress in the perception of the new directions of German jurisprudence in the works of the Baltic scientific thought representatives since the 30-s. XIX century in comparison with the works of the first quarter of the XIX century.
3. The perception of the ideas of German jurisprudence by Baltic lawyers was a step forward not only to apply the new methodology in local law research, but also to develop the dogma of Baltic private law in general.
4. The ideas of the Germanist school about the priority of sources of the national law contributed to the intensification of research of various local law systems by representatives of Baltic jurisprudence. In turn, the development of local legal literature contributed to the rise of interest in the Baltic private law in wider scientific circles and facilitated ways to systematize and codify the law of the Baltic provinces in the XIX century.

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The Formation of Didactic Competence of A Future Specialist in the Educational Complex Conditions

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Abstract

Introduction. In the modern world of rapidly developing international contacts and relations in culture, politics, and economy practical knowledge of a foreign language becomes a real necessity and a necessary condition for successful professional activity. Research methodology. In recent decades, researchers have been paying more and more attention to the unity of motivational, cognitive and behavioral components in the structure of the graduate's personality. The most capacious concept reflecting this unity was the concept of "competence" and "competency". Contextual analysis of such concepts as "competency", "competence" and "professional competence" shows that to date there are different approaches to their interpretation, which creates difficulties in their systematization, hierarchical sequence and definition of genus-species relations. Research results. One of the effective means of obtaining relevant information and thereby expanding their professional competence is a foreign language, the knowledge of which is an important factor in improving the competitiveness and prestige of a specialist-graduate of the First Moscow educational complex. Discussion. Competence-activity approach to teaching foreign languages will be able to implement the conceptual idea of the learning process modernization: to ensure the mastery of communicative activities through the formation of a set of competencies with a focus on the capabilities, abilities, needs and development of cognitive activity and creativity of students. Conclusion. The formation of linguistic and didactic competence of students of the educational complex takes place in the process of formation of such components of its competencies as linguistic, communicative, intercultural, social, cultural, intellectual, educational, professional, and important indicators of the formation of linguistic and didactic competence are the willingness and ability of the graduate to put the formed competence into practice.

Keywords: professional activity, competence, competitive specialist, linguo-didactic competence.

Introduction

In the modern world of rapidly developing international contacts and relations in culture, politics, and economy practical knowledge of a foreign language becomes a real necessity and a necessary condition for successful professional activity. The specialist is faced with the tasks of great complexity: it is necessary to study advanced technologies, adopt all the new things that have been accumulated in the world production. So that domestic enterprises are able to compete with the best foreign firms, each specialist must know from foreign sources what is being done, what is planned by developed countries in the relevant fields of professional activity. Practice has shown that just translators are less useful in the professional world than qualified specialists who speak a foreign language. Linguo-didactic competence of a specialist is in great demand at the present stage of economic development of our state. On the one hand, practical knowledge of a foreign language helps to increase the level of professional competence of the specialist, on the other hand, it involves the ability to carry out such aspects of professional activity as timely familiarization with new trends and technologies in the development of those areas of human activity that are associated with the future profession of the student; establishing contacts with foreign firms, entrepreneurs; dialogue with foreign-language colleagues [1 – 9].

Requirements to the level of knowledge of a foreign language by students-graduates of professional educational organizations, whose professional activity is connected with the sphere of household services and public catering, have increased significantly. The competitiveness of future specialists largely depends on the level of their general culture and knowledge of foreign languages. When applying for a job, for example as a food technologist, a fashion designer for a hairstyle or a make-up artist for a joint venture, foreign language skills are often a decisive factor [10 – 16].

It is generally recognized that a foreign language has become a kind of productive force, and foreign language literacy – an economic category. Consequently, students of secondary vocational schools need to acquire such a level of communicative linguo-didactic competence that would allow them using a foreign language as an additional means of improving their professional skills. Thus, the social order imposes new requirements to the system of foreign language teaching, stimulates the search for rational ways of organization and development of its target and motivational sides. Any student's ultimate educational goal is to acquire knowledge in the chosen profession. Therefore, the leading motive in the learning a foreign language in the First Moscow educational complex should be gaining knowledge in the field of future profession of students, and the basis of the content of the discipline "Foreign language" should be its professional orientation. However, the **discrepancy** between the lack of development of the problem of teaching a professionally oriented foreign language course in secondary vocational schools, both in theory and in practice, and the need to implement sufficiently high final goals – practical knowledge of a foreign language in the field of the profession of students remains unresolved. The practical implementation of these goals is also complicated by the limited terms of training, the lack of textbooks, manuals and recommendations for working with special literature on the subject of a number of specialties of the educational complex, including the sphere of household services, fashion and catering.

Implementation of professionally oriented content of a foreign language course in the educational plant is possible in our opinion on the conditions of interdisciplinary integration of a foreign language and specialized disciplines. Only in this case the presented language training material will contain new and necessary professional information for the future specialist.

The role of information value of educational material in the process of learning a foreign language is well correlated with the main function of the language – to be a means of communication, the main feature of which, as it is known, is the subjectively felt need to obtain the necessary information and exchange it.

Purposeful, consistent and systematic work on the selection of professionally-oriented content of the language material with the necessary level of information in the field of knowledge of the future professional activity of the student, and corresponding to this material teaching methods will contribute to the formation of a stable system of motives for learning a foreign language, which are the basis of educational activity of the student [17 – 29].

Research methodology

The urgent task of the vocational education system is to improve the quality of specialist training. The quality of professional education is a complex multi-level and dynamic system of qualities aimed at ensuring a holistic result – the quality of the graduate, which is determined by the degree of compliance with the goals and results of education. It is the goal that sets the forms, means, content, the course of the educational process and, of course, the result of education depend on the goal. Defining the goals and results of human education, researchers in recent decades, pay more and more attention to the unity of motivational, cognitive and behavioral components in the structure of the graduate's personality. The most capacious concept reflecting this unity was the concept of "competency" and "competence".

Competence-based education (CBE) began its formation in 1965 at the University of Massachusetts (USA) with the concept of *"competence"* proposed by N. Chomsky (1972) in relation to the theory of language and transformational grammar. Besides, N. Chomsky defined the understanding of the differences between the concepts of *"competence"* and *"competency"*, where the latter is interpreted by us as based on knowledge, intellectually and personally-conditioned experience of social and professional life.

At the Symposium in Bern (1996) in the summary report of V. Hutmacher, it was noted that the concept of *competence* itself, being a part of a number of concepts such as skills, mastery, ability, *competency*, is not precisely defined to date. The concept of *"competence"* is closer to the concept of "know how" than to the concept of "know what". The concept of modernization of Russian education and the Federal State Educational Standard present a detailed description of the role and place of the key (basic, universal) competencies of the specialist.

A contextual analysis of such concepts as "competence", "competency" and "professional competence" in pedagogical, psychological, references, and other sources indicates that, to date, different approaches to their interpretation have been developed, which creates difficulties in their classification, hierarchy and the definition of generic-specific relations. Despite the fact that their semantic load is different, sometimes there is an interchangeability of these concepts. The concept of *"competency"*, being systemic and multicomponent, in addition to professional knowledge, skills and abilities includes such properties of the person as orientation (motivation, value orientations, etc.), the ability to overcome stereotypes, shrewdness, flexibility of thinking, character (independence, purposefulness, volitional qualities). The term *"competence"* refers to the result of cognitive activity, knowledge and experience of a person in any field, and *"competency"* – the ability, skill of a person with this knowledge and experience to apply them in this field of knowledge or activity. Competency implies in addition to professional technological training of a specialist such qualities of personality that are necessary for any specialist today.

Both of these terms are widely used in modern scientific and methodological literature in the field of education as a qualitative indicator of the level of knowledge and skills of specialists or students. The quality of professional activity is usually defined by the term "qualification". However, the broader term "competency" is increasingly used, which includes, in addition to purely professional knowledge and skills that characterize qualifications, qualities such as initiative, cooperation, group work ability, communication skills, learning, logical thinking, evaluation, selection and use of information, etc. The concept of *"professional competence"* should include, first of all, the possession of a high level of professional activity, the ability to design their further professional development, the ability to communicate professionally, the ability to be professionally responsible for the results of their work. The most common criterion of professional competence of the individual is their professional adaptation, the ability to model their activities in society in certain spiritual, moral and professional and economic guidelines and to follow steadily the developed professional strategy. In general, competency appears in its various specific forms, and professional competence, in particular, acts in a form adequate to the specific profession that the person has chosen.

Therefore, starting from the first stage of training, it is necessary, first of all, to develop students' motivational sphere: interest, awareness of the choice of profession. In addition, developing the necessary specialist skills, forming professional skills, plus the knowledge gained and accumulated over the years of training, even a small, professional experience gained in practical training, professional educational institution will help the future specialist to adapt more quickly to the appropriate professional environment.

The strategy of modern development of vocational education is focused on the preservation of the fundamental nature of education and the simultaneous strengthening of its practical, activity-oriented orientation on the basis of the formation of a set of competencies that will become a means of further development of students. That is, we can say that the modernization of education is carried out from the standpoint of the competence-activity approach, the essence of which is that the content of education is the basis for the formation of competency (or a set of competencies) of students, and the process of mastering the selected content is of activity character.

Research results

Professional activity of the graduate of the First Moscow educational complex extends mainly to the sphere of service and amenities, which includes a set of methods, means and ways aimed at meeting the needs of people.

In accordance with the fundamental and special training, they will perform such types of professional activities: production and technological; artistic and performing; production and management.

The main socio-economic, psychological and pedagogical requirements of vocational education in this area are: compliance of existing knowledge with the needs of the market; versatility of activities; the ability to respond quickly to changing trends in fashion, styles and consumer demand services; the ability to adapt to new types and conditions of professional activity; readiness for continuous improvement of professional skills and mastery of qualitatively new knowledge; a sense of professional responsibility for the results of their work, which are associated with the preservation of health and healthy appearance of the services consumer of a specialist in this category; a high level of artistic perception and aesthetic consciousness; the ability to form an artistic image of a person; the ability to navigate quickly the flow of information and implement it in their professional activities; knowledge of information technology and foreign languages in the profession; competitiveness.

As it can be seen from the list of socio-economic, psychological and pedagogical requirements of professional education in the field of services and catering, future specialists – graduates of the educational complex – must quickly respond to all the latest fashion trends and the emergence of new technologies in the field of their professional activities – whether it is stylistics and artistic modeling of hairstyles, cosmetics and make-up art, modeling and designing clothes or cooking technology. Possession of the most modern technologies and the most relevant information in the field of the profession is a guarantee of specialist's competitiveness.

There are a great number of ways to obtain information in any field of activity in the modern world; you just need to be able to use them. As it is noted by the graduates and students of the educational complex, one of the effective means of obtaining relevant information and thereby expanding their professional competence is a foreign language. Foreign language is in demand by a specialist in the sphere of services in the performance of such professional activities as: obtaining relevant information on the profession on the websites of foreign companies; exchange of information with foreign colleagues via e-mail; expansion of professional horizons through reading foreign publications in the profession; independent study of annotations and instructions on the use of professional products and equipment in a foreign language; participation in international competitions of professional skill and communication with foreign-language colleagues; professional development training abroad; meeting and service of foreign-language consumer services in the workplace; work in a joint venture and abroad.

Thus, knowledge of a foreign language is an important factor in improving the competitiveness and prestige of a specialist in the sphere of services and catering.

Discussion

Competence-activity approach to teaching foreign languages will be able to implement the conceptual idea of modernization of the learning process: to ensure the mastery of communicative activities through the formation of a set of competencies with a focus on the capabilities, abilities, needs and development of cognitive activity and creativity of students.

We will also consider linguo-didactic competence as a set of competencies that should be mastered by a future mid-level specialist. In modern scientific literature in the field of philology and methods of teaching a foreign language, the terms *competence* and *competency* are widely used to determine the formation of various aspects of the discipline "Foreign language": "foreign language professional communicative competence" (O.Yu. Iskanderova), "sociolinguistic competence" (E.Yu. Panina), "social competence" (M.V. Druzhinina), etc. We use the term ***linguo-didactic competence*** in our work, because our goal is not only the formation of language knowledge of students (*linguistic competence*), but also the comprehensive development of the personality of students and the expansion of the putting knowledge of a foreign language into their practice in the learning process and in future professional activities. Important indicators of the formation of linguo-didactic competence of the graduate are: the need for active use of existing knowledge to solve practical problems, a sense of the need for this knowledge in the upcoming professional activities, the ability to perform such work, which will have a socially useful significance and certain consumers.

Changes in the social and economic life of Russia defined such requirements for a new type of mid-level specialist, where the linguo-didactic competence of the graduate is in demand not only by the individual, but also by the state. Knowledge of a foreign language will help him to adapt more quickly in the modern professional world and carry out more successfully his professional functions; acquire more competence in his future professional activity; form a methodological and psychological readiness to change the type and nature of his professional activity. Knowledge of a foreign language can also improve the overall competence of the future specialist, which is a powerful reserve for accelerating economic, cultural and social development, both in individual fields of activity, and the whole state. Therefore, it can be rightfully argued that linguo-didactic competence is an economic category.

Our concept of forming linguo-didactic competence reflects such progressive ideas of improving the modern system of Russian education as the idea of continuous education and the idea of advanced education. The main meaning of the idea of continuous education is the constant development and improvement of each person throughout life, "lifelong education". The formation of linguo-didactic competence in the context of continuing education can be viewed from two sides. Firstly, it is the continuity of educational activities, curricula, plans, and the content of training in the transition of students from one stage of learning a foreign language to another (primary school – secondary school – secondary vocational institution – university. Secondly, it is a constant continuous self-education of the individual, the decision of each person to move up the levels of foreign language proficiency, the ability to achieve a high level of foreign language competence and change the profile of education or professional activity, based on their personal needs and opportunities and requirements of the labor market.

Advanced education purposefully prepares students for life and professional activities in an information-rich environment that requires specialists to a wider and at the same time flexible educational base that should be continuously developed, ready to adapt to the changing conditions of the working environment. Foreign language is a universal means of expanding opportunities for professional development and socialization of the individual.

Conclusion

Linguo-didactic, pedagogical, psychological and other scientific directions emphasize the need for the formation of students' **social competence**. The content of education should create sufficient and necessary conditions for students to socialize both during their studies at the educational institution and after it – in their professional activities.

The main purpose of a foreign language as a discipline is to master the ability of students to communicate in a foreign language. In this case, we are talking about the formation of **communicative competence**, that is, the ability and willingness to carry out both direct communication (speaking, listening) and indirect communication (reading with the understanding of foreign language texts, writing). Communicative competence is a possession of skills of free communication, ability of establishment of vertical and horizontal contacts, adaptation to a certain social and psychological situation, motives of their behavior, interests, ability to understand the person. Foreign language, like no other discipline, contributes to the formation of communicative competence, developing the ability to build personal and business communication with people, mastering various communication techniques depending on the field and type of activity (professional, managerial, household, etc.).

Familiarity with the original literature on the specialty develops the ability to understand other national cultures, forming the **intercultural competence** of students.

Knowledge about the country of the studied language, about the daily life of the people of this country, speech etiquette and the ability to own it, knowledge about the achievements of the people of the studied language in various spheres of social life and in the field of the studied profession, customs and traditions of national culture – all this contributes to the formation of **cross-cultural competence.**

Learning a foreign language is an intellectual work aimed at mastering knowledge about the system of a non-native language and obtaining new information through foreign language means and ways of its expression, so we can rightfully talk about the development of **intellectual competence** in the process of learning a foreign language.

An obligatory component of the content of teaching a foreign language is the **educational competence** of students. The process of mastering a professionally oriented course of a foreign language involves the formation of the ability to independent, autonomous development of language and culture, which provides conditions for its more free creative use as an educational medium.

The professional orientation determines the specificity of the discipline "Foreign language" in secondary vocational school. By reading professionally-oriented literature and extracting new information from it, students expand their **professional competence.** The academic discipline "Foreign language", being theoretical in form, contains a huge potential of knowledge that can expand the professional outlook of the future specialist and make a significant contribution to its formation.

The formation of linguo-didactic competence of students of the educational complex takes place in the process of formation of such components of its competencies as linguistic, communicative, intercultural, social, cultural, intellectual, educational, professional, and important indicators of the formation of linguo-didactic competence are the willingness and ability of the graduate to put the formed competence into practice.

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Social Networks and Nicknames for Purposes of Interactive Teaching English at School

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Abstract

This article is devoted to one of the urgent problems of modern linguodidactics, in other words, the search for new, effective tools, methods and techniques for teaching foreign languages at school. The authors describe an innovative approach to teaching English in secondary schools, founded on combining information and communication technology resources with interactive teaching. The idea of interactive teaching is based on the interaction and cooperation of all members of the educational process, where teacher only provides possible conditions for the manifestation and implementation of the initiative, the activity from schoolchildren. In a situation of continuous technical and communicative revolution, this type of training can and should be realized by means of modern information technologies, where the Internet space and its services occupy an important place. Social networks, well-known to schoolchildren and being the part if their lives, have great methodological potential. They help increase motivation and academic achievements. The authors of the article demonstrate the possibilities of using social networks (Twitter, Facebook, etc.), as well as their constituent elements – virtual names (nicknames) from the perspective of various interactive teaching methods: project method, case-study, discussion, educational games, brainstorming. As experiments show, interactive exercises by virtue of social networks and nicknames are multifunctional. They contribute to the development of language (lexical, grammatical, etc.), communication skills and also increase the motivation and cognitive interest of schoolchildren (aged 12-17).

Keywords: nickname, social network, interactive teaching, English, school

1. Introduction

The main objective of the modern school is to reveal the potential of all the participants involved in the pedagogical process, to give everyone an opportunity to be active and creative. Interactive training is rapidly gaining ground in the modern educational system, such kind of training is based on the continuous engagement of all the members of the schooling process, where a teacher only creates conditions for pupils to take and realize their initiative. The essence of this approach is as follows: the whole class is involved in the cognitive process, everyone has an opportunity to understand and reflect, to make a special individual contribution and to exchange knowledge, ideas and ways of doing (Panina & Vavilova, 2007). Constant cooperation fosters motivation and improves teaching efficiency overall.

Quite frequently the term "interactive teaching" is used in the scientific literature in response to the emergence of information technologies, to the implementation of Internet resources into the educational process, including such platforms as social networking services which take over the lives of modern people by leaps and bounds. Social media is an Internet service representing itself a virtual space for communication between individuals within the network, allowing users to create profiles. Every user is able to communicate, to be creative and to share the fruits of his or her imagination with a vast audience on the Web.

All social media services provide an opportunity to find the technical and social basis for the virtual self-expression that is evident in the possibility of thinking up a network name – nickname – a symbolic name which a user assumes to communicate with virtual personalities throughout the Internet (Danilov, 2011; Asmus, 2005). Nickname is the so-called "face" of a person in the online world, it emphasizes individual traits and creates a specific image.

Interactivity and Internet constitute some kind of related phenomena. From our perspective, it is through popular communication technologies that we can modernize and upgrade the teaching methods by making them more effective and accordant to the current generation of schoolchildren. Social networking services are so sophisticated and diversified that not only their standard and traditional functions can be involved into the process of education but also their unique elements – nicknames, on the basis of which we can invent some new interesting exercises for creative contemporary pupils during the lessons of foreign language.

A large number of scientific papers are dedicated to the study of didactic potential of different web-services: d. boyd (boyd, 2007), E.P. Ilchinskaya (Ilchinskaya, 2015), N.M. Moolenaar (Moolenaar, 2012), D.E. Onorin (Onorin, 2016), Stornaiuolo (Stornaiuolo, 2012), H. Tanner (Tanner, 2014), however, the application features of social networks in the aspect of an interactive approach to teaching foreign languages are not sufficiently described in detail, and, in particular, the use of the integral elements of online platforms – nicknames – are not researched at all. This fact emphasizes the novelty and importance of the chosen problem.

In the course of reviewing theoretical foundations of the interactive approach to teaching we have analyzed a sufficient number of typologies of corresponding methods and forms of teaching. Here we highlight five most widespread and relevant methods: project method, case-study, discussion, educational games, brainstorming technique. As exemplified in these five interactive teaching methods we try to demonstrate how successful and effective they could be widely adopted in combination with the didactic potential of social networks (Facebook, Twitter, etc.) and nicknames during English lessons at school.

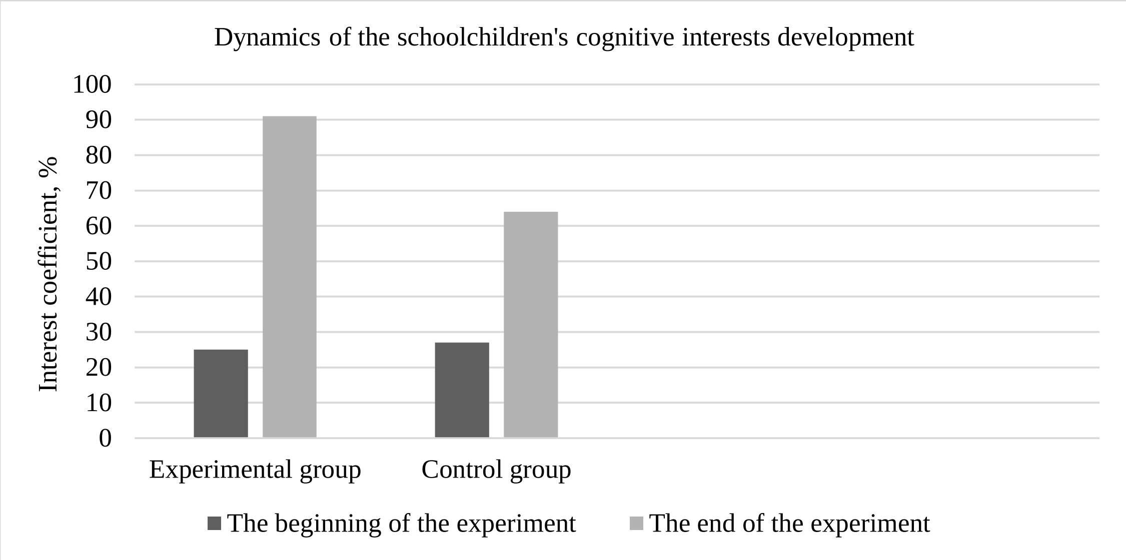
2. Method

In the furtherance of these goals various research methods were used, they included theoretical methods: analysis of sociological, pedagogical and methodical literature, synthesis, forecasting; also empirical methods: pedagogical experiment, interviewing, questioning among schoolchildren, consultations with teachers, observation.

The central research method was a classic typical pedagogical experiment, built on the comparison of experimental and control groups. The result of the experiment is manifested in the change that occurred in the experimental group compared with the control group. During the pedagogical experiment, experimental and control groups of 9th grade schoolchildren of the secondary school were selected. In the experimental group, English was taught with interactive teaching methods based on the use of social networks and nicknames. In the control group, teaching process was organized conservatively and traditionally. All English classes in the control and experimental groups were conducted by one teacher, the level of input knowledge of schoolchildren in both groups was about the same.

3. Results and Discussion

In order to study the dynamics of the development of schoolchildren's interest in the new language material, we carried out a survey. All participants answered a questionnaire, the results of which were used to calculate the coefficient of interest. This coefficient of interest is determined by the method of A. A. Verbitskiy (Verbitskiy, 2006). The diagram clearly shows the changes in the level of cognitive interest among schoolchildren during English lessons.



The pedagogical experiment revealed the positive dynamics in the development of the cognitive interests of schoolchildren in both groups. However, the analysis of the results by the end of the experiment showed a significant leap in the experimental group: the number of students who expressed interest in the English language increased several times. Consequently, social networks and their nicknames, used as interactive teaching tools, indeed are capable of influencing the motivation and interest of schoolchildren. In addition, a positive effect of the described method concerning the formation of objective language and communication skills has been revealed, and this fact is proved by the test results presented in the table below. The control tasks after the studied topics were absolutely the same for both control and experimental groups:

Tests	Experimental group (the number of students, %)				Control group (the number of students, %)			
	excellent	good	satisfactory	poor	excellent	good	satisfactory	poor
Lexical dictation	28	48	24	0	12	38	42	8
Grammatical test	26	50	22	2	4	32	54	10
Composition	30	46	24	0	8	30	54	8
Oral topic	32	52	16	0	4	38	46	12
General test	30	48	22	0	8	36	48	8

As we can see at the table, in almost all types of tests, the results of schoolchildren in the experimental group are higher than those of their classmates from the control group. Thus the use of social networks and nicknames in the form of interactive exercises contributes to the development of language and communication competencies during English lessons.

Let us dwell more detailed on the discussion of the didactic potential and the possibilities of the practical application of social networks and their nicknames.

3.1. Project method

In terms of interactive teaching with regard to foreign language lessons at school one of the most perspective methods is the project method, i.e. the way to achieve didactic purposes through the detailed elaboration of a significant problem, subsequently it should be resulted in the real tangible "product", decorated somehow (Polat, 2003).

We can talk about the creation of a thematical community in English on a social networking service as the joint project of a teacher and his or her pupils at the end of learning the topic, for instance, the public, dedicated to the history of the United Kingdom. Also, the channel on a video hosting service can be started up, where collection of educational videos would be reflected. It is possible to suggest children getting into groups and shooting several videos that would clearly and vividly demonstrate the usage of rules (e.g. in forms of dialogues, sketches, vines) that have been internalized during the lessons. Moreover, an electronic journal with articles in a foreign language can be released, where the teacher would be an editor-in-chief and separate groups of children – reviewers, critics and authors.

Relying on the project technology it is entirely feasible to accomplish a creative task by means of the nicknames of social networking services in English class, e.g. in 8-11 grades within the framework of studying the topic "Popular Professions in a Modern World" (during the final stage):

Project "My prominent career". There is no doubt that everybody would like to be successful and famous. You are suggested creating on Facebook an account of imaginative celebrity, you are eager to be, in any sphere (music, sports, films, television, politics, business, economics, fitness, etc.) either individually, or in pairs / groups with all the details: nickname (that should accurately reflect the personality of your character), personal information (real name, age, place of birth, current accommodation, interests, hobbies, etc.), some photos and content on the online-page. Then each one of you will present publicly your wonderful star in front of the class (in a form of some kind of report). This project will be concluded by making a colourful poster with the collection of our brilliant characters, arranged by rating based on the results of a public poll.

This exercise allows consolidating vocabulary on the topic "Professions", to constitute the competence in making speech acts, to improve oral monological speech skills, to develop skills in working with an interface of social web-services in English, to present an overview of a desirable future career (the last can be considered as an element of vocational guidance).

3.2. Case-study

Proficiency in a foreign language is, first and foremost, a communication skill, an ability to keep the conversation in various situations during the process of interaction between people. By virtue of the method "case-study" it becomes possible for modern pupils to develop their social intelligence, to learn how to analyze everything around them, to demonstrate their leadership and initiative (Kret, 2013). Case-study is a method of problematic-situational analysis based on teaching by means of solving concrete tasks (Trapeznikova, 2015).

The procedure of investigation, research or analysis can be organized inside an online service. Let us suppose that the topic of the foreign language lesson is connected with the ecological problems of our universe, and children are suggested not only reciting potential ways of solving the global troubles, but also finding how to pay people's attention to the pressing issues of contemporary natural reality. It is easy to accomplish this point floating around the Internet, concurrently it is the most effective way. On social networking services one can create the public, devoted to the ecological state of the Earth, people can invent some kinds of hashtags-slogans in order to cooperate and set up conversations and discussions of the actual problems.

Below, we show you the way in which network onyms can be applied at lessons while executing the case-study. Such kind of task can be recommended for accomplishment at any stage of learning in secondary school (grades 5-11) during studying or revising the grammatical topic "Special Questions in English".

We will create a chat on Twitter in order to solve an important task / case – during the communication with each other we should reveal, who is who by asking questions to each other about interests, likings and passions, by noticing the manner of getting into a conversation with us, by seeing only an invented nickname-pseudonym on the online-page of the user.

Example of Q&A Session in an organized live chat:

@crazyaboutpinkness: How many hours a day do you play your favourite musical instrument?

@BestFriendofPiano: I play the piano about three hours a day to hone my skills to perfection.

This exercise is intended to master children's writing skills and their acquirement in building-up interrogative sentences; moreover, it aids development of interviewing skills and actualizes lingvocreative thinking in course of the invention of virtual names and spelling questions for equals in age.

3.3. Discussion

We believe that not only scientists of the world community are interested in the character of social media influence on the choice of the concrete nickname type by users. In our opinion, this vexed question can excite speculation in the minds of modern teenagers too. Discussion is a method of interactive teaching in which public deliberation and free verbal exchange of knowledge, thoughts and opinions, ideas about some problem or moot point take place (Panina & Vavilova, 2008).

This method can be realized when dealing with any topic, the main thing is to have any matter of argument that demands for an active deliberation. Within online services it isn't difficult to organize the case-study, one should only create a chat on a selected theme and arrange so-called "debates" inside. Also, discussion can take place under different posts in online communities, after looking through some thematically ordered picture albums or visual backdrops, after listening to musical tracks of foreign artists, etc.

The task definition for schoolchildren from 9th to 11th grades is presented below; it can be involved in dealing with the topic "Social Networks in our Lives".

Let's discuss, which type of nickname (autonym, pseudonym or mixed) is the best during the communication on neutral social networking services and which – on thematic (romantic, professional, creative) services. You will be divided into three teams according to the existing nickname types on Internet and should prove the advantages of your type during our debates. For each point of view give convincing arguments and illustrative examples.

Such a discussion develops both monological and dialogical foreign speech in an oral form, instils the first notion of anthroponimics into children's minds; it cultivates skills in critical reasoning – in finding clear arguments and introducing them convincingly in front of the classmates by intercommunicating in a flexible and unostentatious way and by accepting criticism and objections properly.

3.4. Brainstorming

Something similar to the discussion means the method of brainstorming, however within this technology the rejection of any criticism and harsh categorical judgments occurs. Brainstorming is a method oriented to the production of the ideas for solving problems, it is based on the process of joint attacking the problem at an organized discussion (Dvulichanskaya, 2011). The point of the brainstorming consists of developing children's skills in expressing their ideas and thoughts quickly and effectively, in comparing, systematizing and analyzing different information by means of the foreign language (Alyoshina, 2016).

Social networking services provide an opportunity to arrange public polls and negotiations and afterwards to count the votes and analyze opinions to reveal the most original and relevant ideas. For instance, if we talk about the topic "Healthy lifestyle" during English classes, at the very beginning of learning it we can realize brainstorming by asking on a virtual web-service some kind of loaded question, provoking consideration and generation of different ideas with regard to a particular problem. All pupils' opinions will be fixed inside the community, and then by rating or public poll the most productive and interesting ones will be chosen. In such a manner children will get useful food for thoughts and motivation even before a detailed learning of a concrete question.

Let's demonstrate the realization of brainstorming by the aid of nicknames of social networking services drawing on the example of an exercise that can be recommended in the 9th grade during studying the topic "Politics and Contemporary History".

Our task is to think up the best nickname for Donald Trump. You should give as many ideas as you can. But beforehand you should search some information about this personality in order to reveal some prominent features. Then we will put all your inventions in a nutshell and by creating a public poll on Facebook, we will choose the best variant of his virtual name.

Such kind of task facilitates the development of lingvocreative thinking, and also the capability of expressing ideas in a foreign language briefly; it fosters an interest in a country specific and historical aspect of the language under study.

3.5. Educational game

It is necessary not to be only result-oriented, but also to emphasize the educative process itself, that is why it makes sense to use gaming technology – the main source of motivation and emotional release for children. The essence of educational games includes activation of the set of skills and abilities to commit oral and mental activities and to make a communicative exchange between pupils (Efimova, 2011).

Window of opportunities for inventing and holding various games exists in the framework of social web-services. There is an option of creating different quizzes, which give possibilities of taking an active part for every single member of an educational process, teachers can think up interactive crossword and pictorial puzzles. Role plays are accessible and useful inside a virtual space, only imagination and creativity are required from a teacher. For instance, pupils can be conferred such powers as movie critics or interviewers on a theme-based social network, suggested being popular bloggers for some period of time.

Let's provide an example of the role-playing game with the use of the nicknames of social media. Popularization and advertisement for an artist is quite a complicated task, so we claim confidently that such kind of exercise is pointed at the schoolchildren of the senior classes (the 9th grade) and can be involved within a framework of the lexical topic "Music".

There are two novice musicians full of energy and new ideas but, to tell the truth, not so many people are aware of their existence, that's why they need an urgent help and qualitative advertisement on Internet. You will be divided into 2 teams. You are to create separate fan-clubs for these musicians, where each one of you will play an important role – from simple members of online-page, demonstrating activity and strong desire to popularize music, to administrators and managers, showing responsibility and faithfulness. Each member of each fan-club should have an exciting nickname, reflecting his or her distinct position according to the viewpoint about the chosen musician's art. The winner of this game will be a musician with the biggest fan-club of the most dedicated admirers.

The game aids development of the abilities to speak in a foreign language, to get on well with people, to work with an interface of social web-services in English; it helps children to improve the skill of sharing duties between each other, to show responsibility and, at the same time, to reveal creative critical thinking.

4. Conclusion

To sum up, taking into consideration the fact of modern pupils' passion for online platforms, we can insist on the possibility of converting this phenomenon to advantage by organizing interaction at lessons and inventing tasks on the basis of social networking services, in particular, of their integral elements – nicknames. In order to acquire a language one should, first of all, practice his or her skills in speaking (both in oral and written form), and the interaction between all the members of the educational process at lessons functions to the benefit that way. It allows mastering all the skills and abilities, which are indispensable for a modern communicant, to the fullest extent possible.

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Teaching Foreign Languages to the Seniors: Significant Components of the Course Development Process

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Abstract

The article sets out practical implications for developing a foreign language course for the seniors (people at the age of 60 and above) based on the theory and practice of education for adults (andragogy) and seniors (geragogy) as well as on the authors' experience of developing and conducting such a course in the system of non-formal education in Ukraine (university of the third age). It proposes a three-staged procedure of course development including learners' needs, wants, and capabilities analysis, program preparation, its running and evaluation. These components of foreign language course development process for the seniors were selected by the group of experts, represented by the teaching staff of the leading Ukrainian higher educational institutions. The first component of the foreign language course development is designed to derive information from the learners on the purpose and motivation of their foreign language learning including their age peculiarities, and learning styles, based on their individual and psychological differences. The second component is an organizational stage, aimed at writing a course program through setting objectives, organization of content and lesson planning. The course program should adequately reflect seniors needs, wants, and capabilities in communicative real-life situations included into exercises and activities. The final stage – course running and evaluation – is the implementation of course program through the principles of flexibility, individual approach, focus on learners' interests, integration of language skills, and providing constant feedback. These principles consider senior learners' basic attitudes and ways of learning foreign languages at the universities of the third age. The three described significant components are the bedrock for foreign language course development process within the system of non-formal education of the senior learners.

Keywords: seniors, foreign languages, course development process, program preparation, non-formal education

1. Introduction

Depopulation and rapid aging of population are among today's major global problems. Besides, knowledge and skills of professionals in all areas get outdated so quickly that they need constant renewal whereas lifelong education can be the only solution to the problem. Teaching and learning foreign languages takes a significant place in the education of adults – andragogy. Because speaking foreign languages is so important to the adults' career, their teaching and learning has taken a variety of forms with the pedagogical techniques primarily based on the learners' professional activities.

At the same time, another category of adults – older adults or seniors – are becoming more and more enthusiastic about learning foreign languages. Moreover, in many countries of the world this category of population remains socially active and shows quite good results in foreign language learning. They regard foreign languages as the key means of intercultural communication both on-line and in live during traveling and meeting new people.

Taking into consideration the opportunities being open now for the seniors of post-Soviet countries for traveling abroad, more and more people try to learn foreign languages alone or in the system of non-formal education in order to communicate with other people. For many of them learning foreign languages has become a hobby with a strong level of motivation for it.

Therefore, for teachers and course developers it has become a real problem how to make such courses useful and valuable. Basically, it is connected with the following problems. On the hand, it is hard to define the age when adults become seniors but in our research we consider them a population beyond age of sixty, still productive but on the verge of retirement or already retired. This age is difficult in terms of human learning skills especially those related to learning foreign languages. It is, primarily connected with the abilities to remember words and grammar (memory capacity), pronunciation, and quick reaction to the dialogue in conversations. At the same time, most of these people previously learned foreign languages at schools and turned to be unsuccessful which can have a considerable negative impact on further foreign language learning at older age. On the other hand, these people have various motivations, i.e. different needs for communication foreign languages. It leads to many questions on what they want to do with a foreign language they try to learn, which skills (speaking, reading, writing or listening) are of a higher priority for them. Because of unsuccessful past experiences in foreign language learning, many seniors, mistakenly, consider communicative approach to language learning not appropriate to them. In their opinion, only the ability of translation can allow them to understand foreign languages.

Overall, teaching foreign languages to the seniors requires approaches which can not be similar to those applied to the kids or other categories of adults. Besides, this specific category of population varies from country to country having their cultural peculiarities deeply embedded in foreign language learning abilities. Ukrainian seniors as many seniors in the post-Soviet environment add up their own peculiarities to the process of foreign language learning basically connected with their previous foreign language learning in the system of Soviet educational institutions.

2. Literature Review

Education of adults has always been under research of many scholars who tried to give definitions of this category of learners. Here we can find various views. The basic one is that adults are people who can take socially significant roles and able to accept responsibility for their lives (Darkenwald & Merriam, 1982).

Principles of adults' education (andragogy) versus teaching children (pedagogy) were laid by M. Knowls (1970). He recognizes the leading role of adult learner in educational process, consciousness of learning, application of life and professional experience, aimed at solving vital problems. Practically adult learners are autonomous, self-directed, goal-oriented, having high level of motivation and life experience they refer to while learning. At the same time, in the work of L. Turos (1999) we find concept 'general andragogy' and a whole range of disciplines it encompasses, depending on the social, age or professional category of adults.

Based on these principles, N. Biryukova, S. Yakovleva, T. Kolesova, L. Lezhnina, and A. Kuragina, (2015) provide a comprehensive study on teaching foreign languages to adults. According to them, such andragogical principles should be applied in this area as identification of adults' individual difficulties and educational experience; content of teaching meeting their objectives and needs; use of interactive methods of teaching; integration of individual and group forms of learning activities and establishment of connection between adults' life and work; instructor's role as a facilitator. They also study such important issues as barriers and motivation, as well as interactive teaching strategies and technologies of practice-oriented approach in foreign languages teaching and learning.

H. Ctibor & S. Grofčíková (2016) identify many shortcomings in the theory and practice of teaching foreign languages to adults, and elderly people in particular. In addition, they analyze a number of strategic documents, programs and legislation creating conditions for lifelong foreign languages education.

There are some interesting aspects on effects of age and experience on English pronunciation by Korean speakers in the article by W. Baker (2010). Similar ideas of age peculiarities of second language learning and teaching can be found in the work of S. Krashen, M. Long, & R. Scarcella (1979). Also, some aspects of foreign languages teaching to adults within the system of military education can be found in the work of I. Bloshchynskyi (2017).

The most substantial work on teaching foreign languages to the seniors is performed by D.R. Gomez

(2016). The author shows her own teaching experience with older adults from the perspective of geragogy – the theory and practice of teaching seniors. She recognizes teaching this category of population challenging, offers interesting insights into the effect of aging on memory and language, considering individual differences of these people. The major achievement of D.R. Gomez is a research on peculiarities of senior students in four dimensions: physical, cognitive, psychological, and experiential. Later in her book, the author describes a study on the influence of experience based on vocabulary learning strategies conducted with older Japanese learners of Spanish. A practical nature of her research includes a pilot course of seven lessons on vocabulary, divided into aims, activities and homework. The work also provides a wide range of recommendations and evaluation techniques for instructors of foreign languages geragogical courses. All way through the book, D.R. Gomez mentions reservations of her research on 'foreign language geragogy' due to the lack of wider experimental studies.

On the whole, although andragogy is rather developed in terms of concepts and methods of teaching this category of population, the science of foreign language teaching and learning of seniors remains seriously limited. It is basically bound to some research on age peculiarities of these people and recommendations to their language training.

Therefore, with this research we aim to set out the main practical implications which should be considered in the foreign language course development for the seniors at the level of non-formal education (foreign languages schools or educational language programs at universities (academies) of the third age etc).

3. Method

While carrying out the research we were using various methods at the theoretical, diagnostic, and empirical levels. The theoretical methods include analysis; synthesis; generalization; specification for dealing with the scientific sources. The diagnostic methods encompass questionnaires and interviews for collecting data on the components of the seniors' foreign language course development process. We also used an experts' assessment method and the Thomas Saati Hierarchy Analysis Method for identifying significance coefficient for the components of the seniors' foreign language course development process.

3.1. Participants

The participants of the first stage of the research were 78 teachers of Ukrainian Universities (National University of Life and Environmental Sciences of Ukraine, Kiev National University named after Taras Shevchenko, Kiev National Economic University named after Vadym Hetman) who have enough experience in teaching foreign languages to different categories of students within formal and non-formal types of education.

For the second stage of the research 7 experts were carefully selected among the teachers of the National University of Life and Environmental Sciences of Ukraine and Military Diplomatic Academy named after Yevheniy Bereznyak. Their selection was based on the considerable level of experience in teaching foreign languages to the adults as well as their scientific background in the area of pedagogy and psychology. They are all doctors of sciences and full professors.

At the third stage of the research we looked at testing and receiving a feedback on the foreign language course we had previously developed for the seniors. Our participants were 24 volunteers (age from 60 to 67), mostly females, who were students of the foreign language course at the university of third age).

3.2. Materials

In order to carry out the research we used questionnaires and interviews at the first stage of the research for identifying the significant components of the seniors' foreign language course development process. The questionnaires include questions to find out information on the aspects the teachers dealing with adults take into consideration while developing a foreign languages course for the seniors. Later, the data from the questionnaires was thoroughly processed and enhanced with the help of interviews to fill in the information gaps. The interviews were carefully developed and conducted with the use of indirect and leading questions

We, then, also used lists of components we had identified to be marked by the experts as to their significance in order to identify the significance coefficient of each component. At the final stage of the research we also used feedback forms to understand in detail how successful the course was for the students.

3.3. Procedure

At the first stage of the research we selected 10 basic components which, in the view of the experts, should be applied to the process of foreign language course development for the seniors. They were shaped, based on the answers the experts provided to the questions we asked them on how better to plan and organize such a course. These components represent the best summary of the ideas the teachers put randomly. So, some of them can overlap. These are the following components:

X_1 – selection of resources;
X_2 – establishing learners' motivation;
X_3 –analyzing learners' needs, wants and capabilities;
X_4 –creating favorable foreign language communication environment;
X_5 – giving feedback on learners' difficulties;
X_6 – preparing a course program;
X_7 – reflecting real-life communication topics in the course contents;
X_8 –developing exercises;
X_9 – course running and evaluation;
X_{10} – analyzing learners' previous foreign languages learning experience.

At the second stage of the research we asked seven experts to assess how significant these components can be in the process of foreign language course development for the seniors. Each of the seven experts compared components between each other. They used the scale, based on the Thomas Saati Hierarchy Analysis Method. In this case, while comparing components between each other they could give 0.5 points if a component being assessed was worse than the one it is compared to. Then, they could give 1 point if the two components being assessed were equal. In case, if the component under assessment was better than the other component, they could give 1.5 points. Then, the mean number for each component of the foreign language course development process was calculated. So, as the result we could get the distribution of the significance coefficient among the components.

At the third stage of the research, we asked the senior learners about their feedback on the foreign language course they participated in. Because the students were not ready to answer the questions in English, the questionnaire was presented in their native language. We also did not want to make it too complicated, so we put 10 basic straightforward questions to get simple answers on how the course went and how we can improve it in the future. The English version of the questionnaire is presented at table 1.

Table 1. *Students' questionnaire on the course feedback*

<table>
<tr><td colspan="3">Instructions
Dear students!
Thank you very much for the participation in this course. We hope it was interesting and useful for you. It was conducted for the first time in this format, so we would like to ask you some questions on how you liked it. We expect honest and objective answers from you. They can help us to make this course better in the future. Please, encircle the answers that seem most appropriate to the questions we ask you. Also, we would be very grateful to you, if you could give use any proposals, comments or observations on the course.</td></tr>
<tr><td>1.</td><td>Have you ever participated in the foreign language course like this one?</td><td>YES NO</td></tr>
<tr><td>2.</td><td>What was you motivation for this course? (You can give several answers)</td><td></td></tr>
<tr><td>3.</td><td>Did you like the course?</td><td>YES NO</td></tr>
<tr><td>4.</td><td>What did you like about the course most of all? (You can choose several answers or give your own)?</td><td>a. the teachers
b. course materials</td></tr>
</table>

		c. the way the course was prepared and run d. other ______________
5.	What did not you like about the course most of all? (You can choose several answers or give your own)?	a. the teachers b. course materials c. the way the course was prepared and run d. other ______________
6.	Do you agree that this course was based on your needs, wants and capabilities?	YES NO
7.	Do you agree that the course program (contents) was properly prepared?	YES NO
8.	Do you agree that the course was properly run?	YES NO
9.	What do you think should be improved in this course? (You can give as many proposals as you can)	
10.	Do you have any other comments or observations on the course? (You can give as many proposals as you can)	

The first two questions were aimed at establishing students' previous experience in foreign language learning at the courses for the seniors as well as their purpose of learning at this course driven by their motivation. These two factors can have a huge effect on the course that we were conducting depending on how positive their previous experience in foreign language learning could be and how strong motivation they could have.

Questions 3, 4 and 5 were asked to find out senior learners' overall impression of the course and their attitude to it. Pinpointing things that they liked and did not like about the course can help us to identify strong and weak points at the course we have conducted.

By asking question 6 we wanted to know to what extent the foreign language course reflected needs, wants and capabilities that would definitely help us to determine its usefulness and appropriateness. The seventh question gave use an opportunity to look at the course program and its contents. By asking it, we wanted to know how adequately it reflected the real-life communicative situations the learners are likely to encounter in their future language use. With the eighth question we intended to establish students' feel on teachers' preparation, organization and conduct of the course.

Questions 9 and 10 were directly asked to get as many proposals on course improvement as possible.

All the three stages of the research were conducted with the single aim to identify the most significant components of the foreign language course development process for the senior learners.

4. Results

The results of components assessment which was conducted at the first stage of the research can be seen at table 2.

Table 2.*Components assessment by the experts*

		Components	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5	Expert 6	Expert 7
X_1		selection of resources	0.065	0.086	0.090	0.090	0.087	0.090	0.088
X_2		establishing learners' motivation	0.109	0.080	0.090	0.085	0.109	0.091	0.086
X_3		analyzing learners' needs, wants and capabilities	0.145	0.144	0.123	0.135	0.121	0.121	0.142
X_4		creating favorable	0.085	0.090	0.090	0.080	0.087	0.083	0.085

		Components	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5	Expert 6	Expert 7
		foreign languages communication environment							
X_5		giving feedback on learners' difficulties	0.075	0.080	0.090	0.085	0.075	0.090	0.086
X_6		preparing a course program	0.125	0.144	0.133	0.145	0.145	0.144	0.140
X_7		reflecting real-life communication topics in the course contents	0.075	0.070	0.080	0.085	0.087	0.075	0.080
X_8		developing exercises	0.105	0.080	0.090	0.080	0.098	0.090	0.085
X_9		course running and evaluation	0.125	0.155	0.144	0.145	0.140	0.155	0.142
X_{10}.		analyzing learners' previous foreign languages learning experience	0.065	0.069	0.064	0.060	0.087	0.069	0.068

Having received assessments from each expert, we have calculated the significance coefficient for each component as an arithmetic mean from the numbers given by each of the seven experts. The results can be seen from table 3.

***Table 3**. Distribution of the significance coefficient among the components*

	Components	Significance coefficient
X_1	selection of resources	0.085
X_2	establishing learners' motivation	0.093
X_3	analyzing learners' needs, wants and capabilities	0.133
X_4	creating favorable foreign languages communication environment	0.086
X_5	giving feedback on learners' difficulties	0.083
X_6	preparing a course program	0.139
X_7	reflecting real-life communication topics in the course contents	0.079
X_8	developing exercises	0.090
X_9	course running and evaluation	0.144
X_{10}	analyzing learners' previous foreign languages learning experience	0.069

As we can see from both tables, the most significant components are the following: analyzing learners' needs, wants and capabilities; preparing a course program; course running and evaluation. The rest of the components are also significant but they can be used as a part of the above three.

We have also analyzed the results of students' feedback on the foreign language course (third stage of the research). They reveal that most of the learners (24 people, mostly females, who volunteered for an English course at the university of third age at the age of 60 to 67), have already had a foreign language learning experience, primarily, an unsuccessful one. Most of them, made several false attempts to master

English as their foreign language at different stages of their life and career but they have never experienced a course for the seniors.

The main purpose of their English learning can be summarized in the following areas: remaining socially active with their friends from abroad or making new friends both on-line and traveling to foreign countries; filling in free time with pleasant and useful activities (making fun); further use of English in the native speaking environment (immigration).

Almost all of them liked the course and really cared a lot about the type of the teacher they would get for the course. Also, most of them expected 'spoon-feeding' (too much attention from the teacher). 70% vividly overestimated their self-confidence in learning English and needed extra help from teachers. This example can not be typical for the seniors' courses in other countries but rather illustrative one for teaching foreign languages to the seniors in a post-Soviet environment.

Most of the senior learners wanted spoken colloquial English for speaking on everyday topics and hobbies, primarily, satisfying their basic speaking needs. Therefore, we can make conclusions that the foreign language course for the seniors was based on the real-life communicative situations they can encounter in foreign language communication.

The basic learners' proposals were to increase time for the course as well as to make it multi-leveled.

5. Discussion and Conclusion

In order to develop an effective foreign languages course for the seniors let us focus on the following three basic issues for consideration: learners' needs, wants and capabilities analysis, program preparation, and course running and evaluation. These components of the foreign language course development process are significant, particularly critical for foreign language teaching to the seniors as their education is not confined with certain formal rules and regulations. We can also regard them as the stages for the foreign language course development process.

Learners' needs, wants and capabilities analysis component is a fact-finding stage that is detrimental for further foreign language course development. It answers three crucial questions: "What do the seniors need a foreign language for?", "To what extend do they want to learn a foreign language?", "Are they able to learn what they need and want?" In the view of some scholars, this stage should establish learners' interests and aspirations and can not be ignored (W. Rivers, 1981, p. 11 − 12). An interesting point can be found in the research of V. Nikolic and H. Cabaj (2000), who compare this stage of foreign language course development to inviting guests for dinner where the host should learn about their food preferences. In the view of the authors, this stage helps to make a course relevant, adequate, and appropriate for the learners (p. 47 − 48).

This is especially true with the seniors as they take courses voluntarily and pursue their individual foreign language learning goals. Both senior learners and their teachers wish to make foreign language learning and teaching as much enjoyable and beneficial as possible. Certainly, at the same time, senior learners' wishes should be realistically measured against their mental and physical capabilities which can be limited due to the age influence.

Another component being selected by the experts – a program preparation – is not less significant. There are several terms used to indicate a course program such as 'curriculum' and 'syllabus'. The first one is a course outline for teaching at the national or community levels while the second term means a 'circumscribed document, prepared for a group of learners. We use term 'program' in the meaning of a context in which a language instruction takes place (F. Dubin& E. Olstain, 1994, p. 3). Here, we include such issues as setting objectives, organization of content and lesson planning.

The final stage of foreign languages course development for the seniors – its running and evaluation – can be regarded both as separate or the one integrated into the whole procedure of foreign language course development. It finally shows how well the course program went, revealing all the drawbacks which should be corrected at the next course.

In order to see how the foreign language course for the seniors is developed, let us have a closer look at its procedure with practical implications derived from our experience of developing and conducting such course in Ukraine.

The best way to establish learners' needs, wants and capabilities in foreign languages learning is to ask them directly questions on why they need to learn a foreign language, what they expect from learning and how confident they are in doing that. As seniors are very sensitive about all issues connected with their learning, this should be done not only prior to the course commencement but also all the way through the course to make sure that the learners really meet their expectations. If something goes wrong, the course should be adjusted.

Our short but very beneficial experience of teaching older adults in Ukraine provides some hints in conducting this stage of foreign language course development. We find questionnaires and interviews the most useful information-gathering techniques. Because in many cases the seniors appear less expressive in putting answers on the paper, we recommend having both filling-in questionnaires and sitting interviews as supplementing each other in order to gather better evidence on learners' needs, wants and capabilities. The questions should be developed by the teachers themselves as they can pick up more precise information on the issues critical to the further stages of foreign language course development.

The best way to organize the questionnaires is to provide not really long but balanced sets of questions and statements for the course applicants. We would recommend items of different types: open-ended and multiple choice questions mixed with statements the respondents can agree and disagree with. Open-ended questions can lead the respondents either to abundant information about the issue or, on the contrary, to difficulties in hardly providing any. Multiple-choice questions can confine learner's answers to the points exactly needed by the course developers, on the one hand, while on the other hand, they seriously restrict the learners in expressing the information. The statements the respondents should agree or disagree with are more popular among the seniors especially if they are written from the first person (e.g., I would like to learn English to make new friends from abroad).

The challenge is that too long and complicated items can tire the applicants down making answers imprecise. Therefore, fewer but clearly formulated questions can provide better information about the learners than long and complex ones. Another challenge the teachers can encounter in dealing with the seniors is their reluctance or refusal on providing any personal information about their plans, aims or previous experiences. This can be found in any types of societies but especially acute among the post-Soviet seniors whose mentality is still deeply rooted in the past, where any information from a person could be turned against him or her. So, the teachers should be prepared to deal with such people. Here, interviews with indirect questions can be more effective.

We recommend making questionnaires and interviews based on Communicative Needs Processor, developed by J. Munby (1978) with our modifications tailored for the seniors. Basically, they should cover the following areas:

learners' biographical data (exact age; previous foreign languages learning experience);

foreign languages learning purpose (there can be multiple purposes changing as the course goes on);

foreign languages use setting (in what environment the learners think they will use a foreign language; what people they will interact with using a foreign language);

target level (degree to what the learners expect to learn a foreign language);

instrumentality (what language the learners need more: written versus spoken; dialogue versus monologue; productive skills versus receptive);

learners' confidence in foreign language learning (what difficulties the learners think they may encounter in foreign language learning; how they plan to overcome them; degree of preparedness to solve problems of foreign language learning);

learners' preferences (likes and dislikes in foreign languages teaching; approaches and techniques; learning styles; types of teachers the learners prefer).

We have used a specially developed questionnaire in order to establish learners' preferences in terms of getting their sensory preferences (establishing visual, auditory and kinesthetic styles), learners' relations with others (extraversion or introversion), learner's relations with ideas (intuitive or concrete/sequential), learners' orientation to learning tasks (closure or openness), learners' overall orientation (global or analytical).

Learners' sensory preferences are likely to affect the way they learn a new foreign language best. For instance, if one of them is a visual person, he/she might rely on the sense of sight and feel more comfortable with reading than with oral activities. If a learner is an auditory learner, he/she might prefer listening or speaking activities to reading assignments. If he/she is a hands-on learner, then the learner benefits from doing projects and moving around the room a lot. If two or all three of learners' sensory preferences are equally strong, he/she is flexible enough to enjoy a wide variety of activities. By knowing learners' sensory preferences the teacher can help optimize foreign language learning by giving to the older students activities that relate to their sensory preferences. On the other hand, activities that might not be quite as suited to their sensory preferences – for example, reading and writing exercises for an auditory person – will help them stretch beyond their ordinary "comfort zone".

By establishing learners' relations with others the teachers will find out how extroverted or introverted the senior learners are. If a person shows a high level of extroversion, he/she might enjoy a wide range of social, interactive events in the language classroom – games, storytelling, role-plays, and skits. If he/she is more introverted, he/she might like to do more independent work or might enjoy working in pairs with someone he/she knows well.

Establishing learners' relations with ideas help the teachers find out how intuitive or concrete/sequential the learners are. If a senior learner is intuitive, he/she might seek out the major principles or rules of the new language, like to speculate about possibilities (cultural or language-related), enjoy abstract thinking, and avoid step-by-step instruction. He/she is much more random in his/her approach than his/her concrete/sequential group mates, who are likely to prefer step-by-step language activities and who might engage in a variety of multimedia memory strategies.

Establishing of orientation to learning tasks helps to know how close or open a senior learner is. If a person is higher for closure, it means he/she focuses carefully on all tasks, meets deadlines, plans ahead for assignments, wants explicit instruction, and asks for clear directions. If a person is higher for openness, he/she probably enjoys "discovery learning" in which he/she picks up information on his/her own, and might prefer to relax and play with the language, without much concern for deadlines or planning ahead.

It is also important to find out how global or analytic a learner is. It helps to make foreign language classes at the course for seniors interesting and meaningful. If a person is more global, he/she might enjoy getting the main idea of a new language conversation or a reading passage by guessing the meaning of unknown words and might like to use strategies (such as gestures or paraphrasing) for communicating even without knowing all the right phrases. But if a person is more analytic, he/she might feel less comfortable with these rather holistic techniques and might focus more on language details, logical analysis of grammar points, and contrasts between native language and the new language.

In fact, some data obtained from these questions are objective (mostly static and can be applied in foreign languages course development without changes), while other information is subjective and needs constant monitoring for the course adjustment. The most important points that should be considered are learners' motivation and how age can affect further learning.

Despite many controversies among the scholars about the age influence, it is hard to find any evidence as to the superiority of younger age for foreign language learning. Older adults in foreign language learning may face only a few problems such as poor eyesight, hearing, failing memory, and bad pronunciation. Some scholars introduced term 'fossilization' to account for the slow down or stopping of language learning that the seniors may face (L. Selinker, 1972; X. Wei, 2008). Nevertheless, these drawbacks can be compensated by additional time and efforts the seniors are likely to input in learning. These problems are not easy to establish at the stage of needs, wants and capabilities analysis, therefore, we recommend indirect questions on how the learners are confident in foreign languages learning.

Overall, having got enough data about senior learners' needs and wants they should be matched with their capabilities and further reflected in the course program. We also recommend splitting learners into small groups (up to five people), based on their language proficiency level (if any) and learning styles. This will make the course more efficient as teachers will have more time to focus on each learner.

Then we start a course writing procedure. In general, we propose to look at the following issues:

identification of the topics that may be of interest to the senior learners and are based on their needs and wants;

formulation of course objectives and singling out teaching points;
consideration of linguistic functions, grammar points, and vocabulary;
selection of authentic texts.

Another significant component of foreign language course development process is course program writing. It starts with setting objectives which should be communicative as senior learners are very demanding to the learning outcomes: so they want to see clearly what they can do with the foreign languages to satisfy their communicative needs. Each objective refers to the communicative task(s) that learners will be able to perform after completing all the steps of a lesson, and may include newly learned material as well as a review or expansion of previously learned skills.

Thus, in formulating course objectives we recommend using active verbs denoting learners' ability to use foreign languages (e.g., at the end of the course learners will be able to introduce themselves and make new friends; to arrange a trip to a foreign country; to find one's way in an unknown city abroad etc.). Course objectives go hand-in-hand with the contents which includes topics and conversational situations. The typical topics for the seniors' foreign languages course we conducted in Ukraine included everyday activities (greetings and introductions; shopping; traveling etc.) and hobbies (sports; gardening; fishing etc.). In other words we should single out the teaching points, basically those issues that need to be taught in order to meet each of the objectives.

Topics are selected from the learners throughout the whole course and, then, exploited in conversational situations. As in every communicative course program, vocabulary and grammar should be presented only within the context in authentic texts.

Their may be some problems as most seniors had bad experience of learning at schools or elsewhere through artificially constructed texts where learning vocabulary and grammar, not communication, was a priority issue. Therefore, changing senior learners' attitudes and learning habits is a very significant issue.

In preparing a new program teachers should decide on the course length, frequency of lessons and resources. Preparing learning materials takes a lot of time. Commercial textbooks cannot satisfy all the learners' needs. In this connection, V. Cook (2008) criticizes new commercial textbooks – New Headway, Hotline, Neigbours – for not being developed for older learners because of contents and illustrations (p. 150).

So, the course program should also envisage texts from authentic sources (written and oral). Course materials should be checked for compatibility with the course objectives. They should represent a variety of the language the senior learners expect to use. Taking into account the eyesight and hearing problems the senior learners may encounter, the texts should be presented in the most convenient way (color, print, and quality recording of audio and video materials).

The final step in preparing a course program is lesson planning which should be done regularly prior to each lesson. Although the lesson may change as to the use of materials, the general framework should remain the same: materials input, language practice, application and verification. Initially at the course, it may take longer time with the senior learners to introduce them new language material because they will always want to learn every single word or grammar rule before they move to practicing and applying them in real-life situations. This problem is, usually, solved with time as the learners start seeing practice and application as parts of the lesson, providing a good opportunity to learn new language material.

We recommend putting a course program as well as lesson plans on paper in order to compare if the learners' needs and wants were met and the course objectives were achieved. The course program, though, is not made once and forever: it is a subject to constant changes and modifications.

In overall, the course program helps at the further stage – course running and evaluation. Here, we would recommend the following principles the course running and evaluation for the older adults should be based on.

Flexibility. To be a success, the course should be adjustable to any changes in the program caused by learners' speed of learning, their health problems and other subjective and objective issues. These changes may deal with all aspects of teaching and learning. Therefore, teachers should follow such a pattern: teaching continues until the teachers make sure the learners have completely learned the new material; if they have any difficulties, they start again and again until the learners can freely use the new material. It requires lots of efforts on both sides.

Individual approach. Since the course is flexible, each learner's needs, wants and capabilities are its cornerstone. Each older learner feels he or she needs individual care. Therefore, it is important to consider such points as their temperaments, personality types, and learning styles in order to build and apply effective teaching strategies, i.e. general mechanisms for the most effective planning, organization and implementation of foreign languages teaching.

Focus on learners' interests. The course materials should really be interesting and meaningful to the older learners. They should feel they need them to satisfy their needs in foreign language communication. This interest should be maintained all the way through the course. The teaching techniques should reflect pedagogic communicative bases stimulating learners to active interpersonal communication through solving various speaking problems.

Integration of language skills. The course is aimed at developing all four basic skills: listening, speaking, reading, and writing. Although some learners can insist on developing only some particular (oral or written) skills, our experience shows that speaking should prevail at the course running and evaluation. Receptive skills, though, should be complimentary.

Providing constant feedback. Teachers and learners should be in close contact with each other. The learners should receive continuous analysis of their drawbacks and ways they should work on in order to improve. It can be done through interviews, testing and evaluations which should be correctional not punitive in nature.

Also, one of many factors that influence successful foreign language acquisition is optimal student participation. This may seem obvious; however, achieving this goal may prove to be quite a challenge for teachers. There are many factors to consider when creating a classroom course environment conducive to optimizing students' participation. Here, the teachers dealing with senior learners should consider a number of roles such as planner, manager, quality controller, group organizer, facilitator, motivator, empowerer, and team member.

So, as a planner, having assessed students' needs, wants and capabilities and having established objectives and teaching points, the teacher should select appropriate training aids and learning activities, and to be able to deliver lesson planning. As a manager, the teacher should set classroom routines, procedures and rules affecting students' behavior, organize seating arrangements to provide an appropriate learning environment. Teachers' abilities to plan and manage are of great value for the senior learners' foreign language course which is flexible in nature. Teachers should be able to anticipate the students' behavior and plan appropriate reaction to it.

As a quality controller the teacher's task is to monitor the quality of language use in the classroom to ensure encouraging correct language and discouraging incorrect use. In the course like this, it is often difficult to measure and evaluate students' achievements as there is no formal assessment procedure. It is also not easy to correct students' errors. Therefore, it prompts a lot of questions, among the teachers which we highlight as the following: "How should the teacher correct students' errors?", "Should he or she correct them at all?"

Error correction within the foreign language course for the seniors is a quite sensitive issue because of students' attitude towards their achievements, their group mates and teacher, caused, primarily, by their age peculiarities. Taking all these into account, we would recommend several ways of error correction which proved to be effective during the foreign language course we conducted in Ukraine. They are the following:

a) pinpointing – a direct reference to a student's error. E.g., "You said you "seed him at the restaurant". "Seed" is not the past tense of "see". The correct way of saying that is "I saw him at the restaurant".

b) rephrasing – giving a reaction statement using a correct form. E.g., "Oh, I got, you saw him at the restaurant".

c) repeating – asking a student to repeat his answer with the intention of self correction. The teacher can also repeat the student's answer allowing him/her to correct it. E.g., "Could you repeat that?" or "So, you seed him at the restaurant?"

d) questioning – asking student a question to make him/her think about the error. E.g., "What was your second word?" or "Do you remember, what we learned about irregular verbs?"

e) giving options or examples – offering students several options, one of which is correct, or showing the error through alternative examples. E.g., "So, you see, saw or seen him at the restaurant?" or "Last week I saw him on the street, last year I saw her in the library, last week-end I __ him at the restaurant".

f) expressions/body language – showing students' errors by some gestures (e.g. raising eye-brows, using hand gestures, pointing at another student to give a correct answer etc.).

In the role of a group organizer the teacher decides how to form or re-form pairs or groups in order to stimulate interactive language use and to develop an environment in which students can work cooperatively. Teacher as a facilitator should fully help students in discovering their own ways of learning while encouraging them to be independent learners. Their encouragement should include sharing personal/experiential information as well as bringing needs-related information to class. Making foreign language needs-related is probably the most important issue in the whole process of course running. Teacher should always think how the implementation of the foreign language students acquire can help them to satisfy their needs and wants.

As a motivator the teacher tries to boost the students' confidence and students' interest in learning. Here, the teacher creates an environment that fosters positive self-esteem and reassurance that will influence positively on student motivation. We also encourage teachers dealing with senior language learners to avoid controversial subjects that may intimidate some students or create an environment of uneasiness.

Being an empowerer requires teacher taking very little control (direction) concerning the lesson, thus enabling students to make decisions on what and how they want to learn.

Finally, as a team member, the teacher along with the students is a member of one team. Therefore, the classroom interactions should model those of a team.

Course running and evaluation is foreign languages learning in action. Its success depends much on the proper application of learners' needs, wants, and capabilities, and its preparation as well as on the personality and professionalism of teachers. Senior learners value good interpersonal relations, facilitation and care from teachers.

Finally, in this article we have set out basic components that should be considered for the foreign language course development for the seniors in the universities of the third age. These components were selected using experts assessment method. Their significance coefficient was determined using the Thomas Saati Hierarchy Analysis Method.

Such type of course requires peculiar approaches due to the attitudes and ways the older adults apply to learning within the system of non-formal education. These peculiarities are caused by the learners' age and motivation as well as by lack of strict formal rules and regulations of such type of course.

Prior to the beginning of foreign languages learning we recommend establishing learners' needs, wants and capabilities as a fact-finding stage of the foreign languages course development. Taking into account the sensitivity of the seniors to answering questions, we insist both on written questionnaires with a good balance of different types of questions, and oral interviews. With this initial stage of course development we intend to establish the learners' biographical data, their purpose of foreign languages learning, where they will use the language, what level they would like to achieve, what kind of language they need more (written or spoken), how they are confident in learning, and how they prefer to learn.

It is important to establish learners' preferences in terms of getting their sensory preferences (visual, auditory and kinesthetic styles), learners' relations with others (extraversion or introversion), their relations with ideas (intuitive or concrete/sequential), orientation to learning tasks (closure or openness), as well as learners' overall orientation (global or analytical).

Learners' needs, wants and capabilities analysis helps in course program writing. This component of foreign language course development is an organizational one and starts with setting the objectives, which should be communicative in nature. They should be reflected in the content consisting of topics and conversational situations which can be selected and changed throughout the course. Here, the challenges for the learners and teachers can be caused by, predominantly, previous negative experience of foreign language learning by the older adults, their inability to work with authentic texts and in a communicative environment as well as their possible poor health. All these issues should be considered in the course program including selection and use of learning materials.

The final stage – course running and evaluation – is a procedural one. Here, the teachers and learners should be guided by the principles of flexibility (constant course adjustment to the learners' need, wants, and capabilities), individual approach (considering learners' temperaments, personality types, and learning styles for developing appropriate teaching strategies), focus on learners' interests (using learning materials interesting and meaningful to the seniors), integration of language skills (all four basic skills – listening, speaking, reading, and writing – should be practiced throughout the course), and providing constant feedback (continuous correctional analysis of learners performance). Here, it is also very important to consider optimal students' participation. One of the most important factors for that can be through multitude of roles teacher can take on, such as planner, manager, quality controller, group organizer, facilitator, motivator, empowerer and team member. In this regard it is also very useful to consider ways of effective error correction. Here, we recommend using such polite and easy-to-use ways as pinpointing (a direct reference to a student's error), rephrasing (direct reaction to a student's error by using a correct answer), repeating (asking a student to repeat his/her answer intending to help self-correction), questioning (asking student a question to make him/her think about the error), giving options or examples (offering students to choose a correct answer among several options where only one is correct), expressions/body language (showing students' errors by some gestures).

These significant components were considered and proved successful at the foreign language course development for the seniors in Ukraine within the university of third age, although we encountered some problems of conducting this course, basically, connected with the 'spoon feeding' of the learners and their overestimation of confidence in foreign languages learning. These problems, however, can be the subject for our further research.

The results of the research we have conducted within the foreign language course at the university of the third age in Ukraine can be equally applied to the similar courses worldwide taking into account some national peculiarities. It is particularly beneficial for the foreign language courses within the post-Soviet area due to the fact that the seniors have similar motivations and capabilities, as well as previous, mostly negative experience of learning foreign languages within the Soviet educational system.

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Development and Assessment of Mediation Skills in Groups of University Management Students

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Abstract

The importance of the research is determined by the necessity to find adequate methods to assess and develop Management B.A. program students' oral mediation competence in English. The issue is vitally important for both students and teachers. For students, because mediation skills can be treated as part of «soft skills», which have recently become so attractive for the employers. For teachers, mediation is a new concept in the paradigm Reception - Production - Interaction – Mediation introduced by The CEFR Companion Volume (2017). We consider both cognitive mediation and relational mediation in a monolingual interactional aspect. Mediation skills are checked in the format of a professional discussion. The purpose of the research is: to work out an overall scheme for teaching and testing mediation competence in oral professionally-oriented performance at B2 level of English in accordance with CEFR descriptors and local educational needs; to pilot it and finally to analyze testing scores statistically. The data show that the teaching materials prove to be effective and lead to the improvement of testing results. The scales are validated and reliable for the population of the experiment which is representational for the focus group. The scheme developed may be used for the departments of Management in tertiary education as well as be adapted for other professionally-oriented profiles and languages other than English.

Keywords: mediation, testing, assessment scales, management, discussion skills

Introduction

Mediation is a form of verbal interaction between an intermediary and interested parties and as such represents an important way of conveying information: "Mediating language activities – (re)processing an existing text – occupy an important place in the normal linguistic functioning of our societies" (*Common European Framework*…, 2001, p. 14). It is becoming increasingly important to foster mediation skills as part of foreign language teaching (Pavlovskaya, 2016). There are several reasons for this, some of the most important being (1) specialization of scientific knowledge and (2) the necessity to convey technical or professional information (Bashmakova, Ryzhova & Kuznetsova, 2016).

The objective of this research is to develop a system of oral mediation assessment in English for Content and Language Integrated Learning (CLIL) classes (2nd year of B.A. Management programme, B2 Level).

In order to achieve this objective, we do the following:

1) analyze the definition of mediation and determine its specific character in the field of teaching English to Management students;

2) build up a competence model of oral mediation in accordance with the general academic goals of the University Management program;

3) analyze B2 (CEFR) descriptors in order to determine the skills necessary for an oral mediator capable of solving professional and linguistic problems;

4) develop techniques that increase the oral mediation skills and test tasks in accordance with the competence model;

5) work out scales for evaluating oral mediation test tasks in accordance with the CEFR descriptors, and the competence model developed;

6) pilot the mediation activities and test tasks in a teaching and testing experiments;

7) analyze the results of the experiments statistically.

Literature Review

More and more researchers insist upon the necessity to strive towards forming a tolerant multicultural environment (Ter-Minasova, 2000; Elizarova, 2005; Tarnaeva 2012; Coste & Cavalli, 2015; North & Piccardo, 2016). Mediation can be one of the tools to accomplish that task. The demand for mediation in the modern society is widespread and the mediation skills can be tested in oral as well as in written forms, in individual and group formats, by means of one (without translation) or two and more languages (translation). Hence: we believe that mediation has a great potential for many approaches in the theory and practice of language teaching.

Statements made in this paper are based on a broad spectrum of researches undertaken in Russia and beyond in the following relevant fields:

1) foreign language teaching theory (N. V. Bagramova, I. A. Bim, A. A. Verbitskiy, N. D. Galskova, N. I. Gez, B. A. Glukhov, I. I. Haleyeva, M. V. Lyakhovitskiy, A. A. Mirolyubov, L. V. Moskovkin, E. I. Passov, I. Yu. Pavlovskaya, I. V. Rakhmanov, S. F. Shatilov, A. N. Schoukin);

2) cross-cultural communication (V. P. Furmanova, M. K. Getmanskaya, D. B. Gudkov, G. V. Elizarova, A. S. Khimicheva, I. N. Khohlova, V. G. Kostomarov, S. G. Ter-Minasova, L. P. Tarnaeva, E. M. Vereschagin, L. V. Yarotskaya);

3) ESP pedagogy in the field of Management (M. I. Faenson, N. M. Speranskaya, E. V. Zarutskaya, B. Z. Zeldovich);

4) mediation (N. I. Bashmakova, H. Besemer, T. Bennett, M. Cavalli, D. Coste, Yu. A. Chernousova, T. C. Dunne, L. L. Fuller, A. A. Kolesnikov, O. M. Litvishko, R. Taft, V. V. Usov, J. A. Wall);

5) assessment of communicative skills (J. Ch. Alderson, L. F. Bachman, T. M. Balikhina, S. R. Baluyan, A. Brown, C. Clapham, G. Fulcher, V. A. Kokkota, M. Ya. Kreer, K. S. Makhmuryan, B. North, K. J. O'Loughlin, A. S. Palmer, J. Panthier, I. Yu. Pavlovskaya, E. Piccardo, I. A. Rapoport, V. N. Simkin, I. A. Tsaturova, J. A. Van Ek, J. L. M. Trim, M. V. Verbitskaya, D. Wall);

6) statistical data analysis (V. S. Avanesov, A. O. Grebennikov L. V. Levtova, A. A. Maslak, T. McNamara, G. Rasch, C. Roever, O. A. Senichkina, N. Verhelst);

7) psychology and psycholinguistics (A. A. Bodalyov, L. S. Vigotskiy, I. A. Zimnyaja).

In this study, the term "mediation" is used in the context of foreign language teaching and testing based on the communicative method (Bachman and Palmer (2010), Canale and Swain (1980), Fulcher (2000), North and Piccardo (2016)). In communicative linguistics, mediation implies activities that make "communication possible between persons who are unable, for whatever reason, to communicate with each other directly" (CEFR, 2001, p. 14). From this point of view, mediation usually requires interpretation or help in assimilating the transferred information. This is accomplished with the help of a range of skills that an experienced mediator possesses, one of them being the ability to organize group work. Mediation is also affected by sociocultural factors that facilitate or impede the acquisition of new knowledge (*The CEFR Companion Volume*, 2017, p. 99-102). This approach to mediation first proposed in early 1990es (North, 1992) became widespread later and in 2017 was embodied in the *CEFR Companion Volume* (2017). As a speech activity, mediation exists along with reception, production and interaction in written and oral forms (Ibid. p. 14). This system of concepts is based on the communicative approach to language learning. In order to understand the fundamentals of mediation we must determine its place in that system. The aim of the communicative approach to language teaching is to make students acquire the communicative competence, which emphasizes learning through mastering functional units of communication such as questions, requests, pieces of advice, complaints, etc. The verbal intention of the speaker underlies their selection of the aforementioned basic units of communication and their speech behavior (Azimov & Schoukin, 2009, p. 99). In turn, speech behavior manifests itself in communicative situations that are described in terms of domains (personal, social, professional, educational) and descriptive categories (location, participants, events etc.) (*Common European Framework…*, 2001 p. 48-49). Communicative situations also manifest themselves through forms of communicative action, which can be grouped into reception of oral and written speech, monologue production in oral and written forms, interaction and mediation. Mediation can be both productive (e. g. retelling a text) and interactive (e. g. written or oral translation of negotiations). Thus, mediation is an element in a system of concepts that defines the nature of verbal acts in relation to the communicating parties.

Examples of mediation include written or oral translation from one language to another; moderating a discussion; interpreting complex abstract concepts; rephrasing, writing a resume, a report, a generalization, an annotation, an abstract; writing down information in order to pass it on to another participant of a verbal interaction.

Based on our analysis of the term, we can discern the following components of mediation: (1) oral or written verbal interaction with an intermediary; (2) usage of multiple languages (translation) or one language (without translation); (3) creating conditions for assimilating transmitted information.

The process of mediation is integrated into the sociocultural environment with the aim to achieve the best possible result for interacting parties. Because of that, classifying mediation skills requires that we take into account not only the information being communicated, but also the conditions providing the success of communication, which has become a reason for D. Coste and M. Cavalli (2015) to draw a distinction between cognitive and relational mediation.

Cognitive mediation is defined as mediator's help in understanding the substance of the issue, concepts being used in another culture or subculture, or circumstances common to that culture. Examples of cognitive mediation include explaining the causes of a certain cultural phenomenon, collective production of ideas or transfer of existing information, e. g. translation or interpreting data.

The purpose of relational mediation is creating a favorable environment for communication. Examples include creating a multilingual space, averting conflicts, showing respect to another culture, ensuring balanced representation of different parties and observing the rules of polite behavior. Creating a multilingual space necessitates the interaction of different cultures or subcultures based on mutual respect and according to certain rules of conduct (Coste & Cavalli, 2015, p. 28).

The idea of accommodating the free will of different individuals within society in order to achieve their peaceful coexistence has been explored by thinkers such as J.-J. Rousseau, I. Kant, G. Hegel, V. Solovyov, G. Spenser, M. Weber, etc. The XIX century saw the formation of basic approaches to the problem of mediation. V. Solovyov insisted that conflict solving can be achieved through spiritual and moral growth of interacting parties. Other approaches included resolving conflicts using the power of reasoning in order to bring the conflicting parties closer before or instead of going to court. Materialist philosophers K. Marx and F. Engels elucidated the class content of the concept of mediation. They explained the origin and motives of peacekeeping institutions in terms of conflicting class interests, thus showing their social nature (Styopin, 2011)

The social aspect of mediation continued to dominate in the works of scholars in the XX century. L. Vygotsky offered an explanation of mediation based on psychology: an individual develops culturally through mastering tools of mediation, such as sign, symbol, word or myth. It is during that process that the higher mental functions of an individual emerge. In this approach, every meaning exists on two levels, the individual and the social, and mediation is the process through which the individual aspect is merged with the social one. Furthermore, a person learns a language by mediating social concepts (Vigotskiy, 1982).

Mediation has benefited greatly from studies in the field of legal science in the XX century. From mid-century onwards in the USA mediation was institutionalized as an area of private procedural law, with particular attention to the psychological aspect of mediation and its social importance. L. Fuller was one of the first researchers from the field of law science to study mediation. He stressed the difference between a mediator and a judge: the latter determines, whether it is necessary to enforce a certain social norm, whereas the former convinces the client that it is in their interest to follow the norm (Fuller, 1971). In this case mediation involves persuading people and relies on social and cultural norms.

It is important to note that in the modern world mediation has become a part of everyday life and it is applied by numerous social institutions. Mediation helps different social groups better understand each other (Wall & Dunn, 2012); it is used to avoid workplace conflicts (Bennet, 2012); it helps achieve higher efficiency of learning in all areas and levels of education (Coste, Cavalli, 2015).

Cultural and behavioral skills are essential for mediators, in that it is necessary to have general knowledge of a culture, to know the rules and norms of social interaction in a certain society, to be empathetic and to control one's own psychological states. Therefore, we believe that mediation skills are part of the cross-cultural competence.

Indeed, the success of mediation in a foreign language depends on the skills mentioned above and language proficiency of the mediator. For instance, when retelling a written text in recipient's language we not only transfer information, but also establish a kind of relationship. It happens because the communicating parties observe the reaction to received information and are able to tell when it is necessary to provide additional explanations, to shorten the text or to employ other narrative strategies. These abilities are based on empathy within the cultural context of communicating parties. Some studies showed that communicative interaction among students of Russian universities is highly emotional, communicatively democratic, but also communicatively dominant; it is honest and very broad in content; it prioritizes informal communication and is characterized by lower level of attention when listening (Sternin, 2012). Each of these cultural traits can result in both advantages and difficulties in communication, thus illustrating the point that the successful mediation depends upon the ability of communicating parties to analyze their situation and find the best ways of achieving their communicative aim.

The verbal side of professional communication (Bodalyov, 1996) includes: (1) the substance of communication, that is correct transfer of information and facts within the scope of the communicator's specialization, using necessary terms and language functions in order to produce a coherent and logical statement; (2) a personal component that is characterized by the level of emotional involvement of the communicant and their ability to control the interaction to achieve professional aims; (3) socio-cultural competence which at the language level involves choosing the right style of communication and observing the necessary norms.

All of these bear a direct relevance to the task of managing intellectual labor in professional groups. Here, two main forms of mediation, (1) cognitive and (2) relational are linked to, respectively:

(1) the ability to present information in a plain manner using necessary verbal techniques;

(2) the ability to interact with the audience in order to ensure that the mediated information has been received.

The skills of a professional manager include communication in English in a multicultural environment and awareness of international aspects of managerial tasks. They involve the transfer of information between communicating parties in a multicultural environment using mediation skills (Saint-Petersburg State University Tertiary Education Standard. Baccalaureate. 2015, p. 5).

Research Questions or Hypotheses

The aforementioned reasons lead us to formulating the research question: if mediation is integrated into the discussion task, how can group discussions be effectively assessed?

Our hypothesis is that assessing oral mediation of professional discussion is most effective when

1) the controlled objects are determined by the aims and specific characteristics of Content and Language Integrated Learning;

2) mediation skills are formed at the lessons based on the interactive method and group work aimed at practicing group discussions;

3) test tasks are designed so that oral mediation is required to complete the task, the task employs a modeled situation and a variety of formal and informal styles;

4) the set of test tasks is standardized and linked to CEFR;

Method

4.1. Objects of assessment

Communicative competence as defined by Hymes (Hymes, 1972, 277) embraces the intuitive functional knowledge and control of the principles of language usage. It allows the language user to produce speech according to the aims of communication in certain settings. In a more general form, it can be described as the ability to participate verbally in a communicative action (Zimnyaja, 1985).

Communicative competence has been described by many researchers (Canale and Swain (1980), Bachman (1990), Izarenkov (1990), Leontiev (1991), Passov (1991), Zimnyaja (1991) etc.). It is viewed as a complex entity, consisting of the following more specific competences: linguistic, socio-linguistic, socio-cultural, discursive, strategic, subject-specific, professional, etc. However, the contents of each specific type of communicative competence are understood differently by different researchers. For instance, Russian researchers tend to associate socio-cultural competence with language and country studies competence, language and cultural competence and cross-cultural competence (Kapitonova, 2006; Moskovkin, p. 64-66). In this study we are going to use the ideas of D. I. Izarenkov, who proposes to solve this problem by defining basic components of communicative competence: language, subject-specific and pragmatic (Izarenkov, 1990, p. 56). Language competence ensures the accuracy of speech; subject-specific competence is related to the content, i. e. the knowledge of the subject; pragmatic competence allows us to fulfill communicative intentions according to the demands of the communicative situation (Ibidum). For the purposes of this study, the objects of oral mediation assessment are grouped in three blocks: language, subject-specific and pragmatic components; and each of them is described by language and professional competences (see Table 1).

Table 1. Objects of oral mediation assessment in CLIL classes for Management students.

Components	Language and professional oral competences in business discussions	
Language	Pronunciation, accuracy and range of the lexical resource and grammar patterns within B2 (CEFR)	
Subject-specific	Subject-specific knowledge in the field of Management	
Pragmatic	Cognitive mediation textual aspect: - introduction, - determining the topic and the problem of discussion, - discerning the major aspects, the ability to summarize, - rephrasing, - splitting complex elements of the text into parts, - enriching the text by providing explanations, - shortening the text; logical coherence: - arguing a point, showing causal links; functional aspect: - generalizing and specifying, providing both general and specific examples, - comparing and contrasting - classifying - providing definitions of events/phenomena/objects.	Relational mediation taking into account characteristics of the audience and the situation: the ability to change style and difficulty level of speech; supporting interaction: showing interest in the opinion of the interlocutor, helping them develop their arguments by asking leading questions and providing constructive criticism, agreeing or disagreeing with the opinion of the interlocutor, taking their opinion into account when developing your own argument; managing group work: ensuring adherence to the chosen format of interaction, providing an introduction to the interaction, setting its aim and summarizing results, stimulating interaction;

		resolving conflicts and arguments: determining the cause of conflict, resolving the conflict by finding common interests and aims/

4.2. Scales of assessment

With the view of the traditions in international foreign language exams and the exam of the Russian as a foreign language, we selected five criteria for analytic assessment of oral mediation (*Analytical Scales)* in accordance with our research aims: interaction, discourse management, range, accuracy and pronunciation. In addition, we used the Global Achievement Scale (CEFR, c.190), which shows the degree to which the communicative aim was fulfilled.

The descriptors for the Global Achievement scale, which represent cognitive and relational mediation skills, were adapted from the *CEFR Companion Volume* (2017, p. 101-128) (See Table 2).

Table 2: Global Achievement scale

Skills	Descriptors
cognitive mediation	How thoroughly is the text relayed? Band 5: Mediates complex texts. Renders nuances. Expands freely. The language is fluent and well-structured. Can vary styles while paraphrasing. Band 3: Passes on detailed information and arguments reliably, though may have problems providing shades of meaning. Speaks with a degree of fluency and spontaneity. Can paraphrase, though problems may occur. Band 1: Mediates well-structured and clear texts on subjects that are familiar. Uses simple straightforward language. Expresses themselves with hesitation. May pause frequently. Paraphrases in a simple fashion.
relational mediation	How effective is the rapport with the audience? Band 5: Works effectively as a mediator helping to maintain positive interaction between interlocutors. Sensitive to different perspectives within a group. Tactfully and effectively steers the discussion towards a conclusion. Band 3: Organizes/takes part in the discussion though not always elegantly. Develops other people's ideas. Band 1: Organizes/takes part in the discussion in a simple way. Provides simple examples.

Both the Analytical and the Global Achievement scales contain descriptors for marks 1, 3 and 5 linked to CEFR levels B1, B2 and C1. Bands 2 and 4 are considered to be intermediate between the other two and are not described in the table.

The components of communicative competence are represented in the Analytical Scales by the criteria of assessment

(1) language competence covers "range", and "accuracy" and "pronunciation";

(2) pragmatic competence (which includes discourse competence, functional competence and discourse planning) encompasses "interaction" and "discourse management";

(3) the part of sociolinguistic competence that includes the skills of relational mediation, such as creating a multicultural space and favorable conditions for interaction, is represented in both "interaction" and "accuracy" (e. g. when considering what grammar patterns or register to use).

The components of pragmatic competence are described as follows.

•Discursive competence is interpreted as familiarity with the rules of composing texts (the "discourse management" criterion). When used for purposes of mediation, this competence includes the ability to use mediation strategies, e. g. splitting complex elements of the text into separate parts and providing explanations if necessary. Also, the statement must be logically coherent. The pragmatic competence includes the ability to produce long or short turns depending on the aim of communication ("discourse management" criterion).

•Functional competence is understood as the ability to achieve the communicative aim using language functions and to find necessary language tools to compensate for insufficient range. Testees with a high level of functional competence usually speak fluently. This competence is included in the criterion "discourse management".

•Discourse planning competence is interpreted as the ability to compose a coherent statement according to communication models. In the "interaction" criterion, this competence is represented by the ability to control interaction through turn taking, as well as the ability to support interaction by providing feedback and promoting cooperation.

The Global Achievement Scale helps to answer two important questions. The first one is "How thoroughly is the text relayed?" or, in other words, how well the message is got across. The second question is "How effective is the rapport with the audience?", or, how sensitive is the mediator to the needs of the communicants.

We assume that mediation is only effective if the testee not only uses the necessary skills of transferring information and establishing rapport, but also demonstrates a certain level of general language and communicative competence. For instance, difficulties with pronunciation, grammar and vocabulary reduce the effectiveness of communication and may negatively affect the outcome of mediation. Because of that, the general mark for mediation should take into account all assessment criteria, which is possible if we use the Analytical Scales. It should be noted that cognitive mediation skills, or skills of working with a text, are part of the "discourse management" criterion, whereas relational skills are included in the "interaction" criterion. Assessment using the Global Achievement scale evaluates the answer as a whole, as well as the success in achieving the communicative aim of mediation. The Global Assessment scale ensures that assessment of the answer is complete.

Assessment based on the scales developed in this study was conducted by three professional raters. Answers were recorded on electronic media and reassessed in order to provide a more accurate mark. One of the raters was assessing students while they were completing their task, the other two raters assessed the audio recording of the answer and had an opportunity to refer to the script. General language competence of each student was assessed on the basis of the Analytical Scales using the criteria "interaction", "discourse management", "range", "accuracy" and "pronunciation". The marks were decided upon by the raters during the answer or immediately after it using the Analytical Scales; then the mediation skills were evaluated on the basis of the Global Assessment Scale. Both scales used the range of marks from 1 to 5, with 5 being the highest score. The maximum score for the Analytical Scale was 20 and for the Global Achievement Scale 5 with descriptors provided for marks 1, 3 and 5.

4.3. Subjects and Material

49 Management students with B2 level of English proficiency participated in the experiment. They were split up into an experimental group (EG; 24 students) and a control group (CG; 25 students). The development of skills of the experimental group was oriented towards mediation with the focus put upon the aim of communication and the strategies for achieving it.

In order to conduct the experiment it was necessary to determine the format of test tasks and the size of discussion groups for testing. If we want to develop the ability to evaluate the needs of one's communication partner or partners, or an ability to adjust language to a changing situation, we have to ensure the variety of language behaviour patterns and points of view presented for a discussion. In order to generate the necessary amount of ideas and provide a lively discussion, the group has to be comprised of several people, at lease 4 or 5, as we have established through practice. There is a practical side to this as well: if the study group amounts 12 to 15 students, then placing 4-5 students in a mini-group allows having three mini-groups thus creating an optimal environment for achieving the aims of the lesson.

The students had 35 to 40 minutes to complete a task, which provided 7 to 10 minutes of speaking time for each student. This amount of time was enough for the rater to assess the level of testee's skills. A longer duration could negatively affect the rater's work, because of the amount of concentrated effort required to conduct high-quality assessment; a longer time could also have a negative impact on the testee's performance.

Communicative situations are differentiated based on their genre, topic, roles of participants, style and aims, while the content of the tasks is determined by the studied subject. In our case the main topic is the management of human resources, with related subtopics. As we already mentioned, there is a general demand for more egalitarian relationships among managers in general and among personnel managers in particular. Therefore we assigned equal status to all participants of the modeled situations, thus giving them fair opportunities to demonstrate their language abilities. This choice also simplifies the task of the rater, as it is more convenient and practical to assess testees who play the same social role.

The discussion topics were chosen specifically for the human resource management which is in line with the students' specialisation. Table 3 presents the topics of discussions.

Table 3. Topics and objects of control

Exercise block	Topic	Objects of control
Block 1	Recruitment strategies	type of class: familiarization with the discussion format textual aspect: introduction; defining the topic or the problem of the statement; rephrasing managing group work: ensuring adherence to the chosen format of interaction; organizing the beginning of interaction, setting its aim and summarizing the results; stimulating interaction taking into account characteristics of the audience and the situation: the ability to change style and difficulty level of speech;
Block 2	Payment for services	Functional aspect: - generalizing and specifying, providing both general and specific examples - comparing and contrasting

		- classifying - providing definitions of events/phenomena/objects
Block 3	Human resource management	logical coherence: - arguing a point, showing causal links
Block 4	Personnel development; coaching	Pronunciation, as well as accuracy and range of lexical resource and grammar patterns within B2 (CEFR)
Block 5	Group work	supporting interaction: showing interest in the opinion of the interlocutor, helping them develop their arguments by asking leading questions and providing constructive criticism; agreeing or disagreeing with the opinion of the interlocutor, taking their opinion into account when developing your own argument
Block 6	Retention strategies	Revision, self-control
Test	Leadership	Discussion skills, oral mediation skills

The skills presented in Table 3 can all be employed in a discussion. Discussions perfectly suit the educational function of assessment, because they allow practicing the main objectives of discourse in a managerial environment, such as providing employees with information, giving reasons and inspiring them (Zeldovich et al., 2001), as well as forming the necessary skills of professional rhetoric. During professional discussion students train techniques of capturing and holding the attention of their future business partners, e. g. comparing "for" and "against", delegating decision-taking abilities, predicting, appealing to the experience of the audience and others (Ibid.). Discussions are a democratic form of interaction, in which communicants play the roles of equal partners. We consider this factor to be highly stimulating for the students and to have a high educational potential. Finally, the discussion as a genre of business rhetoric combines elements of monologue and polylog (Azimov & Schoukin 2009, p. 64), which makes it especially important for assessment purposes. An important argument in favor of choosing discussion is the spontaneity of speech in a discussion, determined by the unpredictability of its course. The spontaneous, unprepared nature of the discussion is a definite advantage for oral assessment. On the other hand, the presence of structure and composition in a discussion (introduction, presenting the task, step-by-step discussion of task elements, conclusion) provides the testees with a comfortable way to achieve the communicative aims, as well as ensuring that the rater has a good scaffolding for assessment. In order to demonstrate the mediation skills defined in the table above as control objects, we specify the task models providing students with a clue how to build up their discussions: presenting the problem, analyzing the problem, discussing ways of solving the problem, coming to a conclusion.

Model tasks and communicative situations are described in a generalized form in the table below.

Table 4. Model tasks and situations

Type	Discussion
Style	Neutral, official
Students' roles	Personnel managers, equal status
Topic	Human resources; educating the workforce; coaching; teamwork; recruitment strategies
Function	Setting and analyzing the problem, discussing solutions, making a decision
Form of interaction; number of testees	Group, 5 – 6 people
Duration of the task	35 minutes

Two suitable discussion scenarios were chosen: brainstorming and linear. The main difference between the two types is the number of ideas in the exposition.The discussions followed the structure:

A. Brainstorming

1. Setting the tasks

Exposition: brainstorming in order to generate a large number of ideas that can potentially achieve the aim of the discussion.

Choosing one or several ideas.

Developing the idea (or ideas)

Coming to a conclusion.

B. Linear

1. Defining the aim of the discussion
2. Exposition: proposing an idea for discussion.
3. In-depth discussion of the idea.
4. Coming to a conclusion.

Results

The data collected were divided into four blocks: diagnostic test in EG, diagnostic test in CG, achievement test in EG, Achievement test in CG. Diagnostic tests were taken before the experimental teaching period, achievement tests – after it.

The aim of analysis was (1) to evaluate the accuracy and reliability of our experimental testing; (2) to determine the efficiency of oral mediation in the group discussion task set; (3) to compare the efficiency of evaluating based on the "mediation" criterion with other oral criteria in group discussions; (4) to link the difficulty level of test tasks with the skill level of students.

The tests results were analyzed statistically. We analyzed the tests using the Excel and ITEMAN (http://www.assess.com/iteman/) applications. Results are presented in Table 5.

Table 5. General measurements of the experimental test results (based on the average of three raters)

№	Measurement	Method of calculation	Diagnostic test		Achievement test	
			EG	CG	EG	CG
1	Number of people	none	24	25	24	25
2	Mean score (out of 30)	Excel	20.63	17.35	21.11	17.54
3	Mode	Excel	18.33	15.00, 18,00	18.67	20.00
4	Median	Excel	19.17	17.67	21.17	17.50
5	Standard deviation	Excel	4.03	1.88	3.40	2.40
6	Skew	Excel	0.32	-0.02	0.13	-0.07
7	Kurtosis	Excel	-1.02	-1.22	-0.95	-1.41
8	Min. Score / Max. Score	none	13.00 / 27.00	13.00 / 22.00	14.00 / 25.00	14.00 / 21.00
9	Mean Item	ITEMAN	3.43	2.89	3.69	2.92
10	Alpha	ITEMAN	0.95	0.90	0.94	0.83
11	SEM (error of measurement)	ITEMAN	1.00	1.02	0.97	1.01

Here *the Skew* is the asymmetry of normal distribution. (Fig.1, 2)

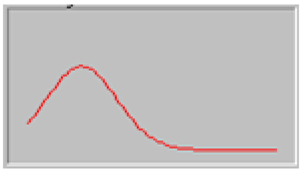
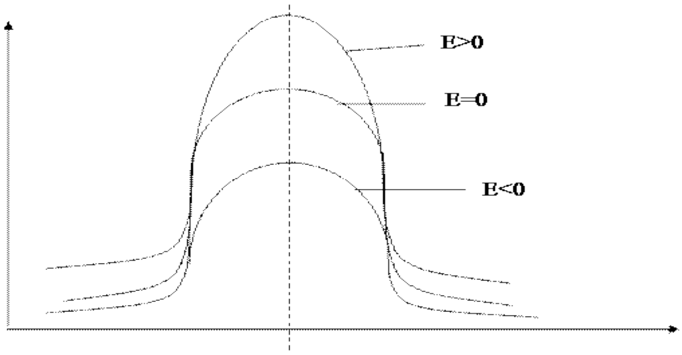


Figure 1 - Right-hand asymmetry, *As>0*

Fig. 2 – Left-hand asymmetry, *As<0*

The asymmetry shows the level of task difficulty for the population of test-takers. Right-hand asymmetry characterizes difficult tests, left-hand asymmetry – easy tests.

The Kurtosis shows the sharpness or flatness of the distribution curve (Fig..3). Zero kurtosis corresponds to normal distribution.



Fig, 3 – Kurtosis (E)

Kurtosis > 0 characterizes the homogeneity of the population.

We can interpret the received data as follows.

High Alpha values prove the inner consistency of chosen characteristics (Table 5, № 10). SEM doesn't exceed 1.02, (Table 5, № 11) indicating that test results are reliable.

Considering the minimum and maximum scores (Table 5, № 8), a comparison of standard deviation values (Table 5, № 8) shows a higher uniformity of the control group compared to the experimental group. It should be noted that in the final test both groups had a more uniform skill level, as indicated by the lower standard deviation values in both groups.

Another indicator of the heterogeneous composition of groups is the uniform character of distribution, which we can infer from a small negative kurtosis (Table 5, № 7).

The absolute skew value is insignificant in both groups, never exceeding /0.32/ (Table 10, № 6). It is positive in the experimental group and negative in the control group, i.e. the experimental group distribution has a longer right tail, and the control group distribution has a longer left tail. This might indicate the presence of several highly proficient students in the experimental group.

All in all, a certain difference in levels of the two groups should be acknowledged. However, this difference does not exceed 0.54 points in the diagnostic test and 0.77 in the achievement test (Table 5, № 9). A difference of this size can be considered insignificant for the purposes of our experiment.

We used the ITEMAN application to calculate statistical characteristics of «mediation», as well as the analytical criteria: «interaction», «discourse management», «range», «accuracy» and «pronunciation».

Table 6. Statistical measurements of test results in the experimental group

	№	Data set	Mean mark	Correlation with the general mark (Total R)	Alpha	Alpha w/o
Mediation	1	1	3,21	0,83	0,95	0,94
	2	2 (δ)	3,83 (0,63)	0,81 (-0,02)	0,94	0,93
Interaction	3	1	3,46	0,91	0,95	0,93
	4	2 (δ)	3,96 (0,50)	0,87 (-0,04)	0,94	0,92
Discourse management	5	1	3,46	0,93	0,95	0,93
	6	2 (δ)	3,96 (0,50)	0,87 (-0,06)	0,94	0,92
Range	7	1	3,50	0,88	0,95	0,94
	8	2	3,33	0,85	0,94	0,93

		(δ)	(-0,17)	(-0,03)		
Accuracy	9	1	3,38	0,88	0,95	0,93
	10	2 (δ)	3,38 (0,00)	0,79 (-0,09)	0,94	0,93
Pronunciation	11	1	3,58	0,76	0,95	0,95
	12	2 (δ)	3,67 (0,08)	0,86 (0,10)	0,94	0,93

Table 7. Statistical measurements of test results in the control group

	№	Data set	Mean mark	Correlation with the general mark	Alpha	Alpha w/o
Mediation	1	1	2,71	0,86	0,90	0,86
	2	2 (δ)	2,71 (0,00)	0,80 (-0,06)	0,83	0,77
Interaction	3	1	3,08	0,84	0,90	0,86
	4	2 (δ)	3,13 (-0,04)	0,72 (-0,12)	0,83	0,79
Discourse management	5	1	3,13	0,70	0,90	0,89
	6	2 (δ)	3,00 (0,13)	0,58 (-0,12)	0,83	0,82
Range	7	1	2,75	0,72	0,90	0,88
	8	2 (δ)	2,79 (0,04)	0,71 (-0,01)	0,83	0,79
Accuracy	9	1	2,79	0,87	0,90	0,86
	10	2 (δ)	2,92 (0,13)	0,64 (-0,23)	0,83	0,81
Pronunciation	11	1	2,88	0,49	0,90	0,91
	12	2 (δ)	3,00 (0,13)	0,38 (-0,11)	0,83	0,85 (0,02)

The Alpha value of a data field is a measure of how the consistency of the entire data set will change if that field is removed from the set. If the value increases, it signifies that the data field disrupts the general consistency of data. In 23 cases out of 24 (Tables 6 and 7) the Alpha value decreases, indicating internal consistency of characteristics and reliability of measurements. In one of the cases (CG, 2nd data set, pronunciation) the value of Alpha increases by 0.02 (Table 6, № 12), but it stays within the (0,7; 1) range. A measurement is reliable if the value of Alpha exceeds 0,7 (Verhelst, 2004, p. 7), which is true of our results.

A visual representation of changes in the mean mark for each criterion at the beginning and at the end of the experiment is represented in Figure 4.

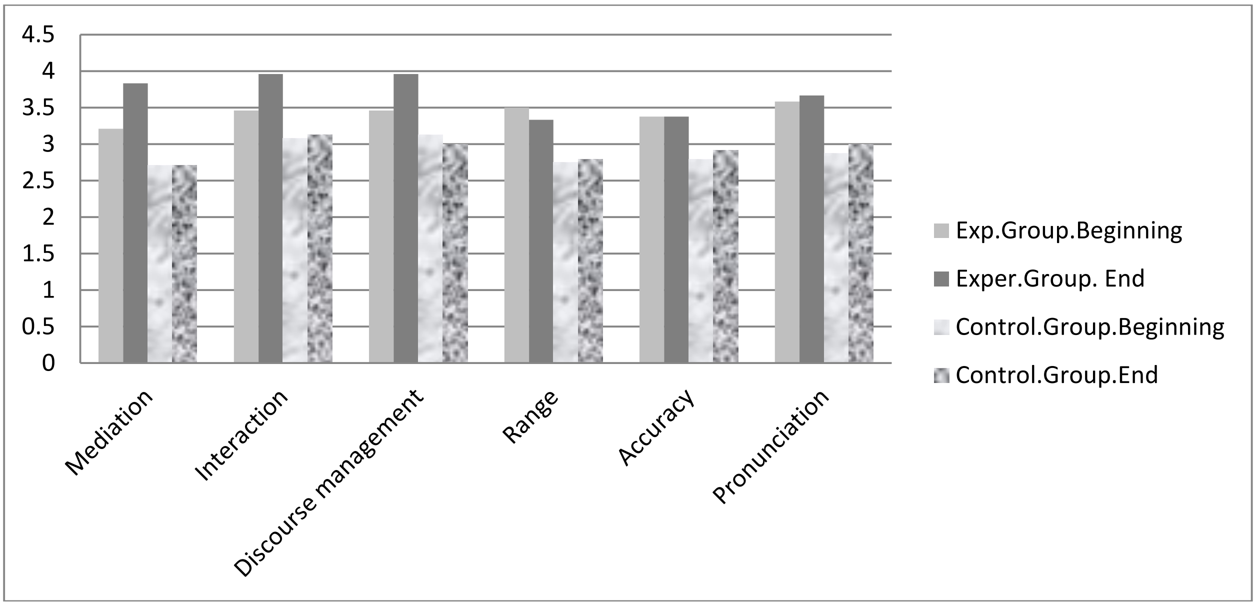


Fig. 4. Mean mark for each criterion in the 4 blocks of data (EG diagnostic test – beginning stage, EG achievement test – end of experiment, CG diagnostic test, CG achievement test)

According to Figure 4, the mean marks show higher increases in the experimental group than in the control group. This is especially true for the "mediation", "interaction" and "discourse management" criteria. Changes in the mean mark vary from -0.17 to 0.63 in the experimental group and show an increase in 4 cases out of 6. The highest growth, 0.63, was observed in the "mediation" criterion. In the control group these changes are positive in 4 out of 6 cases as well, however, the interval in this case is much smaller: from -0.13 to 0.13. These data indicate the effectiveness of the set of oral mediation tasks that we used for training the experimental group.

The growth in the "mediation" criterion in the experimental group was to be expected: the set of tasks we used in that group was specifically designed to improve mediation skills. It is to be noted though that, apart from "mediation", we observe significant (0.5) growth in two more criteria in the experimental group ("interaction" and "speech control"). No growth of this magnitude is observed in any criteria in the control group/ We assume that it must be attributed to the effect of mediation tasks. We may tentatively conclude that by using mediation skills training teachers can expect a growth of general language proficiency level.

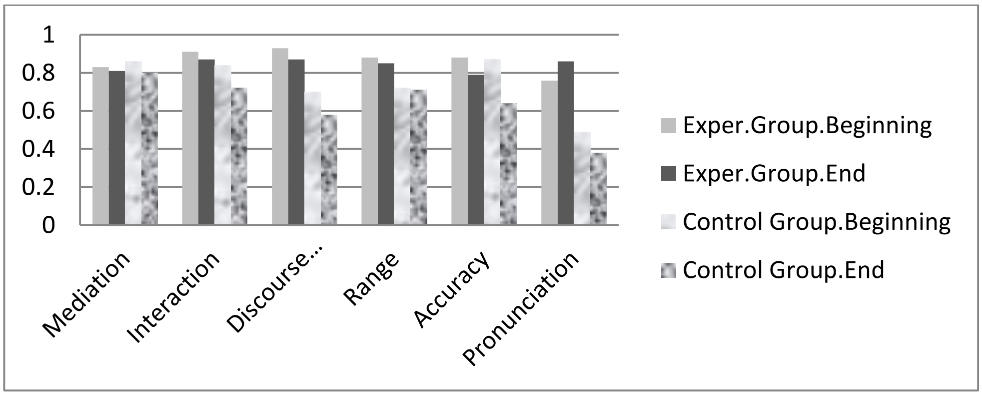


Fig. 5. Correlation of criterion marks with the general mark at the beginning and the end of experiment.

One more important observation concerns Pearson correlation. Pearson correlation is a measure of extent to which changes in one variable are linked to changes in another variable, and it varies between -1 and 1. The correlation of a criterion mark with the general mark shows the degree to which this criterion is representative of general language proficiency (the marks used for this calculation are means of the three rater's marks for each student). These correlations are graphically presented in Fig. 5. We can observe that correlation of the "mediation" criterion with the general mark is the only one that consistently stays above 0.8 in both groups in both stages of testing. This might indicate that of all six criteria mediation is the most reliable indicator of general language proficiency.

Discussion

A modern manager has to convey information and provide effective interaction of multiple parties in a discussion. Because of that, mediation plays a crucial role among managerial professional competences. Developing and controlling oral mediation skills is of paramount importance for CLIL Management classes. During our experiment we noted that stimulating the development of mediation skills by focusing on the content of the discussion increases the effectiveness of group work.

The theoretical base of our research allowed us to define cognitive and relational skills of oral mediation and integrate them into a system of oral speech control in the discussion format.

In order to assess oral performances we have developed the Analytical and Global Achievement scales with the following criteria for the Analytical Scale: interaction, discourse management, range, accuracy and pronunciation. The Global Achievement scale is based on two concepts, relaying a message and rapport with the communicants, which are assessed as one criterion. The Global Assessment scale determines the level of cognitive and relational mediation skills. The general mark for achieving the communicative task consists of the analytical marks and the general achievement mark.

Our research showed that results are most reliable when combining both scales. This way we take into account the broadest range of characteristics of communicative competence on the language, subject and pragmatic levels.

Results of statistical analysis show that the average mark in the experimental group was significantly higher than in the control group. This is especially noticeable in case of the “mediation”, “interaction” and “discourse management” criteria (Table 6). It is our conclusion that the method of teaching presented in this study can be used to successfully achieve the necessary level of oral mediation skills in group discussions.

Based on our research we have come to a tentative conclusion that the "mediation" criterion we employed has a stronger connection to general language proficiency than any other analytical criterion. To be more specific, we found that, firstly, training mediation skills can have almost as strong an effect on other skills; and, secondly, that mediation has the most reliable correlation with general language proficiency of all criteria. If these conclusions can be corroborated, they will have far-reaching practical implications. Assessing mediation is much simpler and quicker than analytical assessment of multiple criteria. Because of that, this approach can be used when time is an issue. Furthermore, the rater can perform self-evaluation by comparing analytical marks with the mediation mark, which leads to more reliable results. These results can be achieved by one rater, without the need for a second rater or secondary assessment, thus reducing labor input.

To improve the accuracy of results in future we plan to involve more testees. The fact that the examiner cannot intervene to help out shy testees is debatable: on the one hand domineering of some candidates with high self-esteem may become a reason of unequal contributions of candidates. On the other hand, equal participation in the discussion is one of the parameters which are being assessed, and domineering as well as being shy should be penalised.

A way to increase the objectivity of assessment could be raters’ training and the use of standardized performances by raters for tuning in before assessment sessions. In case two or more raters are involved in assessment after the test, video recordings should be used to minimize a chance of awarding a mark to a wrong candidate. There is an important question of equality the tasks and discussants contributions in terms of how much mediation they involve. This requires further research and discussion.

Conclusions

The fast-paced development of information technologies and the ever-growing need for managerial expertise in intellectual labor raises the demand for skills of clear and concise presentation (cognitive mediation) and leading group assimilation of new information (relational mediation) among managers. As a consequence, mediation becomes one of the most crucial skills of a modern manager.

Control of intellectual labor is often conducted through group discussion of professional topics. Because of that, discussion is a suitable method for developing the skills of cognitive and relational mediation. Becoming proficient in this type of speech requires the Management students to become familiar with the structure of a discussion, to learn the rules that have to be followed and the differences in style according to the context and nature of the discussion.

The methods of developing oral mediation competence presented in this study, as well as the criteria and scales for assessing this competence have proven to be effective.

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Development of Grammatical Competence of Medical Students on Latin Lessons Using Virtual Training Programs

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Abstract

The issues of development of grammatical competence as an important component of communicative competence of medical students are presented in the research. The use of virtual training program on Latin lessons by raising experts in medicine is summarized on the example of I. Horbachevsky Ternopil State Medical University. The practical aspect of grammatical competence development by means of virtual programs on Latin lessons is explained. The general scientific and methodical approaches to the use of virtual environment for the study of the Latin language by the students of medical universities are analyzed. The virtual information model "Morphological and syntactic structure of two- and several-word anatomical terms and different types of definitions" is presented and the efficiency of virtual training programs for the study of Latin is proved.

Keywords: virtual training program; virtual reality; computer technologies; development of grammaticalcompetence; Latin; medical student.

1. Introduction

A significant influence of computer technologies, which penetrate into all spheres of human life, provide distribution of information flows developing a global information space is typical for the present society. Computerization of education is an integral and important part of these processes.

Introduction of computer technologies is the main course of pedagogical education development in Ukraine. The role of a teacher is changing; besides being highly skilled professionals in the subject, they have to be ready to work in a new system of open education. The teacher must be able to develop informational materials and use various resources in the sphere of information technologies. Computer technologies and their influence on the content of education, methodology and organization of a foreign language teaching are a topical issue of present studies. The effectiveness of introduction of new developments, intensification of learning process, and motivation of students depends on the teacher's skills to work with computer technologies and the ability to achieve didactic, developing and cognitive purpose of learning process by their means.

Today the issue of motivation and interest in the studying Latin is urgent; its knowledge is evidence of professionalism of the raising physician. Today it is not enough for a teacher to have profound knowledge of the subject, practical skills and expertise. They have to use the gained knowledge creatively in abnormal developing situations, to be constructive in the arrangement and planning of pedagogical process.

The study of grammar is an integral part of studying Latin. Grammatical rules, structures, and forms are very important in oral and written communication. Grammatically correct use of terms involves certain grammatical skills, both for speech-making and correct understanding of statements. Incompetence of grammatical skills and expertise is a difficulty in communicative competence development of students. Consequently, in the context of Latin language learning by the students of medical schools, the development of grammatical competence is a topical matter.

The Latin language is historically a literary, dead language, so the traditional approach to learning foreign languages makes it impossible for the students to comprehend the Latin language and hinders understanding of the structure and functions of the language, making them passive recipients of knowledge. Innovation technologies have been increasingly used to further optimize and improve learning efficiency.

The introduction of computer technologies into the educational process can intensify the cognitive activity of medical students; the visual and animated multimedia makes learning Latin more effective. N. Boyko believes that the effective use of multimedia means improves the process of organization of students' independent work, stimulates their educational and cognitive activity in studying theoretical, grammatical material, solving problems of practical importance, controlling and evaluating students' educational achievements (Boyko, 2008, p. 8).

Thus, the use of multimedia in the Latin language teaching: virtual learning programs, based on visual and audio perception of the material, is effective enough. The virtual computer programs design have been introduced into the current system of education; they enable new material being presented in a relaxed atmosphere and intelligibly for more quickly learning.

2. Literature Review

The problems and peculiarities of information and communication technologies use were studied by N. Boiko (2008), R. Hurevych (2008), L. Duets (2005), M. Zhaldak (2007), V. Krasnopolskyi (2010), L. Kutepova (2003), I. Malytska (2013), O. Meniailenko (2016), H. Monastyrna (2013), H. Navolska (2013), O. Ovcharuk (2012), A. Yakovliev (2009), A. Yankovets (2005) and others. The theoretical fundamentals of the use of virtual learning environment have been analyzed in the works of H. Atanov (2002), A. Boichenko (2011), M. Weindorf-Sysoieva (2017), A. Haharina (2009), A. Lutsenko (2012). In the researches of O. Belinska (2000), A. Zhychkina (2007), T. Parfirova (2012), H. Selevko (1998), A. Ellis (2007), J. Fouts (1997) described the development of web environment for virtual forms of study. However, the issue of the introduction of virtual training programs in the study of a foreign language has not been fully studied yet.

Despite the considerable amount of investigations and the significance of the ideas and technologies suggested in the papers, the issue of virtual training programs introduction for development of grammatical competence in the study of the Latin language by medical students has not been fully studied. The studies are mainly focused on the theoretical aspects of the problem, while the practical aspect needs to be analyzed in detail.

The aim of the research is to define the practical aspect of grammatical competence development in the raising physicians by means of virtual learning programs in the Latin language classes as an innovative method for training of a highly skilled expert.

3. Method

The methodological basis of the research is the study of Ukrainian and foreign scientists. To realize this goal, the following methods have been used: theoretical analysis, comparison, justification, generalization, systematization of theoretical and practical material, studying the experience of organizing the study of grammar material through a virtual program in the classes of Latin language by medical students.

3.1. Materials

Theoretical bases of research

The current development of the educational sphere needs new-style specialists. The issues of professional training of the expert, who has a thorough professional knowledge, skills and expertise, are topical. Grammatical competence is the aspect of professional competence of medical students. According to N. Katsman, the Latin language develops abstract grammatical thinking and scientific attitude to the study of languages in students (Katsman, 1979, p. 7).

With the development of current teaching methods, the technical means of training, which can clearly present any information, are the most important in the Latin language learning. They also affect all components of the learning system: aims, content, methods and organizational forms of studying that allow solving complex and topical tasks of pedagogy that are development of intellectual, creative potential, analytical thinking and human independence. The use of computers in grammatical competence development affords great opportunities.

Grammatical competence is established to be an ability to understand and express the definitions producing and recognizing phrases and sentences correctly, which are delivered in accordance with these principles (that is the opposite of learning and reproduction as established formulas) (Lvov, 1988, p. 112-113). R. Porshneva and O. Spiridonova consider that, 'grammatical competence involves internal non-verbalized knowledge of the grammatical system of language, knowledge of the morphological and syntactic system of language (typology of forms), as well as the set of rules' (Porshneva, 2008, p. 73).

O. Vovk points out that grammatical competence provides systematic knowledge of lexical, morphological, syntactic, phonetic and spelling aspects of language for making meaningful and coherent statements; a good command of grammatical notions as well as means of expressing the grammatical categories; skills and expertise to adequately use the grammatical features in speech in various communication situations for solving speech-mental problem tasks (Vovk, 1992, p. 20). Development of grammatical skills and expertise involves three main stages: analysis of rules, processing of speech models, use of grammatical features in various communicative situations.

According to R. Porshneva, 'the ultimate goal of grammatical competence development is student's practical knowledge of grammatical structure of the language (systems of linguistic units) and the rules of its use in the communication process. The enrichment of students' linguistic wealth of knowledge with as many grammatical structures as possible is very important in the context of grammatical competence development. To perform this task, the complex technical means of training are useful (Porshneva, 2008, p. 76)

Many scholars define the notion of 'grammatical competence' as the knowledge of grammatical means of language and the ability to use them. Thus, John van Eck reduces linguistic competence to grammatical, interpreting it as 'the ability to deliver and interpret statements that correspond to grammatical rules and certain meanings (John van Eck, 1993, p. 39)

We agree with the scholars, who interpret grammatical competence as knowledge and ability to use grammatical resources of the language. In studying the Latin language, this is, first of all, the development of the habits of use of nouns and adjectives case endings, verbal stems and their personal endings, some syntactic structures, etc.

The task of the Latin language teacher is to stimulate the cognitive activity of students in the process of studying new lexical and grammatical material, digesting anatomical, histological, pharmaceutical and clinical terms. It is established by experiment that by means of oral presentation of material the listener perceives and is able to process up to one thousand conventional units of information, and when 'involving' the organs of vision – up to 100 thousand units. Yu. Yatsenko has proved that multimedia materials and computer technologies reduce training time in nearly three times, and the level of memory by simultaneous use of images, sound and text increases by 30-40% (Yatsenko, 2007).

Also worth noting is that the use of virtual training programs significantly expands the capabilities of teachers, promotes individualization of learning, stimulation of students' cognitive activity; it allows adapting learning process to their individual features to the extent possible.

Virtual reality (Latin virus – potential, possible; and Latin Realis – real, existing) – a world created by technical means and is conveyed to a person through the senses that are normal for perception of material world. Virtuality is one of the fundamental-categorical concepts, the profound meaning of which is opened to the mankind at the change of epochs. The concept of virtual reality was first introduced by Myron Krueger (1958) in the late 1960's (Virtual world, 2000). The concept of 'virtuality' was present in the scientific vocabulary in the 70's owing to physicists. They defined 'fictitious' elementary particles as virtual ones, the presence of which offered the opportunity to fill the gaps in the theory of nuclear interactions; their characteristic feature is the fact that they exist, but only here and now – at the moment of energy interaction, without which and beyond which they are impossible (Repkin). In the late 70's the concept of 'virtual reality' was used by the researchers of the Massachusetts Institute of Technology in the process of computer simulation of space. Over time, virtuality has become a symbol of the supporters of the global computer network. the present term 'virtual reality' was suggested by Jaron Lanier (1989) (Nosov, 2000).

Virtual reality is computer systems that provide visual and audio effects, which immerse the user into the imaginary world behind the screen. They are surrounded by computer-generated images and sounds that give the look and feel of reality. They interact with the artificial world by means of various sensors that join their movements, impressions and audiovisual effects (Vorona, Savaryn, 2014).

Virtual learning is the process and the result of interaction of subjects and objects of learning that is followed by creation by them of a virtual educational space, the specificity of which is determined by these objects and subjects. The virtual educational space is impossible beyond the communication of teachers and students. The study of pedagogical efficiency of sharing use of subject and 'virtual' training resources is defined by current informatization of educational process. The analysis of the level of security as well as forecasting the further strategy of development and use of these means in the educational process is urgent.

4. Results.

The technology for creation of virtual interactive training programs in the Latin language, which enable quickly and effectively digest new material, is suggested in the article. These virtual programs are a great scientific achievement, especially for learning professional terminology by raising physicians. Probably, soon we will be able to improve and assess students' knowledge of a subject using the designed virtual programs, which are the best way to improve the already-learned and gain new material. In addition, such activity is adaptive, that is easy. Creation of a virtual foreign-language learning environment and interaction between a teacher and a student in it are based on the use of recent artistic and information-communication technologies in the professional training of medical students (Vorona, Savaryn, 2014).

Orthography and grammatical use of Latin medical terms should be inherent to each doctor, because it represents the linguistic culture of a person and adorns the professional language of an expert.

To improve the students' training at I. Horbachevsky Ternopil State Medical University, the virtual training programs are being introduced into the educational process. The creation of a virtual training program is in two stages: 1) the development of virtual training program scenario. First of all, the teacher decides which topic of the subject they want to transfer into the virtual environment; makes questions and answers to them on the chosen topic; develops all stages of the program; 2) the second stage consist of technical implementation of the previous stage. One has to have good command of computer, so this part of the work is performed by qualified specialists of the department of virtual training programs.

The complexity of medical science results in a large number of terms and requires orthographic and grammar literacy. The Latin terminology systems are the basis of professional training of a doctor. So, the correct use of anatomical, histological and clinical terms is important. This knowledge can be provided by the development of a scenario for a computer virtual program on the theme "Morphological and syntactic structure of two- and several-word anatomical terms and different types of adjectives" (Figure 1).

Figure 1. Virtual program in the Latin language on the theme "Morphological and syntactic structure of two- and several-word anatomical terms and different types of adjectives"

The use of virtual programs speeds up digesting of educational material, diversifies it, makes it more interesting. The Latin language virtual computer program helps students before the testing to check their knowledge by the performance method, as well as facilitate the digesting of material in the class. The virtual program contains the necessary information in both the theory and practice.

It should be noted that when creating a virtual program for the construction of anatomical and histological terms in Latin classes, each anatomical or histological term should be precise and unambiguous. Much attention should be paid to correct grammar of two- and three-word terms, in which agreeing and non-agreeing adjectives are used. After completing a computer virtual program, the student will individually learn how to grammatically correctly form anatomical and histological terms. The use of this program is quite simple: the student controls the processes on the screen using a computer mouse and a keyboard.

In the main menu of the virtual program "Morphological and syntactic structure of two- and several-word anatomical terms and different types of adjectives", the student is offered three sections: Theoretical Information, Training Activities, Testing (Figure. 2).

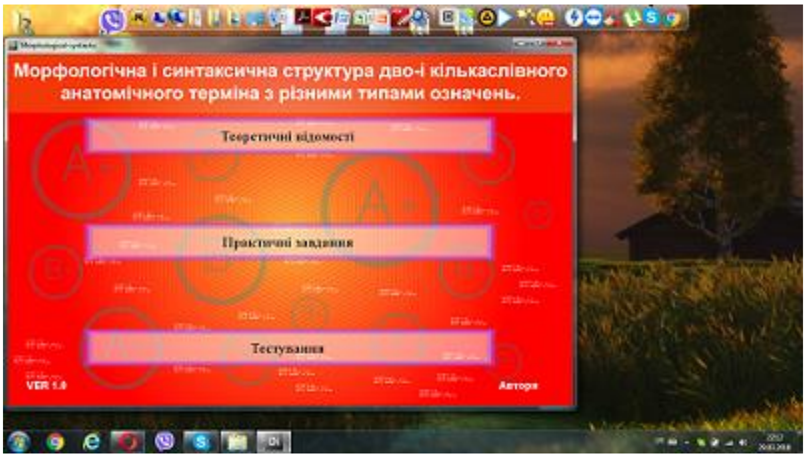


Figure 2. Main menu of virtual program

The section Theoretical Information provides a detailed description of the algorithm of noun adjective agreement (Figure 3) as well as the structure of anatomical term and different types of adjectives (Figure 4).

Figure 3. Section Theoretical Information. Algorithm of noun adjective agreement

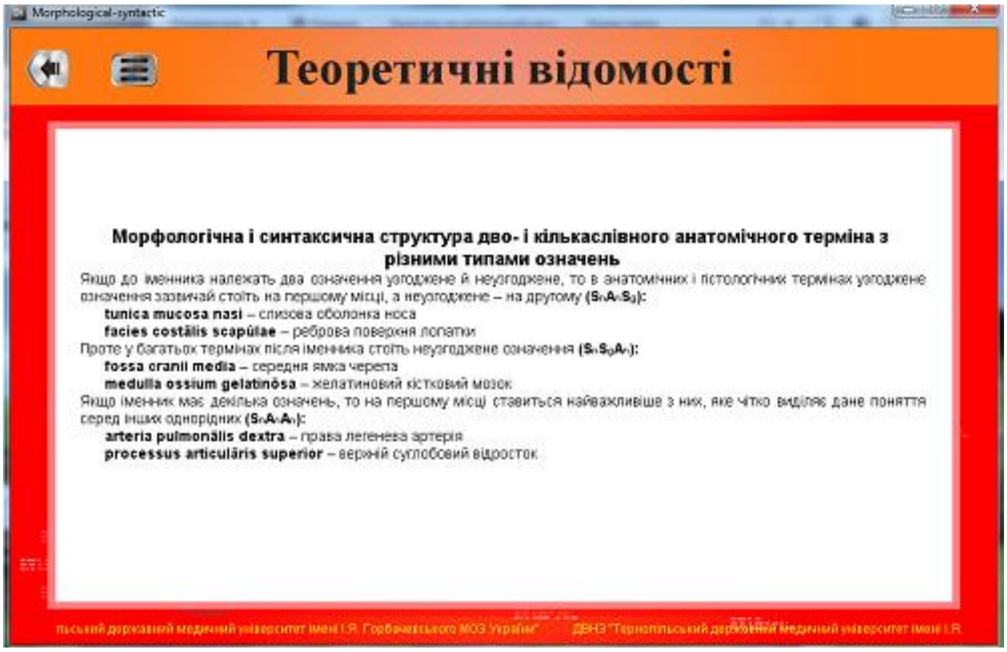


Figure 4. Section Theoretical Information. Morphological and syntactic structure of two- and several-word anatomical terms and different types of adjectives

For example, the student creates a two-word anatomical term 'thoracic vertebra' according to the scheme Sn An (Sn – noun in the nominative case, An – adjective in the nominative case). The student sees medical terms one-by-one in a dictionary form vertebra, ae f and thoracicus, a, um (Figure 5).

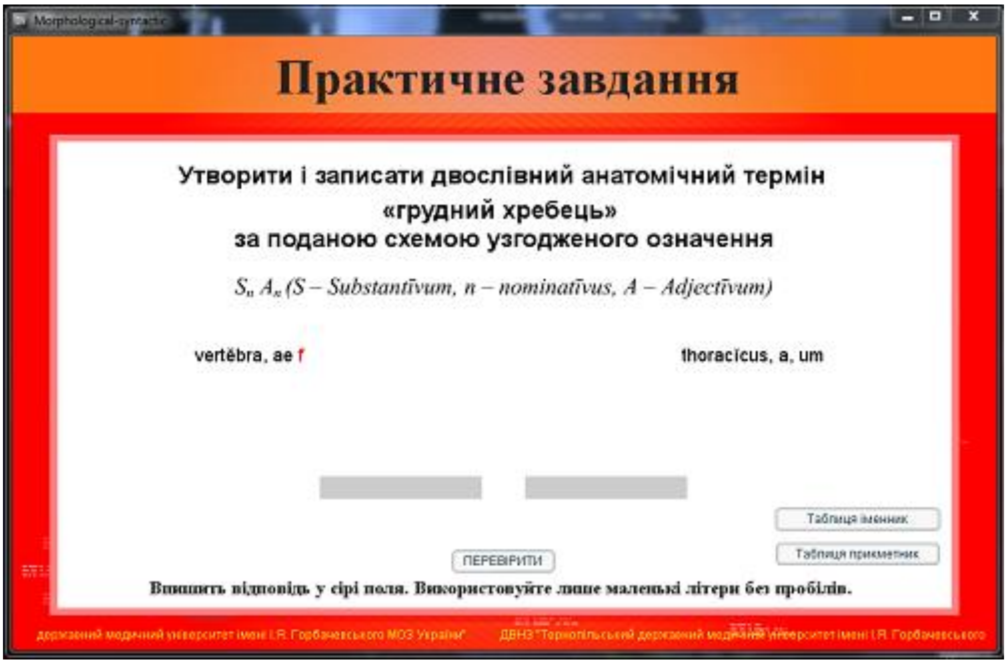
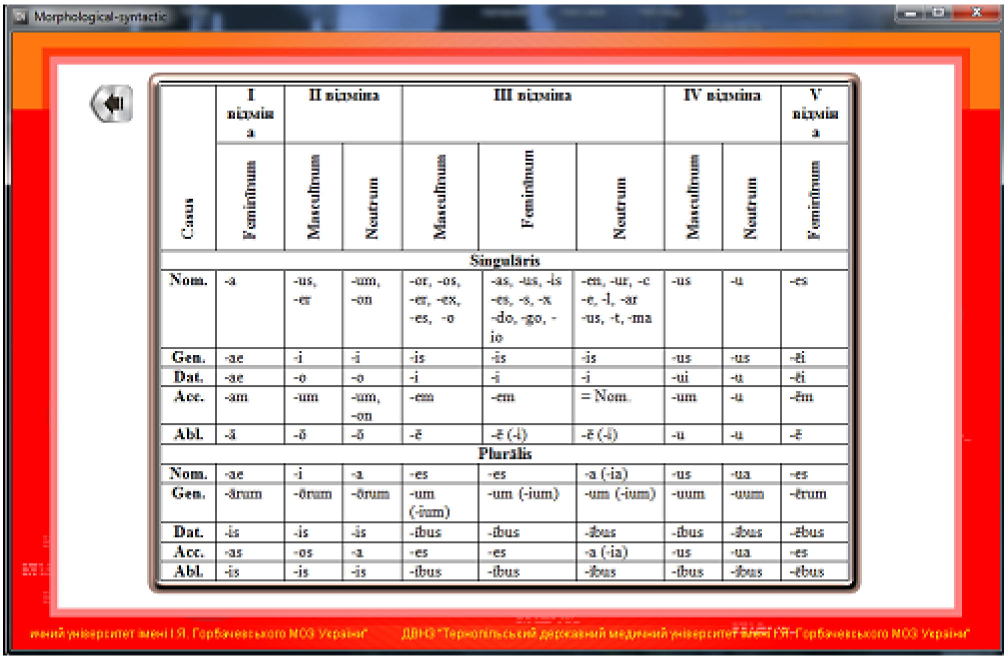


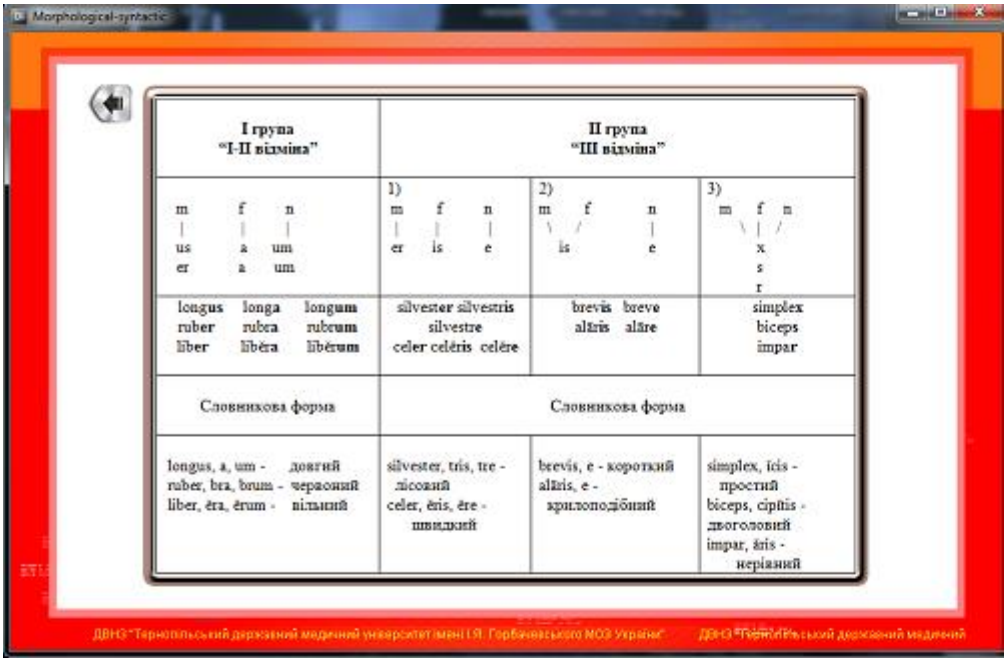
Figure 5. Condition of the task for creation of a two-word anatomical term

If a student needs to use a table of case endings of nouns (Figure 6) or a table of adjective groups (Figure 7), they should click the left mouse button in the lower right corner of the screen.



Casus	I відміна	II відміна		III відміна			IV відміна		V відміна
	Feminīnum	Masculīnum	Neutrum	Masculīnum	Feminīnum	Neutrum	Masculīnum	Neutrum	Feminīnum
Singulāris									
Nom.	-a	-us, -er	-um, -on	-or, -os, -er, -ex, -es, -o	-as, -us, -is -es, -s, -x -do, -go, -io	-en, -ur, -c -e, -l, -ar -us, -t, -ma	-us	-u	-es
Gen.	-ae	-i	-i	-is	-is	-is	-us	-us	-ēi
Dat.	-ae	-o	-o	-i	-i	-i	-ui	-u	-ēi
Acc.	-am	-um	-um, -on	-em	-em	= Nom.	-um	-u	-ēm
Abl.	-ā	-ō	-ō	-ĕ	-ĕ (-ī)	-ĕ (-ī)	-u	-u	-ĕ
Plurālis									
Nom.	-ae	-i	-a	-es	-es	-a (-ia)	-us	-ua	-es
Gen.	-ārum	-ōrum	-ōrum	-um (-ium)	-um (-ium)	-um (-ium)	-uum	-uum	-ērum
Dat.	-is	-is	-is	-ĭbus	-ĭbus	-ĭbus	-ĭbus	-ĭbus	-ēbus
Acc.	-as	-os	-a	-es	-es	-a (-ia)	-us	-ua	-es
Abl.	-is	-is	-is	-ĭbus	-ĭbus	-ĭbus	-ĭbus	-ĭbus	-ēbus

Figure 6. Summary table of case endings of five Latin noun declensions



I група “I-II відміна”	II група “III відміна”		
m f n us a um er a um	1) m f n er is e	2) m f n is e	3) m f n x s r
longus longa longum ruber rubra rubrum liber libĕra libĕrum	silvester silvestris silvestre celer celĕris celĕre	brevis breve alāris alāre	simplex biceps impar
Словникова форма	Словникова форма		
longus, a, um - довгий ruber, bra, brum - червоний liber, ĕra, ĕrum - вільний	silvester, tris, tre - лісовий celer, ĕris, ĕre - швидкий	brevis, e - короткий alāris, e - крилоподібний	simplex, ĭcis - простий biceps, cipĭtis - двоголовий impar, ăris - нерівний

Figure 7. Positive degree of comparison of adjectives

If the answer is right, the green color flashes of the screen (Figure 8), in the case of wrong – the red (Figure 9). The student may try again. If they fail for a second time, the correct answer appears on the screen that allows the student to analyze their mistakes.

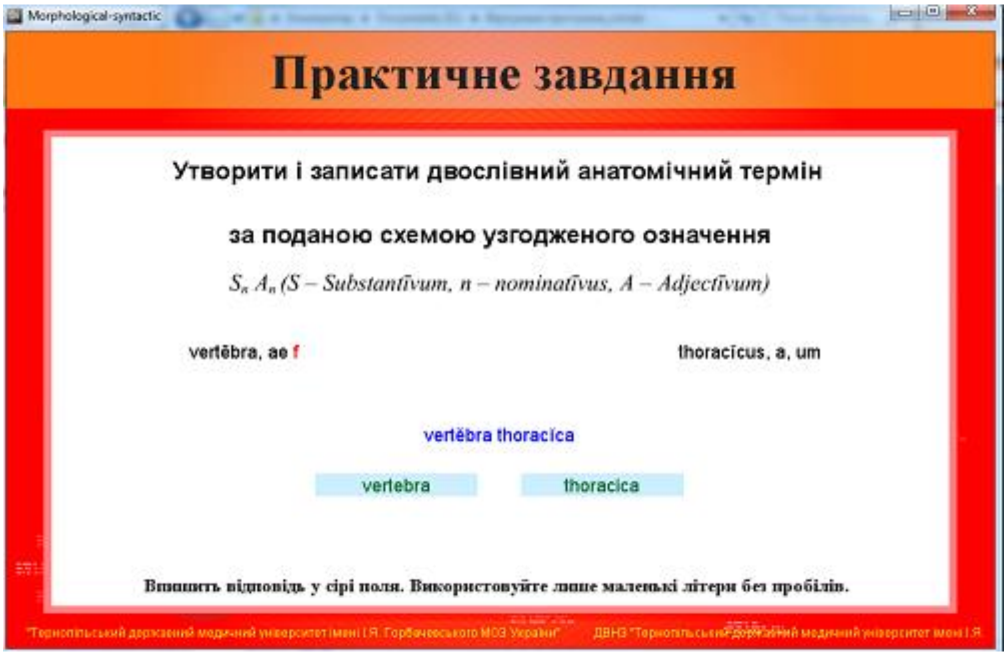


Figure 8. Orthography of anatomical term

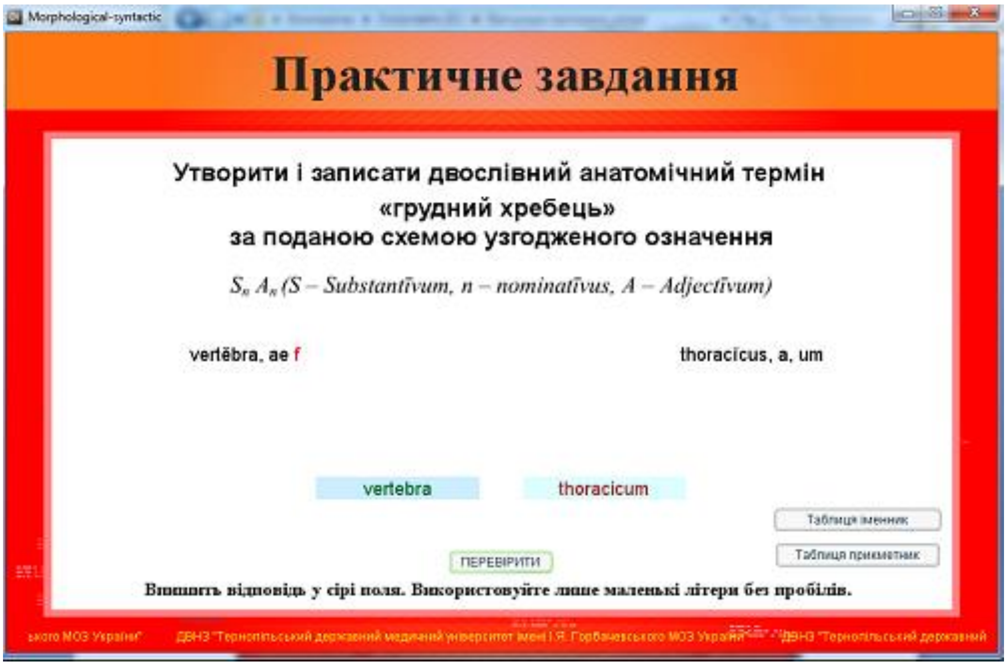


Figure 9. Grammar mistakes in making anatomical terms

The section Testing is designed only for examination of the learned material and assesses theoretical and practical skills of students. By performing the tasks of this section, they have the opportunity to solidify the gained knowledge (Figure 10).

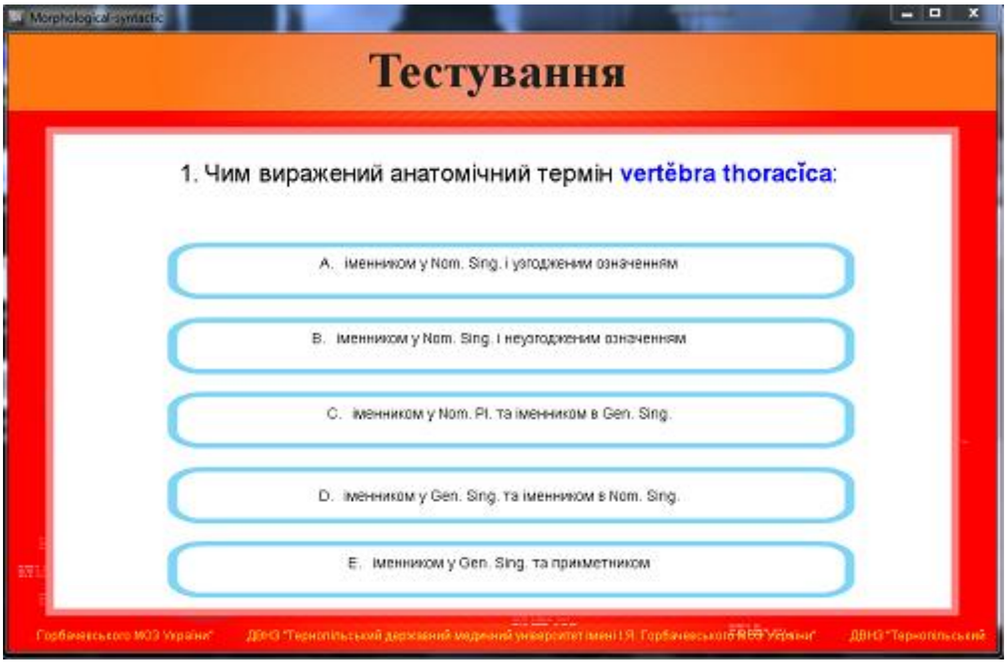


Figure 10. Tests in the Latin language grammar

If the student chooses a wrong answer, it is highlighted in red on the screen, and the right one – in green that allows them to analyze their mistakes (Figure 11).

Figure 11. Example of a wrong student's answer

After completing the test, the result containing the number of correct answers appears on the screen (Figure 12).

Figure 12. Result of the test

In our research we investigated the effectiveness of the use of the virtual program in the study of the topic "Morphological and syntactic structure of two- and several-word anatomical terms and different types of definitions" by the first year students (specialty 222 "Medicine") of I.Ya. Horbachevsky Ternopil State Medical University in 2017-2018 academic year.

There were 312 first year students. We divided them into two groups. 156 students studied the topic "Morphological and syntactic structure of two- and several-word anatomical terms and different types of definitions" without using a virtual program. 156 students used a virtual program while studying the topic. After completing the study of the topic "Morphological and syntactic structure of two- and several-word anatomical terms and different types of definitions", students wrote a final test for examination of learned material.

Table 1. Final test results.

	Mark									
	Negative mark	4 points	5 points	6 points	7 points	8 points	9 points	10 points	11 points	12 points
The number of students who studied the grammar topic without using the virtual program (Total amount – 156 students	3 (1,92%)	18 (11,54%)	24 (15,4%)	42 (26,92%)	15 (9,6%)	16 (10,26%)	19 (12,18%)	12 (7,7%)	5 (3,2%)	2 (1,28%)

(100%))										
The number of students who studied the grammar topic with the use of the virtual program (Total amount – 156 students (100%))	- (0%)	8 (5,13 %)	10 (6,41 %)	9 (5,77%)	11 (7,05%)	30 (19,23 %)	27 (17,3 %)	34 (21,79 %)	17 (10,9%)	10 (6,42%)

As can be seen from the data presented in Table 1, the success of students studying the grammatical topic "Morphological and syntactic structure of two- and several-word anatomical terms and different types of definitions" with the help of the virtual program has increased significantly.

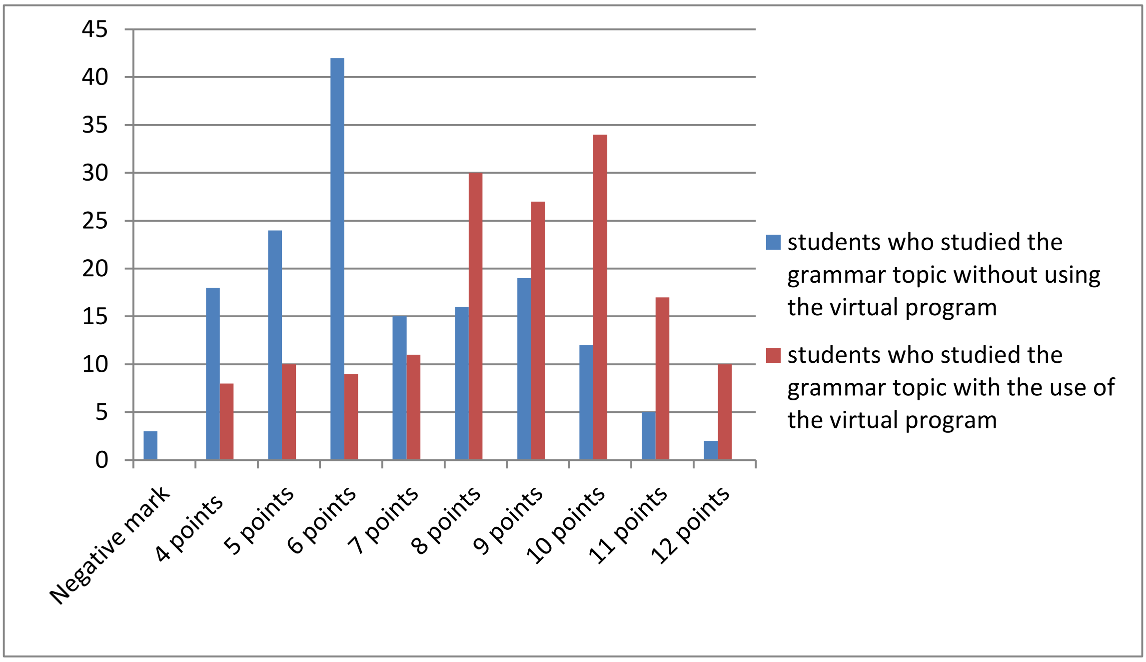


Figure 13. Comparative student progress chart

Computer technologies, virtual learning programs in the study of the Latin language in particular, expand and diversify the motivation of medical students to study, promoting individualization of learning and effective improvement of grammatical competence in a medical school.

5. Conclusions.

The use of virtual training programs in the study of professional medical vocabulary in Latin has a number of advantages over other methods:

- Psychological aspect (when studying grammatically correct medical terms by means of virtual training programs, the presence of a teacher is not needed that increases the concentration of student's attention to the program and does not cause anxiety during anticipation before speaking in front of the class);

- Organizational-methodical aspect (only computer is enough for studying the language, which is one of the innovative methods of studying Latin);

- Economic effect (the use of virtual training programs is not expensive, compared to other methods, e.g. linguaphone classes, etc.).

Thus, virtual training programs can be used in the learning Latin of medical field as a powerful source of information, as a means of individualization of learning, assessment and control of knowledge, as well as a means for stimulation of students' creative activity and encouragement to study. The presented virtual learning programs for development of grammatical competence in the study of Latin language do not solve all the problems of effectiveness of students' professional terminology learning that suggests further research prospects.

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The Relationship Between Physical Activity and Sleep Quality in University Students

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Abstract

The purpose of this research was to evaluate the relationship between physical activity and sleep quality in university students. The sample of the study was composed of 200 volunteer students (n=106 female and n=94 male students) studying at different associate and undergraduate programs of Adnan Menderes University in the Spring Semester of 2017-2018 Academic Year. In determining the physical activity levels of the university students, International Physical Activity Questionnaire (IPAQ) developed by International Physical Activity Evaluation Group (1998) as a short form and a long form was used. In their study carried out in order to determine the validity and reliability of International Physical Activity Questionnaire, Craig et al. [16] revealed that the criterion validity of the questionnaire was 0.33 for the long form and 0.30 for the short form. The validity and reliability analyses of the questionnaire in Turkey were performed by Özturk [17]. The students' last 1-month sleep quality was determined by Pittsburgh Sleep Quality Index (PSQI) (α=0.77). The internal consistency coefficient of PSQI, whose Turkish validity and reliability study was conducted by Ağargün et al. [20], was reported to be 0.80. The data obtained from the questionnaire applications conducted in order to determine the physical activity levels and sleep qualities of the students was evaluated in SPSS 22.0 package program with 95% confidence interval and 0.05 significance level. In the statistical analyzes performed, it was found that there was a low level, positive relationship between physical activity and sleep quality (r=0.172) in the university students who participated in the research, and between sleep duration (r=0.196) and habitual sleep efficiency (r=0.159), which are of the sub-dimensions of sleep quality ($p<0.05$). Furthermore, it was determined that there was a low level, negative relationship between physical activity and sleep latency (r=-0.185) ($p<0.05$). In the research, it was concluded that physical activity in the university students increased, albeit at a low level, sleep quality. Physical activity contributed to the reduction of sleep latency (the duration of falling asleep), and the increase in sleep duration and habitual sleep efficiency, though just little.

Keywords: University student, Physical activity, Sleep quality.

1. Introduction

Together with the fact that sleep is a state of unconsciousness that can be turned back, it is not just a state of motionlessness that allows the body to rest but also an active regeneration period that re-prepares the whole body for life [1]. Sleep is one of the basic daily life activities that affect the health of individuals and is a concept that has physiological, psychological and social dimensions [2]. For this reason, it is regarded as one of the most important factors affecting the life quality of individuals. While sleep is preparing the individual for the new day by providing the resting of the body, strengthening, regulating and rehabilitating the functions of the brain, the changes in sleep patterns and sleep quality affect daily [3].

Sleep has different aspects such as total sleep duration, sleep latency and sleep patterns [4]. One of them is sleep quality. Sleep quality is the fact that the individual feels physically fit and ready for the new day after waking up. Sleep quality includes the quantitative aspects of sleep such as sleep latency, sleep duration and the number of awaking during one night, as well as the subjective aspects of sleep such as deep sleep and relaxing sleep [5].

Today, sleep quality is a concept emphasized significantly in clinical applications and in the researches related to sleep. The reason for this is that sleep-related complaints are quite common [6]. However, there is a general belief that university students sleep inadequately [7]. Vail-Smith et al. [8] reported that the amount of sleep and sleep quality of university students had changed significantly in the recent years, and that the students' mean sleep duration decreased from 7.75 hours to 6.65 hours. Liu et al.

[9] stated that there was a relationship between sleep quality and psychological health and that psychological health problems were more observed in the university students with poor sleep quality. In some studies, it was reported that the time of university students when they went to bed was inadequate, they slept insufficiently, had poor sleep quality, often used alcohol and even non-prescribed medications so as to regulate their sleep, used stimulants to stay awake, and fell asleep while driving [10,11,12].

Sleep quality is influenced by various factors such as life style, environmental factors, work, social life, economic status, general health status, stress and physical activity [2]. Physical activity and exercise are reported to be associated with sleep quality in healthy adults [13]. Uezu et al. [14] reported that daily exercise done regularly affected sleep positively. Vardar [15] stated that the increase in body temperature due to physical activity and exercise could activate the mechanisms related to sleep and that the changes in body and brain temperature affected the sleep EEG and increased slow wave sleep. For this reason, anticipating the fact that physical activity could be used as a tool in overcoming the sleep problems of university students, it was aimed in this research to evaluate the relationship between sleep quality and physical activity.

2. Method

2.1. Participants

The sample of the study was composed of 200 volunteer students (n=106 female and n=94 male students) studying at different associate and undergraduate programs of Adnan Menderes University in the Spring Semester of 2017-2018 Academic Year.

2.2. Materials

Physical activity levels of the university students who participated in the research were determined with International Physical Activity Questionnaire (IPAQ) and their sleep qualities were determined with Pittsburgh Sleep Quality Index (PSQI).

2.2.1. International Physical Activity Questionnaire

International Physical Activity Questionnaire (IPAQ) was developed by International Physical Activity Evaluation Group (1998) in short form and long form. IPAQ was designed to determine the physical activity levels and inactivity circumstances of adults. In their study carried out in order to determine the validity and reliability of International Physical Activity Questionnaire, Craig et al. [16] revealed that the criterion validity of the questionnaire was 0.33 for the long form and 0.30 for the short form.

The validity and reliability studies of the questionnaire in Turkey was conducted by Özturk [17]. It was stated that the short and long forms of the questionnaire could provide repeatable and comparable data (r=0.66). The criterion validity was found r=0.30 in the short form and r=0.29 in the long form of the questionnaire.

IPAQ provides information in terms of the time spent for sitting, walking, and moderate level and severe activities. For the evaluation of all the activities, the criterion is that each activity should be performed for at least 10 minutes [16]. MET (metabolic equivalent) values of individuals can be calculated from the data obtained from IPAQ. In the calculation of MET values, frequency, duration and intensity variables are used. Frequency expresses how many days a week the activity is performed; duration expresses how long (how many hours or minutes) the activity is performed each time; and intensity expresses the MET value spent in 1 minute during the activity. MET is a measure of oxygen spent or consumed in a unit of time per kilogram. One MET corresponds to the amount of oxygen consumed during rest (about 3.5 ml/kg/minutes) [16].

In the calculation of MET min./week values, the formula given below is used:

MET/week: The frequency of the activity * The duration of the activity * The intensity of the activity [18].

According to MET values, the following score interval is used in the classification of individuals in terms of physical activity level:

1. Low level: <600 MET minute/week
2. Moderate level: 600-3000 MET minute/week

3. High level: >3000 MET minute/week [16].

2.2.2. Pittsburgh Sleep Quality Index (PSQI)

Pittsburgh Sleep Quality Index (PSQI), which is a valid, reliable and repeatable test, was used to determine the sleep quality of the university students over the last month (α=0.77) [19]. PSQI, which ensures sleep quality, the amount of sleep, the presence and severity of sleep disturbance, and which is composed of 19 questions, was completed by the same researcher by means of face-to-face interviews. PSQI is composed of seven items in which subjective sleep quality, sleep latency, sleep duration, habitual sleep efficiency, sleep disturbance, use of sleep medications and daytime work dysfunction are evaluated. Each response is scored between 0 and 3 according to the frequency of the symptom. The scoring is conducted as; 0 if not experienced over the last month, 1 if experienced less than once in a week, 2 if experienced once or twice a week, and 3 if experienced three times a week or more. The evaluation of sleep quality asked in the questionnaire is scored as; 0 very good, 1 pretty good, 2 pretty bad, and 3 very bad. The global score obtained ranges from 0 to 21 and high values indicate that sleep quality is bad and the level of sleep disturbance is high. The fact that the global score is 5 or above indicates that clinically, sleep quality is significantly bad. The diagnostic sensitivity of PSQI is 89.6% and its specificity is 86.5% [19]. The Turkish validity and reliability study of PSQI was conducted by Ağargün et al. [20] and they reported the internal consistency coefficient of the index as 0.80.

2.3. Statistical Analysis of Data

In the analysis of the data obtained from the applications conducted to determine the physical activity levels and sleep qualities of the university students, SPSS 22.0 package program was used. Whether the data showed normal distribution was tested by Kolmogorov-Smirnov Test. As the data showed normal distribution, Independent Sample T Test was used to test whether there was a difference between the two sample groups in terms of their means. The frequency distributions of the students regarding gender, physical activity level, sleep quality total score and sub-dimensions were calculated.

In the evaluation of the relationship between physical activity and sleep quality and its sub-dimensions, Pearson correlation coefficient (r) was used. The correlation coefficients used in the research were based on the coefficients specified as the absolute value given below:

- 0.00-0.19 No relationship or too low relationship
- 0.20-0.39 Low relationship
- 0.40-0.69 Moderate level of relationship
- 0.70-0.89 High relationship
- 0.90-1.00 Extremely high relationship [21].

4. Results

As shown in Table 1, the mean scores of experimental and control groups are nearly the same, indicating equality of two groups regarding their knowledge of targeted structures.

***Table 1**. Descriptive statistics regarding the students who participated in the research*

Variables		*f*	%
Gender	Female	106	53.0
	Male	94	47.0
	Total	**200**	**100**
Physical activity level	Low level	50	25.0
	Middle level	108	54.0
	High level	42	21.0

	Total	**200**	**100**

In Table 1, the descriptive statistics regarding the university students who participated in the research were given. 106 (53%) of the university students were female and 94 (47%) of them were male. 50 (25%) of the students had low physical activity levels, while 108 (54%) of them had moderate and 42 (21%) of them had high physical activitylevels.

Table 2. *Frequency distribution regarding sleep quality and its sub-dimensions*

Variables		*f*	%
Subjective sleep quality	Very good (0 point)	24	12.0
	Good (1 point)	91	45.5
	Bad (2 points)	64	32.0
	Very bad (3 points)	21	10.5
Sleep latency	Under 15 minutes (0 point)	29	14.5
	16-30 minutes (1 point)	79	39.5
	31-60 minutes (2 points)	71	35.5
	Above 60 minutes (3 points)	21	10.5
Sleep duration	7 hours and above (0 point)	61	30.5
	6-6.9 hours (1 point)	89	44.5
	5-5.9 hours (2 points)	33	16.5
	Under 5 hours (3 points)	17	8.5
Habitual sleep efficiency	Above 85% (0 point)	160	80.0
	75-84% (1 point)	30	15.0
	65-74% (2 points)	6	3.0
	Under 65% (3 points)	4	2.0
Sleep disturbance frequency	None (0 point)	2	1.0
	Once a week (1 point)	99	49.5
	2 times a week (2 points)	85	42.5
	3 times a week and above (3 points)	14	7.0
Use of sleep medications	None (0 point)	184	92.0
	Once a week (1 point)	5	2.5
	2 times a week (2 points)	5	2.5
	3 times a week and above (3 points)	6	3.0
Daytime dysfunction	Never (0 point)	51	25.5
	1-2 times a day (1 point)	58	29.0
	1-2 times a week (2 points)	61	30.5
	3 times a week and above (3 points)	30	15.0
Sleep quality	Global score < 5	41	20.5

Global score ≥ 5	159	79.5

When Table 2 was analyzed, it could be seen that subjective sleep quality of the university students (evaluating one's own sleep quality) was very good (n=24; 12%) and good (n=91; 45.5%). However, 32% (n=64) of the students stated that their subjective sleep quality was poor and 10.5% (n=21) of them stated that their subjective sleep quality was very bad. A significant amount of the students fell asleep in 16-30 minutes (n=79; 39.5%) and in 31-60 minutes (n=71; 35.5%). It could be revealed that there was a cluster in the students' sleep durations between 5-7 hours. 44.5% (n=89) of the students slept for 6-6.9 hours; 16.5% (n=33) of them slept for 5-5.9 hours. A

large amount of the students had high habitual sleep efficiency levels (n=160; 80%). The students experienced sleep disturbances once a week (n=99; 49.5%) and twice a week (n=85; 42.5%). The number of students using sleep medications was quite low (n=6; 3.0%). The number of students experiencing daytime dysfunction (daytime sleepiness) was high. 29% (n=58) of the students experienced daytime dysfunction once or twice a day, while 30.5% (n=61) of them experienced daytime dysfunction once or twice a week and 15% (n=30) experienced daytime dysfunction three times a week and above. It was found that 79.5% (n=159) of the students who participated in the research had good sleep quality, while 20.5% (n=41) had poor sleep quality.

***Table 3**. The comparison of the students' sleep qualities according to gender*

Variables	Gender	*N*	X	Sd±	S_{error}	T test	
						t	p
Subjective sleep quality	Female	106	1.43	0.82	0.08	0.242	0.809
	Male	94	1.40	0.90	0.09		
Sleep latency	Female	106	0.97	0.93	0.09	-1.221	0.223
	Male	94	1.13	0.94	0.09		
Sleep duration	Female	106	1.04	8.17	0.79	0.915	0.361
	Male	94	0.27	0.55	0.05		
Habitual sleep efficiency	Female	106	1.59	0.67	0.06	0.923	0.357
	Male	94	1.51	0.60	0.06		
Sleep disturbance frequency	Female	106	1.34	0.81	0.07	1.069	0.206
	Male	94	1.49	0.85	0.08		
Use of sleep medications	Female	106	0.13	0.55	0.05	-0.813	0.417
	Male	94	0.20	0.66	0.06		
Daytime dysfunction	Female	106	1.39	0.97	0.09	0.540	0.590
	Male	94	1.31	1.07	0.11		
Sleep quality	Female	106	1.80	0.40	0.03	0.255	0.799
	Male	94	1.79	0.41	0.04		

When Table 3 was analyzed, it was found that there was not a significant difference between female and male students according to gender regarding sleep quality and the sub-dimensions of sleep quality, which were subjective sleep quality, sleep latency (the duration of falling asleep), habitual sleep efficiency, sleep disturbance frequency, use of sleep medications use and daytime dysfunction (p>0.05)

***Table 4**. The comparison of the students' physical activity levels according to gender*

Variables	Gender	*N*	X	Sd±	S_{error}	T test	
						t	p
MET level (ml/kg/min.)	Female	106	2917.9	3604.1	350.0	-2.075	0.039*
	Male	94	3978.7	3612.3	372.5		

**Significant at 0.05 level*

When Table 4 was analyzed, it was found that there was a significant difference between female and male students on behalf of male students regarding physical activity level (p<0.05).

***Table 5**. The relationship between the students' physical activity levels and sleep qualities*

	MET	SSQ	UL	SD	HSE	SDF	USM	DD	SQ
MET	1								
SSQ	0.106	1							
UL	-0.285*	0.157*	1						
SD	0.296*	0.256**	0.083	1					
HSE	0.259*	-0.021	-0.027	-0.069	1				
SDF	0.129	0.240**	0.222**	0.139*	-0.063	1			
USM	-0.060	0.104	0.126	0.041	-0.010	0.099	1		
DD	0.059	0.497**	0.288**	0.229**	0.059	0.355**	0.230**	1	
SQ	-0.272*	0.644**	0.532**	0.524**	-0.039	0.505**	0.334**	0.766	1

**Significant relationship at 0.05 level; **Significant relationship at 0.01 level; MET: Metabolic Equivalent; SUK: Subjective sleep quality; SL: Sleep Latency; SD: Sleep Duration; HSE: Habitual Sleep Efficiency; SDF: Sleep Disturbance Frequency; USM; Use of Sleep Medications; DD: Daytime Dysfunction; SQ: Sleep Quality*

When Table 5 was analyzed, it was found that there was a low level, positive relationship between physical activity and sleep quality (r=0.272), sleep duration (r=0.296) and habitual sleep efficiency (r=0.259) in the university students (p<0.05). It was also revealed that there was a low level, negative relationship between physical activity and sleep latency (r=-0.285) in the students (p<0.05).

5. Discussion and Conclusion

Quality sleep is a prerequisite and complement of a quality life. Poor sleep quality is an indicator of mental and physical diseases [22]. Inadequate sleep causes a decrease in cognitive, psychomotor and emotional functions [7]. Sleep quality is a complex phenomenon and is a combination of subjective and objective factors affecting the sleep functions of the individual [22].

Complaints about sleep have become a public health issue. Sleep quality needs to be measured because of the fact that the frequency of sleep-related complaints have increased and that sleep affects physiological, psychological and social health [23].

Sleep plays an important role in protecting the health of young individuals. However, sleep-related complaints among young people are frequently encountered [7]. Physical activity and exercise can be used in eliminating the complaints of young people about sleep. For this reason, in this research, which evaluated the relationship between physical activity and sleep quality in the university students studying in different associate and undergraduate programs of the universities, it was determined that 79.5% of the students had good sleep quality (Table 2). Nonetheless, when the sub-dimensions of sleep quality were examined, various findings were obtained that might negatively affect health. The students' duration of falling asleep usually varied between 30-60 minutes. A significant amount of the students fell asleep in 16-30 minutes (n=79; 39.5%) and in 31-60 minutes (n=71; 35.5%). Only 14.5% (n=29) of the students could sleep within the first 15 minutes after they went to bed (Table 2).

Sleep requirement varies by age. In adults, this duration is 7-8 hours on average [24]. However, it could be revealed that there was a cluster in the students' sleep durations between 5-7 hours. 44.5% (n=89) of the students slept for 6-6.9 hours; 16.5% (n=33) of them slept for 5-5.9 hours. (Table 2).

Of the students who participated in the research, the number of students experiencing daytime dysfunction (daytime sleepiness) was high. 29% (n=58) of the students experienced daytime dysfunction once or twice a day, while 30.5% (n=61) of them experienced daytime dysfunction once or twice a week and 15% (n=30) experienced daytime dysfunction three times a week and above (Table 2). The fact that the students do not sleep until late at nights in dormitories, apart houses and student homes, that they study for their exams during the exam periods until late at nights and sometimes until the mornings, and that they turn it into a habit may be the reason of experiencing daytime dysfunction.

In this research, it was found that there was not a significant difference between female and male university students regarding sleep quality (Table 3). When the literature is examined, it is possible to find studies that support this finding. Eliasson and Lettieri [25]; Şenol et al. [26]; Aysan et al. [27] stated that gender did not affect sleep quality. However, Potter and Perry [24] revealed that women had more sleep disturbances than men, while Liu et al. [9] reported that sleep quality of men was worse than that of women.

In the research, it was found that there was a low level, positive relationship between physical activity and sleep quality, sleep duration and habitual sleep efficiency in the university students. Besides, it was revealed that there was a low level, negative relationship between physical activity and sleep latency (the duration of falling asleep) ($p<0.05$) (Table 5). Accordingly, it can be said that as the physical activity level increases, the duration of falling asleep, albeit just little, decreases, and sleep quality, sleep duration and sleep efficiency increase.

Physical activity levels of a significant amount of the university students who participated in the research were low (n=50; 25%) and moderate (n=108; 54%). 21% (n=42) of the students had a high level of physical activity (Table 1). It is thought that as the students' physical activity levels increase, the low level of relationship between physical activity and sleep quality will increase.

When the literature is examined, it is possible to find many studies regarding that physical activity and exercise increase sleep quality. Işık et al. [28] reported that there was a positive relationship between physical activity and sleep quality in the university students. Benloucif et al. [29] stated that a two-week morning exercise increased sleep quality. In similar studies, Adamson et al. [30]; Montgomery and Dennis [31] reported that regular physical activity increased sleep quality in the adults. Loprinzi et al. [32] revealed that as a result of four months of exercise, the patients with chronic sleep disturbances experienced an 85-minute increase in their sleep duration per night. Loprinzi and Cardinal [33] found that sleep quality of the individuals between 18-85 years of age differed on the days when they did exercise and did not do exercise, and that on the days of exercise, sleep quality of the individuals was high and their daytime sleep dysfunction was less common. In his study that compared the perceived and measured sleep qualities of 30 elite rowers and 30 sedentary individuals, Ayar [22] concluded that the perceived and actual sleep qualities of elite rowers were higher than those of sedentary individuals.

In accordance with the findings obtained from the research, it was concluded that physical activity in the university students increased, albeit at a low level, sleep quality. Physical activity contributed to the reduction of sleep latency (the duration of falling asleep), and the increase in sleep duration and habitual sleep efficiency, though just little. As the frequency, intensity and duration of physical activity increase, the effect of physical activity on sleep quality is expected to increase, too. Therefore, university students should be encouraged to participate in the recreational activities and exercise programs inside and outside the campus.

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A Brief Overview and Studies Analysis Focus on the Methods of Monitoring the Functional Status of Athletes Practicing Martial Arts

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Abstract

Study aim. Modern competitive activity imposes significant requirements of the functional readiness level of martial arts athletes. Moreover, informative and objective monitoring methods should be used for a qualitative assessment of the functional status of martial artists. At the same time, a single position on determining the most effective methods for monitoring the functional status of athletes practicing martial arts has not been developed by scientists. It was revealed that different specialists use various methods of monitoring and assessing the functional state of martial artists.

Indeed, the purpose of the research is a structural analysis of scientific research focuses on the methods of monitoring the functional status of athletes practicing martial arts carried out by scientists from Russia and several CIS countries.

Methods. Information search was carried out in scientific databases: SCOPUS, Web of Science, PubMed, Google Scholar, Crossref, eLIBRARY. Fortunately, searches included the words: functional training of athletes, martial arts, adaptation, monitoring, control. The recommendations of the PRISMA-P protocol were used to work with the data. Accordingly, the following criteria were taken into account when analyzing the data: achieving the goal of research, availability of sufficient number of studied athletes, availability of informative tests and measurements, statistical data analysis, age of documents not older than 8 years.

Results. There are 136 documents matching your search criteria. Besides, there are submitted documents: 124 articles and 12 PhD thesis. Furthermore, the most of the scientific papers (107 documents) are publications in Russian oriented to the Russian-speaking category of readers. Most of the documents (127 studies) contain data on the assessment of the functional state of martial artists using various methods. Besides, a number of studies (9 scientific papers) in addition to monitoring the functional status of athletes contain data on the restoration of the functional status of martial art wrestlers using various methods. The duration of studies had been from 1-2 days to 2 years. Moreover, the age of the studied athletes was from 6 to 30 years old. Sports practice of athletes: freestyle and Greco-Roman wrestling, judo, sambo, combat sambo, mixed martial arts (MMA), taekwondo, boxing, kickboxing and Muay Thai. However, there are objective and subjective methods for monitoring the functional status of athletes in the documents. Also, Russian scientists use hemodynamic and biochemical methods, use special fitness tests and conduct a comprehensive functional diagnosis of athletes.

Conclusions. Many monitoring methods of the functional state of martial artists (biochemical, physiological, special fitness tests) used by the Russian scientists are relevant and welcomed by the foreign experts. Some research methods limitations of biochemical indicators of the athletes' body's response to the load was revealed. The views focus on the methods of analyzing the data of heart rate variability of athletes are different evaluating their response to stress. A lack of monitoring data of the functional status of young athletes where athletes age is over 30 years old, girls and women practicing martial arts has been discovered. The research priority of the Russian scientists is young elite athletes reaching the age 17-22 years old, candidates and members of the national teams of the Russian Federation in various types of martial arts. An analysis of the documents has showed that Russian scientists are not using enough data from studies of

foreign colleagues. The number of current references to the studies of foreign scientists in the literature is small. The lack of modern scientific data can have a negative impact on the quality of studies of the functional status of athletes practicing martial arts in the Russian Federation.
Keywords: Martial arts, special endurance of athletes, training load, electrocardiogram (ECG), adaptation, biochemical parameters, scientific data, structural analysis.

Introduction

It is known that the modern competitive activity is characterized by a significant amount of training loads and strict requirements for the level of functional readiness of athletes. Effective organization of training activities requires quality control of the training process for athletes. By the way, specialists use various options for monitoring the physical status of athletes (objective and subjective) for control. Monitoring is necessary for optimal control of the training load and identification of any negative effects on the health of athletes [1]. The problems of qualitatively monitoring of the training and competitive load of athletes are today a current topic of scientific research in the world. A significant increase has been found in empirical and applied research on this topic [2]. Today, sports doctors and trainers must comprehensively monitor all physiological changes in the body of athletes to create optimal training cycles. These cycles should contribute to maximizing greater productivity of athletes with minimal risk of overtraining and injury [3].

Nevertheless, the functional readiness level of athletes practicing martial arts is an essential component of their physical condition and readiness to achieve a sporting result. The need to achieve high competitive results makes coaches all the time to increase the volume and intensity of training loads which leads to a high stress degree of the body adaptation mechanisms of athletes [4]. Qualitative analysis and an objective assessment of the adaptive capacity of athletes are important factors in athletic selection and training activities of martial arts [5]. At the same time, experts point out that it is necessary to take into account all adaptation peculiarities of athletes to physical loads when planning the training process [6]. It is known that with high-intensity training effects, the lack or absence of control over the magnitude of the load leads to fatigue and the appearance of negative cross-effects of the body adaptation of martial arts [7]. In modern sports practice it is necessary to use informative and effective methods of monitoring and assessing the level of load received by athletes in the process of training activity [8]. Consequently, scientists point out that the qualitative monitoring of the physical and functional state of martial artists will be effective on the basis of comprehensive and systematic studies characterizing the different stages of the training process [9]. Experts also indicate that the results of such studies should be presented in the form of surveys used as reference materials in assessing the effectiveness of training programs and the physical status of athletes [10].

Besides, the purpose of the study is a qualitative structural analysis of modern scientific data focus on methods for monitoring the functional status of athletes practicing various types of martial arts. Scientific studies data of experts from Russia and several CIS countries had been used for the analysis.

Methods

By the way, a search was made for significant (published in peer-reviewed scientific journals) documents in various scientific databases: Web of Science, SCOPUS, PubMed, Crossref, Google Scholar, eLIBRARY to achieve the study goal. Searches had included the terms: functional training, functional status, martial arts, athletes, monitoring, control, exercise, adaptive capacity, endurance. Consequently, the implementation recommendations of the review protocols and meta-analysis PRISMA-P were used to improve the review and analysis quality of the obtained data. The age of the found documents was not older than 8 years (2011-2019). The following criteria had been taken into account analyzing the data: the relevance of the research goal, the achievement of the stated research goal by the authors, a sufficient sample of studied athletes, the availability of informative tests and other measurements and a statistically correct analysis of the obtained data.

Statistical Results

Moreover, during the data search, 136 studies had been found that met all the criteria of the search request. Data were presented: 124 articles (there were 18 articles in the SCOPUS database, 13 articles in the Web of Science database and 93 articles in the databases: Crossref, Google Scholar, eLIBRARY) and 12 candidate dissertations (PhD thesis). At the same time, most of the found documents (107 papers) were publications in Russian aimed at the Russian-speaking audience of specialists. Only a small part of these studies (8 documents) had a full translated version in English. Most of the research (127 documents) was an assessment of the functional state of martial arts in a certain period of the training cycle. In addition, a number of studies (9 works) to assessing the level of the functional state of athletes had contained data on the possibility of restoring the functional status of martial art wrestlers by various methods. The age of the studied athletes was from 6 to 30 years. The studies duration was from 1-2 days to 2 years. The studied athletes had practiced: Muay Thai, taekwondo, judo, sambo, combat sambo, freestyle and Greco-Roman wrestling, boxing, kickboxing, mixed martial arts (MMA). All studied athletes were male. The sportsmanship level was varied: from athletes who did not have significant sporting achievements to Honored Masters of Sports (winners and prize-winners of world championships and Olympic Games). The majority of martial artists (72.6% of the studied athletes) were elite athletes who had an experience in competitive practice and sporting results in competitions at the national level. The scientists had used diagnostic (functional tests and tests), biochemical methods (determination of the level of lactate, creatine and other substances in the blood of athletes, the concentration of various substances in saliva) and various analyzing methods of heart rhythm variability of martial arts to assess the level of functional status of athletes. Also the widespread use of various tests was revealed to determine the level of special endurance of athletes to perform competitive load.

Data number of studied athletes are presented in Figure 1.

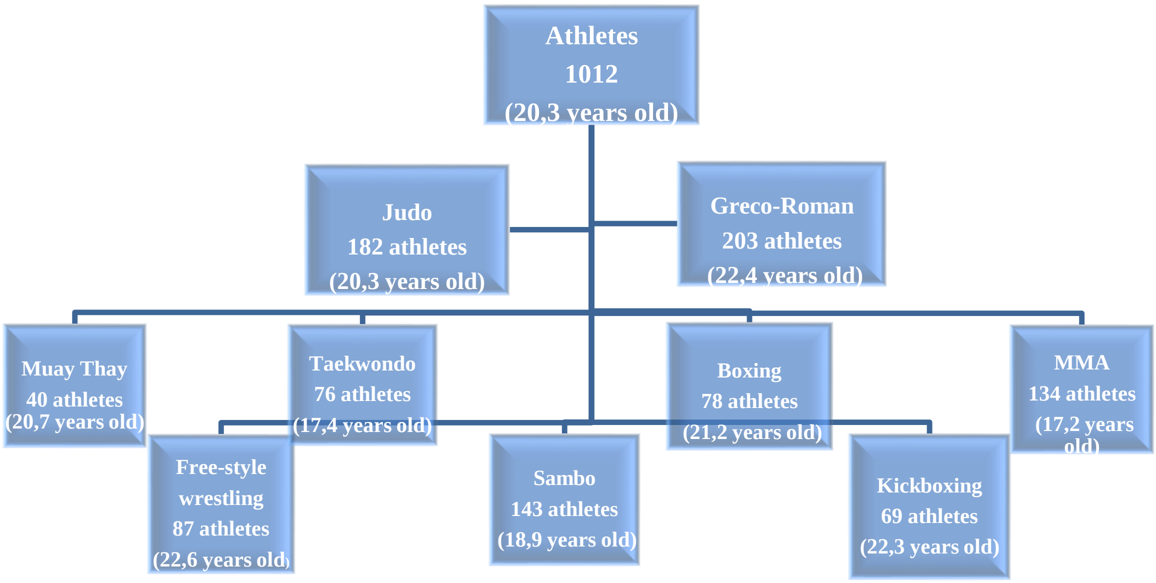

Figure 1. *Data about studied martial artists*

The main data of the studies presented in the overview are presented in Table 1.

Table 1: *General research characteristics*

Monitoring and recovery methods	Studies range	Outcomes
Heart rate, ECG, GDV-gram	31 Ar, 5 Cd (Ru-29, En-7)	The use of various methods of cardiointervalography has been identified: method of Bayevsky, method of Zavyalov,

		method of Dushanin
PWC170, Harvard step test, Gench test, Stange test, Ruffer test, Cerdo test, etc.	35 Ar, 2 Cd (Ru-27, En-10)	Test results depend on the age and level of athletic achievement of athletes. Athletes who show high level results demonstrate higher levels of functional readiness.
Biochemical data: the level of lactate, creatine, the content of reticulocytes and hemoglobin in the blood, the ions concentration of K + and Na + in saliva, etc.	28 Ar, 3 Cd (Ru-24, En-7)	Some discrepancies were found in the assessment of blood lactate concentration data in determining the functional status of martial arts (from 22,7 to 24,8 mmol/l)
Special tests (SJFT, power test, etc.)	16 Ar, 1 Cd (Ru-13, En-4)	The dependence of the test results on the level of the functional state of martial artists has been revealed
Evaluation of technical and tactical actions and the activity level of athletes in competitive matches	5 Ar (Ru-3, En-2)	A high level of activity correlates with the level of functional readiness in competitive matches.
Transcranial stimulation, electromyogram, nutritional supplements	9 Ar, 1 Cd (Ru-9, En-1)	The adaptive capacity increase of athletes during the period of pre-competitive training, the level of hemoglobin increase and the level of cortisol reduction

Note: Ar - Article, Cd - PhD thesis, Ru - Russian text publication, En - publication in English

A brief overview of received findings

Consequently, the analysis of the found documents had revealed that scientists from Russia and the CIS countries use various objective and somewhat subjective methods to assess the functional status of martial artists. Romanenko et al., had used the definition of the dynamics of heart rate (HR) of 63 athletes practicing various types of wrestling and shock martial arts. At the same time, age of athletes was 17-18 years old. The results had shown that the adaptation degree to the load for all athletes was within the normal range. Scientists say that the dynamics of HR is the fastest and most easily recorded response of the body to training effects [11]. It goes without saying that Doeva and Gagieva propose to assess the functional state of martial arts by calculating the coefficient of endurance. This coefficient represents the integral indicator of the ratio of HR and pulse pressure. Scientists has examined 10 elite free-style wrestlers at rest, at the peak of the training load and during the recovery period: 1,2,3,5,7 and 10 minutes of the recovery period. However, experts say that endurance coefficient can be used to predict the athletic performance of athletes [12]. Many Russian specialists use the cardiointervalography method (heart rate variability analysis) to assess the functional state of the body of martial artists. Vikulov et al. had investigated 33 elite wrestlers of Greco-Roman style (the age of athletes was 18-23 years old). The recovery period after the last workout was 22-24 hours. Athletes had a 5-minute ECG recording. Data evaluation was performed by the method of Bayevsky. The data had shown the presence of normocardia – 63,82±8,69 beats/min. and moderate bradycardia – 58,26±7,22 beats / min. among the studied athletes. Scientists propose to use these indicators to assess the level of the functional state of elite wrestlers [13]. Besides, Osipov et al. had tested 90 elite athletes practicing martial arts (sambo, combat sambo, judo). ECG recording method of Zavyalov was used to assess the level of functional readiness of athletes. This method was based on assigning certain points to various electrocardiogram readings. The ECG assessment had taken into account the percentage of the number of ischemic ST segments and the presence of a plateau on the ECG. The criterion for acute fatigue was the presence of ischemic ST segments in 50-80% of the electrocardiogram complexes. These ECG readings were estimated at 26-28 points and serve as a criterion for reducing or stopping the training load. The results had showed a significant advantage of athletes using this method in the development of special endurance [14]. Grishin et al, had used the ECG recording method of Zavyalov to control the functional status of elite kickboxers (19-21 years old). It was found that athletes who used this method not only differed in the best performance indicators, but also they had significantly reduced the percentage of the fat component of body weight from 11–12% to 7–9% [15]. Portnyagin et al., had used to assess the dynamics of the functional state of the cardiovascular system of martial artists, the method of recognition and measurement of R-R time intervals of the electrocardiogram followed by the analysis of numerical series by mathematical methods. For evaluation, the Omega-S software and hardware complex (manufactured in Russia) was used. The study had been conducted with 20 elite freestyle wrestlers for 3 weeks. The use of this method had been recognized as effective in addressing issues of operational control and an objective assessment of the level of functional readiness of athletes [16]. Zebzeev et al, had conducted a development dynamics study of special endurance of 40 elite judo wrestlers (17-19 years). The research duration was during 2 years. We had used the Omega-S software and hardware complex (made in Russia) and the multifactorial express diagnostics of the ECG recording method of Dushanin. It was revealed that the athletes who used this method while controlling the training load had a special level of endurance increased significantly during the research. A significant increase of lactate concentration in the blood to 24.2-24.8 mmol / l and an increase in the maximum oxygen consumption up to 90% had been found [17]. Minko had used ECG readings and the PWC170 test to study the level of adaptive responses of martial artists to the load. 64 athletes (17-21 years old) practicing sambo and judo were studied. ECG registration was carried out at rest and after a training load. It was revealed that the worst indicators of the body's adaptive response to physical activity predominate among athletes of younger age [18].

However, Cherkashin et al, had suggested using a special combined 3-minute test to assess the functional ability of athletes practicing Muay Thai. This test was a sequential execution of 9 different combinations of punches and kicks. The number of performed hits had been counted. 40 elite athletes reaching the age 19-22 years old were tested. The test allowed to determine the criteria for special physical and functional fitness for athletes practicing Muay Thai [19]. Zdanovich and Zebzeev had used the special judo fitness test (SJFT) in assessing the level of functionality of 20 elite athletes (17-19 years old) for 1 year. It was revealed that athletes who showed higher SJFT rates at the end of the training cycle they showed higher results of competitive activity [20]. Also, Podrigalo et al, had recommended using a complex method for predicting the level of athletic achievements of athletes based on the analysis of various indicators: physiological, biomechanical, etc. The study involved 17 athletes practicing kickboxing. In the course of the study, indicators of HR recovery were evaluated after the test load and the electrocardiogram readings using the method of Bayevsky. The analysis had identified criteria predicting the likelihood of success in kickboxing [21].

Thus, Russian experts recommend using quantitative indicators of tactical and technical actions of athletes in competitive matches to assess the level of functional fitness of martial artists. Miller and Bakshutov propose to conduct an assessment by filling in a special questionnaire with members of a team or club. The questionnaire must be estimated on a 10-point scale, the volume and intensity of the attacking actions in competitive matches. There are 10 criteria for evaluation. The results of the evaluation for novice athletes on average should not be lower than 15 points, for the elite not lower than 70 points [22]. Osipov et al, have pointed to the possibility of using a number of competitive factors (criteria for the effectiveness of athletes' competitive actions) in assessing the level of physical and functional fitness of elite judo wrestlers. Kuznetsov and Mubarakzyanov [23] confirm that quantitative indicators of the effectiveness of competitive struggle have significant correlations with indicators of functional readiness (PWC170, HR, maximum oxygen consumption (MOC)).

It is necessary to pay attention to specialists who had used electronic systems of training equipment determining the level of special endurance of athletes. Therefore, Mout'yev and Mishin had used the e-sparring system "Zemita" – training vests, gloves, pillows, equipped with sensors recording the characteristics of the strikes. The equipment was used to determine the optimal indicators of the quantity and quality of strikes among young (6-7 years old) athletes practicing taekwondo. 26 athletes had completed the test - applying the maximum number of hits to the training bag in 60 seconds. The results of the test were used by scientists to create a regulatory base of requirements for the required level of functional readiness of young athletes (at least 85 strokes over 60 seconds) [24]. According to Potapov and Maleev who recommend using the Karbonik breathing simulator (produced in Russia) to increase the level of functional fitness of athletes. The simulator allows you to adjust the concentration of CO2 and O2 during breathing and contributes to the creation of an artificial gas environment (hypoxia-hypercapnia). Studies had been conducted with 20 young (15-16 years old) judo practitioners. Athletes had used the simulator for 20 minutes in a daily training for a month. It was revealed that the use of the Karbonik breathing simulator made it possible to provide an increase in the level of the functional body reserve of athletes. The effect was revealed in the growth of VC indicators, Gench and Shtang samples, decrease in HR at rest [25]. Bukharin et al, had recommended the use of interval hypoxic training in combination with high-frequency impulse electric current (HIEC) to increase the level of efficiency of martial artists. Scientists had investigated the effect of interval hypoxic training with HIEC of elite wrestlers (n=10) of the Greco-Roman style. Age of athletes - 18-21 years. The course of exposure - 15 days (daily workouts with HIEC). At the end of the course, an increase in the figure of aerobic productivity (PWC170 test) and the body's resistance to hypoxia (Gench test) was revealed [26]. Roguleva had used the method of transcranial stimulation of the brain by pulse current to optimize the functional status of athletes. The study had involved 13 elite wrestlers reaching the age 18-24 years. The course of transcranial stimulation consisted of 10 daily sessions (the duration of each was 20 minutes). The sessions were conducted using the TRANSAIR-5 device (production - Russia) the maximum value of the pulsed bipolar current was 3 mA. The scientist argues that such a course helps to optimize the functional state of the nervous system, increase the speed of simple and complex sensorimotor reactions, synchronize the electroencephalogram rhythms of athletes [27]. Gorbachev had conducted a study with elite wrestlers of Greco-Roman style dedicated to the ability to control muscle activity on the parameters of the envelope electromyogram based on the principles of biofeedback. The use of the electromyogram envelope in training the biceps and triceps muscles of the shoulder had increased the adaptive capacity of the cardiovascular system of athletes to special training loads by 10-12% [28].

According to Terzi who recommends the use of diagnostic control methods to optimize the process of functional readiness of martial artists successfully. The scientist had used a number of functional tests to determine the level of functional readiness of athletes (n=50) of various qualifications practicing taekwondo. There are recommended samples: Gench, Shtang, Ruffer, Cerdo, Skibinski and others. Terzi believes that the complex of functional tests is an informative method for assessing the effectiveness of the training process aimed at forming a high level of functional fitness [29]. Korzhenevsky et al, had used the PWC170 test and a special force test (lifting the barbell of the bar – 20 kg, the maximum number of times) for complex diagnostics of wrestlers of Greco-Roman style. Besides, 57 wrestlers had passed the diagnosis: 10 elite athletes and 47 young athletes. At the same time, age of athletes - 16-26 years. The use of these tests allowed scientists to develop uniform criteria for assessing the functional readiness of wrestlers of various levels and ages. In particular, it was revealed that the HR recovery indicators in the PWC170 test in 3 minutes after the load should not exceed 108±0,9 beats/min. for elite athletes. HR recovery rates of young athletes should not exceed 116±1,3 beats per minute. In the strength test, the average time for lifting the rod is 5,00±0,2 minutes for elite wrestlers and 3,15±0,2 min. for young athletes [30]. Laptev had conducted a study with 45 elite Greco-Roman wrestlers to determine the maximum aerobic capacity of athletes. For testing, a test with increasing load was performed on the “Monark Peak Bike 894E” bicycle ergometer. Besides, the power of work performed at the level of the anaerobic threshold had been evaluated. The mean values of the lungs for athletes – 162,7±8,9 W, average ones – 191,6±7,1 W and heavy weight categories – 217,8±15,7 W had been found. The scientist suggests using the obtained data to evaluate aerobic efficiency of athletes [31]. Volodchenko et al, had proposed to use a whole battery of psychophysiological tests that assess the speed of athletic reactions of athletes for a qualitative assessment of the functional status of martial artists. The study had involved 76 elite athletes practicing various types of martial arts. The subjects’ age was 17-21 years old. The test results had showed that athletes practicing kickboxing found better rates of motor reaction speed than athletes practicing other martial arts. However, scientists point out that this set of tests cannot be fully used in monitoring the functional status of athletes since the battery of tests they offer is far from complete [32]. Simakov and Pavlov had determined the functionality of young athletes (14-18 years old) practicing taekwondo. Gench test and Harvard step test had been used. According to an obtained data, the integral health indicator was calculated. Scientists say that athletes who have the best results of functional fitness the working efficiency indicator is 26,9-27,4 units [33]. Ashkinazi and Bavykin had proposed using tests related to speed-strength and strength exercises to assess the level of special endurance of athletes practicing mixed martial arts (MMA). Young athletes (16-18 years old) had taken part in the research. The athletes had performed the tests: squats with a barbell on the shoulders (70% weight of the maximum) to failure and performing movements – 2 hand strokes + throw (1 min.). After the exercise, HP indicators with 1.2.3 minutes' intervals of athletes had been recorded. It was revealed that athletes with a higher level of functional fitness demonstrate significantly (P <0,01) higher values of the proposed tests results [34].

Indeed, some scientists propose to use methods of biochemical control to assess the level of functional fitness of martial artists. Kuznietsov and Kurov had conducted research with elite judo wrestlers (n=30) reaching the age of 18 to 28 years old. Athletes had performed an intense load, close to the competitive (test match). 5 minutes after the load was completed, blood and urine were collected to determine the level of creatine, creatinine and urea. Moreover, athletes who had a high level of functional training, the level of creatine and creatinine in the blood had increased but then it had decreased during the recovery period (day). Judoists with a low level of functional readiness had showed an increased concentration of creatine and creatinine in the recovery period [35]. Korzhenevsky et al, had investigated 20 elite wrestlers of Greco-Roman style during the pre-competitive preparation period. Scientists investigated the lactate concentration in the blood of combatants. Analysis had been made in 3 minutes of active struggle. Based on the analysis, 3 different types of adaptation of athletes to competitive loads had been identified. The best type was the presence of medium changes in the concentration of lactate in the blood from the normal 15-16 mmol/l (22-23 mmol/l). It was proposed to use the indicators of athletes as selection criteria for the formation of national teams [36]. Also, Sashenkov et al, had investigated the features of peripheral "red" blood in beginners and elite athletes (n=204) practicing boxing and various types of wrestling. It was revealed that wrestlers regardless of their qualification had showed that "red" blood did not differ significantly. The boxers had found significant differences in the peripheral blood indices depending on the level of athletic achievements of the athletes. A significantly higher content of reticulocytes in the blood had been found among the athletes with lower qualifications. Besides, the volume and diameter of erythrocytes and hemoglobin in the blood were significantly higher among elite boxers [37]. Isaev et al, had investigated the immune status of elite wrestlers (there are 41 wrestlers and 29 boxers) using the Novikov method. Neutrophil secretion activity, lysosomal activity parameters and levels of the main types of immunoglobulins were determined in the serum of athletes. The obtained values allow us to determine the level of functional readiness of athletes since there is a significant load on the immune status of martial arts which affects their working efficiency in martial arts significantly [38]. Volodchenko et al, had used the saliva analysis of kickboxing athletes to determine the general state of martial arts. Saliva sampling was carried out before and 5 minutes after the training session. The indicators of glycolysis, the level of lactic acid concentration, the degree of lipid oxidation, etc. had been investigated. The obtained biochemical indicators were informative criteria for assessing the degree of training load on the body of athletes [39]. Pseunok et al, had investigated young (11-13 years old) sambo fighters by photocolorimetric method. Saliva had been collected to determine the concentration of K + and Na + ions. The study period was during 5 months. It was revealed that with excessive training load, the level of K + and Na + ions in the saliva of young athletes had been significantly increased. An excessive increase serves as a signal of the need to reduce training loads in these indicators [40].

Furthermore, Kalnitskaya et al, had investigated 10 elite athletes practicing judo using the Gas Discharge Visualization (GDV-gram) method. GDV-grams of all fingers of both hands of the athletes were recorded with the help of the device "Quantum-Pro" for 10 seconds. Scientists say that athletes with a higher level of functional readiness have a much larger GDV-grams glow area than judoists with a lower level of functional training [41].

In some studies, focusing on the methods of monitoring the functional status of martial artists, interesting data were found on the possibility of effective recovery of the body of athletes with significant loads. The data of the increase in the functional capabilities of the body of combat sportsmen are presented by the use of food additives and sports nutrition. Shustov et al, had pointed to the possibility of a significant increase in the physical endurance of the martial arts using the multi-component food complex "Attack". This complex consists of three modules combining concentrated protein food supplements with extracts of medicinal plants (ginseng, lemongrass, mint, etc.). In the course of research with a group of elite martial artists (n=20), a significant increase of the athletes' functional parameters was revealed: recovery time after the test load, speed of visual-motor reactions, etc. and in 4 weeks of regular intake of this food complex [42]. Gavril'eva had developed a way to restore the body of young athletes (16-17 years old) engaged in free-style wrestling as a natural biological remedy - antler mass of reindeer. It was revealed that regular use of antler mass during the pre-competition preparation leads to an increase in the level of hemoglobin in the blood, an increase in the level of testosterone and a decrease in the level of cortisol. The course application of antler weight contributes to a more rapid recovery of body functions of young athletes [43]. The practical significance of such studies is high since there is an increase in the use of sports nutrition and phyto-drinks among young athletes and young people who start playing professional sports in Russia [44]. The use of effective methods to restore the functional state of young athletes is necessary since modern sports activities are characterized by a fairly significant amount of training and competitive loads.

DISCUSSION AND CONCLUSION

Consequently, an analysis of the findings revealed that most methods for monitoring the functional status of athletes used by Russian scientists are also relevant for foreign specialists. The main methods for assessing the load perceived by athletes: physiological (blood lactate, heart rate) and special tests (SJFT, etc.) are also widely used by sports doctors and specialists around the world [45]. It should be noted that Russian scientists offer different values of lactate concentration in the blood as a criterion for assessing the functional readiness of athletes. The range of values from 22,7 mmol/l [13] to 24,8 mmol/l [17] was revealed. However, the difference between the presented values is not critical. Also, many factors could have influenced the obtained values: precompetitive preparation, weight reduction, specificity of the type of struggle, etc. Therefore, in our opinion, it is permissible to assess the level of functional readiness of martial artists by the presented values. It should be noted that biochemical indicators of the response of athletes to the load are presented by evaluating the reactions of lactate in studies [36], the concentration of various substances in saliva [40], other indicators are not studied enough. Foreign scientists point to the need for additional extensive study of various biochemical reactions of athletes during training and competitive load [46].

It was found that Russian specialists use different methods for analyzing the heart rhythm of athletes when evaluating the response to exercise. Thus, many scientists use the method of Bayevsky [13; 16; 21] proposing to assess the adaptation potential of athletes by the frequency of the R-R ECG intervals. Other specialists use ECG recording method of Dushanin [17]. This method is based on the analysis of the average amplitude of the R and S teeth in leads RV2, RV3 and RV6. Another method for assessing the adaptation potential of martial artists is ECG recording method of Zavyalov. The method involves determining the number of ischemic ST segments as a percentage of the ECG complexes presented for the study. This method is widely used specifically in martial arts [14; 15]. Therefore, we are not ready to give preference to one or another method of assessing the body's response to stress since all the mentioned methods in the review are widely used in the practice of sports medicine and have positive feedback from specialists. In the future, we can conduct a comparative analysis of the accuracy of these methods which will be the subject of further research by scientists.

Moreover, the lack of comprehensive research on the adaptation of young athletes to intense training effects. At the same time, it was found that the adaptation potential of young and novice athletes was significantly lower (almost 2 times) than that of elite wrestlers [4]. Comprehensive studies are needed to increase the adaptive capacity of young martial artists to an ever-increasing amount of training effects. Experts say that the control of training load and physiological recovery between training sessions is an important aspect for planning the periodization of training and increasing the level of athletes' competitive readiness [47].

There is a lack of comprehensive scientific research on the monitoring of the functional status of athletes in the long preparation stages. The duration of many studies is insignificant (no more than 2-3 weeks) and characterizes the functional status of athletes in the period of preparation for significant competitions. Longer periods of monitoring are needed which characterize the different stages of training martial artists as indicated by experts [6]. Also a lack of data on the development of the adaptive capacity of women practicing martial arts has been revealed. There are no data on mature athletes (30 years and older).

It can be recognized that in recent years, the priority direction of research by Russian scientists has been the optimization of the training activities of young (17-22 years old) elite male athletes who can be the members of the national teams of the Russian Federation and other CIS countries.

Nevertheless, a number of Russian scientists apply quantitative indicators of technical and tactical actions of athletes in competitive matches to assess the level of special physical and functional readiness of martial arts [22]. These methods do not refer to objective methods of monitoring the functional status of athletes, but can be used in conjunction with other methods of assessing the functional state of martial artists. Correlations between the level of competitive achievements and the functional state of athletes practicing martial arts are confirmed by both Russian [23] and foreign scientists [48].

It was revealed that the majority of research results Russian specialists publish in national scientific journals [49] issued for a fairly narrow circle of Russian-speaking specialists: coaches, doctors and scientists. Identified a lack of publications in journals of international scientific citation bases: Web of Science, PubMed, SCOPUS. The lack of citations of significant scientific works of foreign experts is also found in most of the discovered publications. Unfortunately, it can be assumed that the lack of scientific information will negatively affect the quality of research by Russian specialists. The absence or lack of modern and accurate data will not contribute to improving the quality of the process of preparing athletes for competitive activities.

In conclusion, we may say that the review authors expect that the provided information will help improving the quality of training activities in martial arts aimed at achieving high results in sports and preserving the physical health of athletes. The relevance of the data presented is due to some lack of modern scientific information about the methods of qualitative monitoring of the functional status of athletes and a significant increase in the volume of training loads in martial arts.

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Conflicts of interest

If the authors have any conflicts of interest to declare.

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You Get What You Give: Analyzing the Depth of Specialized Content Knowledge of Preservice Physical Education Teachers

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Abstract

The purpose of this study was to examine physical education teacher education students' volleyball, basketball and football specialized content knowledge (SCK) levels. Convenient sampling method was used for participant selection. There were totally 92 students (34 female and 58 male) accepted to participate this study from two public universities. Data collected from physical education teachers education students attending basketball (N=31), football (N= 33) and volleyball (N=28) courses. Content map was used for data collection before and after 14 week courses. Results showed that each group significantly increased their SCK levels. However, they could not reach expected score (3.0) demonstrating their depth of SCK levels. This study showed that SCK should be taught explicitly. Devoted time for SCK should be increased in PETE program.

Keywords: specialized content knowledge, effective teaching, content development, physical education teacher education.

Introduction

Teaching is defined as providing learning opportunities to students [1]. It is an interactive process and includes purposive activities for increasing students' learning level. Teaching might be differentiated by its effectiveness. [2]. While bad teaching is estimated that students do not improve their learning on the subject matter, effective teaching is about consensus between teachers' goals and students' learning. Effective teaching is systematic, stimulating and caring, and also complex in practice [3]. Moreover, it is mostly related with successful teaching and requires several knowledge bases as such Shulman [4] proposed for teachers to teach effectively. These are content knowledge, general pedagogical knowledge, curriculum knowledge, pedagogical content knowledge, knowledge of learners, knowledge of educational contexts and knowledge of educational ends [4].

Content knowledge (CK) is the core knowledge that teachers must have in order to teach subject matter [4, 5]. Studies showed that teachers must have deep CK for effective teaching [6]. CK in math was categorized by Ball, Thames and Phelps [7] as a) common content knowledge (CCK) and b) specialized content knowledge (SCK). Ward [6] transferred this categorization to physical education. He defined that CCK is the knowledge of how to perform a specific sport. CCK has two sub-domains; a) rules, etiquette and safety, b) techniques and tactics. SCK is the knowledge of how to teach CCK of a specific sport. It includes a) student errors and b) instructional task and representation. If a physical education teacher has both CCK and SCK regarding a specific sport, he/she has deep CK.

Recently, studies have been conducted on devoted time for CCK and SCK in physical education teacher education (PETE) programs [8, 9, 10]. Ward and his colleagues [9] studied on PETE curricula from different countries and found that PETE programs provide sufficient time for CCK, not for SCK. Specifically, İnce et al. [8] examined CCK and SCK time in Turkish context. Results showed that Turkish PETE curricula devoted 89.6 % for CCK and 10.4 % for SCK in physical activity and sport courses. The studies mentioned above indicated that there was a weakness in teachers' CK development in terms of SCK domain [11].

Enhancing SCK level of physical education teachers increased their pedagogical content knowledge (PCK) which was defined as representing and formulating ways for specific subject matter in order to make it comprehensible to students [5]. Studies showed that students learn easier and better with teachers who have improved their SCK as a result of SCK interventions [12, 13, 11]. Because of close definitions of SCK and PCK, these two terms are mostly confused and used interchangeably. Difference between PCK and SCK can be comprehended with an example. If a teacher was asked to describe possible errors and task progression for teaching smash stroke in badminton, he/she likely demonstrates task progression from basic side position of smash to finish smash follow-up position. This represents his/her part of the SCK of badminton. Moreover, if he/she adapts different and appropriate task selection and representation for different grade levels, this shows his/her part of PCK.

SCK focused professional development programs are effective in improving physical education teachers' PCK and their student learning level [12, 13]. Even some studies showed effectiveness of SCK interventions on physical education teachers, few studies have been aimed to measure the PETE students' SCK development. The purpose of this study was to examine PETE students' volleyball, basketball and football SCK levels.

We hypothesized that PETE students' basketball, football and volleyball SCK levels will increase after 14 weeks courses. Our second hypothesis was that PETE students will have depth SCK level for basketball, football and volleyball.

Method

Institutional Review Board was accepted this study. Individual consents of participants were ensured.

Study Design

Quasi-experimental research design was applied for this study. Data were collected from three different physical activity and sport courses prior and after the courses. We used data for comparing scores of three group students' content map(CM) pre and post test results.

Participants and Setting

Convenient sampling method was utilized for selecting participants. Totally 92 students (34 female and 58 male) accepted to participate this study from two public universities. Data collected from three groups of students; a) basketball group was 31 (M_{age}= 21.49, SD=2.44) students, b) volleyball group was 28 (M_{age}= 20.11, SD= 1.88) students, and c) football group was 33 (M_{age}= 20.85, SD= 1.04) students.

Three group participants followed 14 weeks lesson content and completed writing and performance exams. Participants filled out CM before and after courses. They completed CM in regular class time. Duration for filling CM was 20 minutes.

Data Collection

Content Map Instrument

Data were collected with content map (CM) which is a valid and reliable tool for measuring SCK [14]. CM is a graphic organizer of SCK and demonstrates instructional tasks of sport specific skills/techniques to be taught in school physical education setting for a particular lesson duration (i.e., 10 lessons). CM is a blank page and at the beginning, participants identify basic skills that would be taught in physical education lessons (e.g., smash, drop). They write them horizontally from left side to right side. Then, they write sequence of instructional tasks for each skill/technique from down to up (e.g., teaching grip or backhand service through target).Later, vertical sequences of tasks can be combined. For example, long service and smash from back court can be used together and diagramed on CM. When all tasks, skills/techniques and combinations were written, weak or strong SCK level in PETE students and physical education teachers would be differentiated. More detailed information and examples could be seen on https://www.youtube.com/watch?v=iCE7CEa7KPU&t =2s.

Content Development Categories

Content development is the key of SCK [14]. Rink [15] defined content development; a) Informing: initial task of every skills/techniques or lesson, b) Extending: changing complexity of tasks through increasing or decreasing difficulty of them, c) Refining: it is about quality of performing, d) Applying: Game performance or assessment. In 2017, Ward and his colleagues modified and added three more categories. Added categories: e) Extending-applying: extending task happened within games, f) Refining-applying: refining task during gaming. Rink [15] defined applying task in two parts which were game or assessment. In modified categories, Ward et al. [14] defined categories as informing (I), extending (E), refining (R), extending-applying (EA), refining-applying (RA), applying game (AG), and applying non-game (AN). The depth of content development of participants is determined by content development on CM.

Gauging Depth of Content Development

A formula:

$$\frac{E + EA + R + RA + AG + AN}{I}$$

validated by Ward et al. [14] was used for evaluating content development. As seen above, SCK index is calculated that total number of informing tasks take place as a denominator and all other tasks as numerators. This index score is used in literature for determining SCK level of participants [16, 17, 18]. Calculated index score is continuous variable and allows scores to be compared against each other.

Cut point 3.0 was set as criteria for distinguishing strong and weak content development. Studies in literature rationalized this index score via empirical validation data [15, 18, 19]. A mean score of 3.0 demonstrates that a physical education teacher or a PETE student used at least three other instructional tasks beyond informing task. Using all tasks except informing tasks are the evidence of content development progression.

Coder Training and Inter-Observer Agreement

A four-phase coding training guided by Content Development Coding Assessment Manual [20] followed by three coders before data collection. In the initial phase, they learned and discussed all modified content development categories. Second, there were categories and definitions on the paper and they asked to match them. To be able to pass to the next phase, all categories and definitions must have been matched correctly. Then, prepared 35 examples from different sports were given coders and they continued coding them until they reached 100% matching success. In the final phase, coders took 45 instructional tasks from previously completed CMs and coded them. They passed this phase when they answered correctly at least 95% of all instructional tasks. The four-phase training was strictly applied. When coders could not meet the criteria of any phase, they turned back to first phase and started again.

To check inter-observer agreement, 33% of total number of content maps (CM) (N=31) were selected and coded. Mean inter observer agreement was calculated as 96.8 % (range 95.2- 97.6).

Data Analysis

SCK index scores of three group participants were reported descriptively. Then, we used paired sample t-test to compare within results of three groups. Before conducting analysis, assumptions of paired sample t-test were checked. Skewness-Kurtosis, histogram and p-p plots were used for testing normality assumption. Results showed that assumption was met. Second assumption was all dependent variables must be continuous. Variables were continuous and this assumption was met. Final assumption was observations must be independent. Researchers confirmed this assumption. Overall, assumptions indicated that paired sample t-test could be used for analyzing collected data.

Instructional conditions of three different groups were represented according to their instructional foci. We investigated observation through 65% of basketball, 70% of volleyball and 65 % of football classes. In this process, we used three steps observation protocol. First, we collected contents being taught to what was indicated in syllabi of three groups. Analysis showed that lecturers followed their contents lesson by lesson as expected. Second, organizations which were defined each lesson about pedagogy have been examined. Data indicated that organization and syllabi were ensured according to lessons we observed. Third, we did final judgment about correction of all lessons.

Results

Table 1. Table of paired sample t-test

	Paired Differences					Sig. (2-tailed)
	M	SD	SE Mean	t	df	

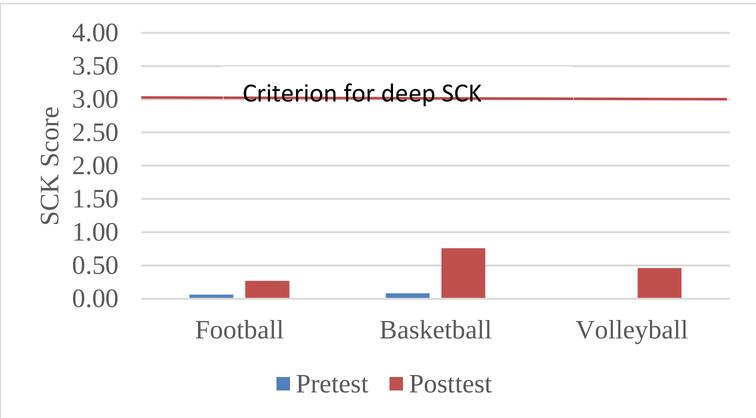
Pair 1	Football_pretest - Football_posttest	-.21	.34	.06	-3.44	32	.00
Pair 2	Basketball_pretest - Basketball_posttest	-.67	.67	.12	-5.61	30	.00
Pair 3	Voleyball_pretest- Voleyball_posttest	-.46	.52	.10	-4.63	27	.00

Table 1 indicated that pre and post test results of football ($t_{(32)}$= -3.44, p<.05), basketball ($t_{(30)}$= -5.61, p<.05) and volleyball ($t_{(27)}$= -4.63, p<.05) were significantly increased.

Table 2. Pre and post test descriptive results of three groups

	N	M	SD	SE Mean
Football_pretest	33	.06	.25	.04
Football_posttest	33	.27	.32	.06
Basketball_pretest	31	.08	.21	.04
Basketball_posttest	31	.76	.60	.11
Voleyball_pretest	28	.00	.00	.00
Voleyball_posttest	28	.46	.52	.10

Even results showed that paired sample t-test was statistically significant, mean post test results of football (*M*= .27, *SD*=.32), basketball (*M*= .76, *SD*=.60) and volleyball (*M*= .46, *SD*=.52) groups reached lower values than expected criteria (3.0) value (See table 3 and graphic 1).



Graphic 1. Mean pretest and posttest SCK scores

Discussion

The purpose of this study was to examine PETE students' volleyball, basketball and football SCK levels. We hypothesized that PETE students will increase basketball, football and volleyball SCK levels after 14 weeks courses. Paired sample t-test showed that PETE students' volleyball, basketball and football SCK levels significantly increased from pre to post test. Ward et al. [21] investigated SCK level differences between CCK focused group and SCK focused group. Similar to our study, CCK focused group significantly increased their SCK levels. Despite the statistically significance, increase in the SCK score was not meaningful. Preservice physical education teachers did not reach the benchmark 3.0 which is the indicator of deep SCK [15, 18, 19] .

Our second hypothesis was that PETE students' basketball, football and volleyball SCK level will be sufficient for having deep content knowledge. In our study, SCK index score 3.0 which shows depth of content development was set. Results showed that mean index scores of football (*M*= .27), basketball (*M*= .76) and volleyball (*M*= .76) group participants were determined. All group participants could not reach expected SCK index scores even they newly completed their lessons. Similar results have been found in literature [21, 22]. The study of Ward, He, Wang, and Li[22] examined football SCK levels of Chinese secondary physical education teachers. Their SCK levels were lower than expected. In another study, low SCK level was also determined [22]. Study showed that CCK focused group had lower SCK score than SCK focused group in terms of content development 3.0 criteria. This criterion for having deep SCK could not meet in different sport and context. Findings of another study showed that PETE students did not improve their basketball and parkour SCK level [23].

Having sufficient SCK level increases PCK of physical education teachers [11, 12]. If PETE students graduate from their department without sufficient SCK levels for specific physical activity and sports, it will not possible to expect they could teach them to students appropriately. Siedentop [24] stated that if physical education teachers don't have enough CK, they will teach same tasks again and again.

The findings of this study had some limitations. First, sample might be moderate for measuring SCK level of PETE students. Future studies should focus on larger sample size. Second, we examined basketball, volleyball and football SCK level. Different physical activity and sports should be investigated.

Conclusion

Results of this study concluded that football, volleyball and basketball SCK levels of PETE students statistically increased after 14 week courses. However, they could not reach required SCK value of 3.0. This study showed that SCK should be taught explicitly. In addition, devoted time for SCK should be increased in PETE program.

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Job Satisfaction and Professional Burnout of High School Teachers

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Abstract

The essence of occupational burnout phenomenon reveals within the employment behavior management as the display of professional activity effect on corporate staff. The goal of our study is to identify the relationship between occupational burnout components, ability to cope with stress and job and life satisfaction of university teachers. The study involved 100 teachers of the Finance University. The study results suggest that the stronger the emotional thriftiness mechanism, the more callousness, cynicism or rudeness in dealing with colleagues and students, the less teachers are satisfied with their own work. The main directions of educational personnel occupational burnout correction control for the purpose of reduction and compensation, and for the purpose of personal occupational burnout prevention implemented in the course of the training workshop authorial program were emphasized. Within the corrective measures, conditions for the following personality development were provided: awareness of own ideas about stress, attitude to stress factors, awareness and management of own emotional states, ability to find resources for stress coping.

Keywords: occupational burnout, job satisfaction, ability to cope with stress, employment behavior of teachers.

1. Introduction

The reorganization of higher education, transformation of universities into research centers dramatically increases the amount of scientific load on teachers while increasing the amount of academic load, the need for the use of innovative and digital learning technologies in teaching, which leads to additional strain in the work thus boosting the occupational burnout and undermining the employment behavior of teaching staff [1]. So, despite the fact that a significant amount of research papers is devoted to the occupational burnout [2; 3; 4; 5; 6; 7], at the present time, this problem has again become relevant for many types of professional activities, including university teachers.

Despite the fact that the problem of "occupational burnout" has now become the focus of much attention in the labor economics, management, labor psychology, managerial psychology, up to now, the research literature gives no fairly clear definition of characteristic aspects of various deviations in the work of professionals both in general and in terms of professional personality development, though, at the same time, there are many close concepts that address deviations in the professional development of an individual, for instance, "destructive organizational behavior", "professional degradations", "learned helplessness", "proneness to conflict", "professional activity barriers", "stressogenity of a professional", "emotional burnout", "professional accentuations", "employment behavioral problems", etc. [4; 8; 9].

The goal of our study is to identify the relationship between occupational burnout components, ability to cope with stress and job and life satisfaction of teachers.

2. Literature Review

Deviations in professional personality development and impact on professional activity are determined through the concepts of "professional stress (distress)" and the syndrome of "emotional (occupational, mental) burnout", which peep either in expansiveness, or in apathy, or in despair and in the loss of "life tone" as a consequence of inadequate consumption of accumulated energy which was not steered on the right occupational course [9; 10].

Occupational burnout according to the professional deformation concept developed by K. Maslach and S. Jackson is thought of as a three-dimensional construct [5], which includes:

– emotional draining described in the concept as the main burnout component which manifests itself as a reduced emotional background, indifference or emotional supersaturation;

– depersonalization representing a tendency to form a negative, callous, cynic attitude towards recipients;

– reduction of personal achievements consisting "in reduced sense of competence in the work, dissatisfaction with oneself, reduced value of own activities, understating own professional achievements and successes, negativism towards official merits and opportunities, limited own capabilities, responsibilities towards others"

The occupational burnout syndrome is evidenced in psychophysical (weakness, decreased activity, constant fatigue, etc.), socio-psychological (indifference, depression and unconscious anxiety, nervous "breakdowns", angst...), and behavioral (feeling that the work is becoming still harder, reduced passion for professional activity...) symptoms. Thus, the occupational burnout manifests itself in destruction of the entire psyche and is characterized by physical exhaustion, which often consists in psychosomatic disorders of various degrees of severity [1].

The occupational burnout, in our opinion, should be considered as a symptom of professional deformation, representing "gradually accumulated sustainable changes in personal qualities in response to professional activities, negatively affecting the productivity and efficiency of labor, business and interpersonal relationships, as well as the personality development" [11]. There are individual differences in the development of the "occupational burnout syndrome" among teachers as a derivative of the degree of expression of some individual psychological characteristics, as well as the conditions of their professional activities [10].

Satisfaction is considered as one of the main happiness components, as its cognitive component, representing a reflexive assessment of the past and present well-being.

According to studies [8; 9], satisfaction is determined by the following "intrinsic factors: income, physical condition, employment and job, social relations, leisure, housing conditions and education" [12]. The general satisfaction also depends on the emotional state and cognitive factors (for instance, attribution and mastery, perception of past events). Thanks to existing positive illusions "people satisfied with life evaluate themselves, their friends and partners as above-average" [12]. It is important to note a high degree of self-esteem and self-assessment influence on the life satisfaction revealed in the studies on this issue, as well as the following personal qualities, "as internality, extroversion, neuroticism, etc." [13].

The job satisfaction is defined as an emotion-laden assessment of personal professional activity results by a person. Satisfaction is achieved when an employee is able to compensate for unattractive aspects of his work with something more significant for him in the work performed [3].

A person who is satisfied with his work experiences positive emotions and feelings that encourage him to work well, which directly affects the work efficiency [14;15]. The job satisfaction is the result of successful work, when a person overcomes various difficulties and obstacles arising in the process of such activity [3]. For instance, such prominent authors as E. Lock, L. Porter and E. Lawler, D. and S. Schulz and others believe that satisfaction itself is often not a cause but a consequence of good work, when an employee has something to be proud of.

3. Method

The study involved 100 teachers of the Finance University. Age of respondents between 26 and 63 years. The total length of respondents' professional experience – from 6 to 43 years.

The occupational burnout study was pursued using the "Occupational Burnout" questionnaire of Maslach K.and Jackson S., adapted by N.E. Vodopyanova. We have chosen the "Stress Test" for determination of the ability to cope with stress. The life and job satisfaction were measured using the "Assessment of General Life Satisfaction" questionnaire by E.V. Kamneva and M.V. Polevaya. The questionnaire contains life satisfaction, job satisfaction scales and general satisfaction index.

4. Results

Among the teachers who took part in the study, respondents with a moderate level of job and life satisfaction predominate (Figure 1).

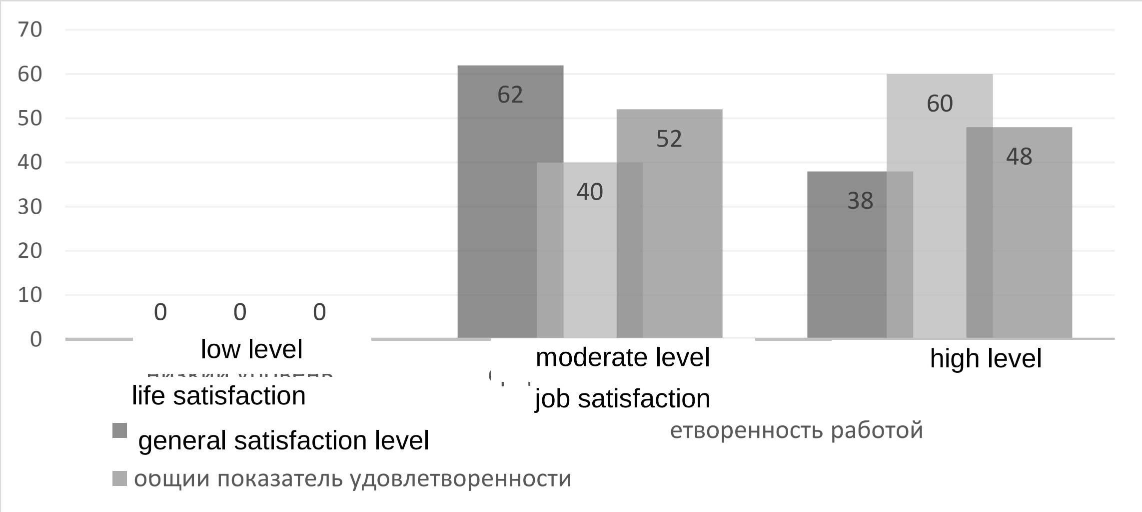


Figure 1. Distribution of respondents by satisfaction levels (%)

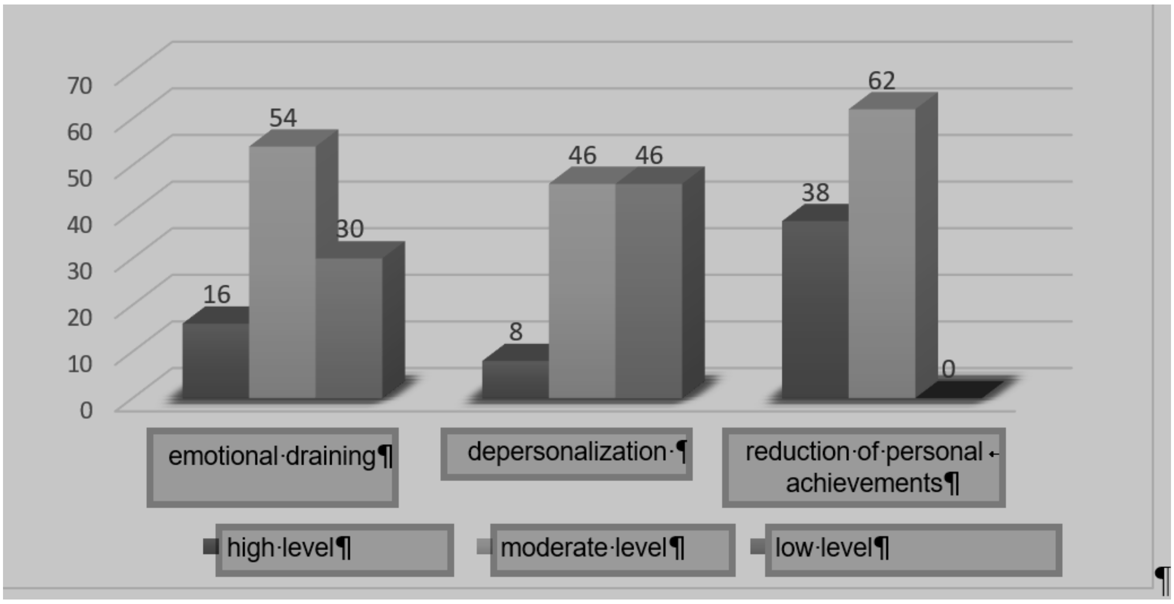
It should be noted that the job satisfaction is definitely higher than the life satisfaction (tstat.= –2.321 at tcrit.= 2.101).

According to the data, 62% of teachers are people who tend to respond to any, even minor stress factors; such respondents are characterized by zero reflection and self-direction skills and predominance of destructive stress coping ways.

The results obtained by the method of "Occupational burnout", indicate the severity of burnout components in the teachers' sample group. 16% of respondents have a high level of emotional draining, 54% have a moderate level. A high level of depersonalization is observed in 8% of respondents, a moderate level – in 46%. Teachers are most exposed to reduction of personal achievements: 38% of respondents show a high level and 62% show a moderate level (Figure 2).

Thus, more than half of teachers with a high and moderate level of reduced emotional background, indifference or emotional supersaturation have moral deformations, cynical attitude to students and awareness of inefficiency of professional activity against the background of professional stagnation signs.

The correlation analysis of occupational burnout and job and life satisfaction indicators revealed the following statistically significant relationships: an inverse relationship between emotional draining and job satisfaction indicators (–0.7796; P≤0.001) and general satisfaction –0.7824; P≤0.001); an inverse relationship between depersonalization and job satisfaction indicators (–0.7386; P≤0.001).



Discussion and Conclusion

Consequently, the stronger the emotional thriftiness mechanism due to highly charged contacts, the more callousness, cynicism or rudeness in dealing with colleagues and students, the less teachers are satisfied with the job.

The obtained data allow identifying the main directions of university staff occupational burnout correction control for the reduction, compensation and prevention of occupational burnout, with the view of positive effect on the employment behavior of teachers [2;15].

We have developed a training workshop program, which includes 4 class sessions by 4 hours each [11]. The training group size: 12 people. Each session was a module focused on the development of a specific component. Participation in the training made it possible not only to obtain information about the conditions of efficient employment behavior, sources of stress, dynamics of its course but also a change to develop stress coping skills with account of the individuality of each trainee. This reduced the intensity of stress response and increased the resistance to their occurrence; trainees' communication skills were honed as well.

When the training program was complete, the trainees had a positive emerging trend towards stress sensitivity reduction ($t_{st.}$=–2.344 at $t_{crit.}$ =2.080). Consequently, teachers became less responsive to circumstances beyond their control, more confident in realization of their ability to use functional ways of coping with stress, and better understand a company thus increasing the employment behavior efficiency. No such changes were observed in the control group.

Thus, it can be noted that due to the implementation of training workshop basic principles and the use of specifically selected and developed exercises, the trainees provided conditions for the development of the following important individual psychological characteristics: awareness of own ideas about stress, attitude to stress factors, awareness and management of own emotional states, ability to find resources for stress coping, etc. Improving the ability to cope with stress and communicative competence is an essential prerequisite for reducing, compensating and preventing occupational burnout and ultimately upgrading the efficiency of the teacher's employment behavior.

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Effect of Eight Weeks Endurance Training on Ovarian Androgens in Women with Polycystic Ovary Syndrome: Application of Multivariate Longitudinal Models

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Abstract

Polycystic ovary syndrome (PCOS) is one of the most common endocrine disorders in women of reproductive ages. The purpose of this study was to determine the effect of eight weeks endurance training on ovarian hormones in PCOS women with use of application of multivariate longitudinal models. In order to 40 PCOS women (age: 16-40 years) in Isfahan city were selected by convenience sampling and randomly divided into two groups of intervention (n=20) and control (n=20). Subjects of intervention group performed endurance training included running with a severity of 60 to 75% of maximum heart rate for 8 weeks, 3 sessions per week, each session 20-30 minutes. Blood samples were collected before of first session training and 48 hours after the last training session, after at least 10 hours of fasting in days 2 to 4 menstruation according to the menstrual period. The ELISA method was used to measure the testosterone, prolactin, LH and FSH variables. With respect to association between these biomarkers, multivariate longitudinal modeling approach was used with R 3.4.1 software at a significant level of 0.05. Results showed a significant effect of the intervention on LH and prolactin variables (P <0.001), but aerobic exercise did not show a significant effect on testosterone and FSH. Also, the highest effect of exercise on prolactin hormone (effect size = 0.39) and the lowest effect on FSH (effect size = 0.02). Eight weeks of regular aerobic exercise, while affecting ovarian androgens in PCOS women, can be considered as a safe treatment for these patients.

Keywords: Polycystic Ovary Syndrome, Gonadal Hormones, Aerobic Exercise, Women, Prolactin.

1. Introduction

Polycystic ovary syndrome (PCOS) is one of the most common endocrine disorders in women with prevalence rate 5% to 18 % in all of the world [4, 6, 13]. PCOS contains with irregular menstrual syndrome and metabolic syndrome [10, 16, 19]. Disruption of ovarian function causes abnormalities in the growth and development of follicles, impaired message transmission of insulin, changes in the production of steroids from the adrenal gland and in androgen up take [19]. It is often associated with prolactin, hormone follicles (FSH), hormonal lutein (LH) and hormonal disorders such as increased levels and serum androgen hormone. The levels of sex hormone-binding globulin (SHBG), which controls the availability of androgens, are reduced in women with PCOS leading to an increase in free testosterone levels contributing to the free androgen index (FAI).

2. Literature Review

Today numerous studies have shown the impact of non-pharmacological treatments through life style modification and the reduction of metabolic risk factors [7]. It has been shown that physical activity in PCOS rate can improve hyperandergy and morphology of ovaries by decreasing serum levels of insulin [15]. Some researchers consider changing life style with emphasis on exercise and weight loss as the preferred and most effective treatment for women with PCOS [2, 7]. Of course the majority of studies recruited overweight to moderately obese women and weight loss are effective in improving PCOS. Haqq et al (2014) reported that levels of FSH, sex hormone-binding globulin (SHBG), total testosterone, androstenedione, and FG score to be improved with exercise alone [11]. However, most of these studies have evaluated the effect of exercise on multiple responses, do not take into account the nature of repeated measurements of correlated responses. With respect to association between these biomarkers, in this study we utilized a multivariate longitudinal modeling to know whether eight-week endurance training can be significant effects on multiple responses of LH, FSH, Dehydroepiandrosterone sulphate (DHEAS), antimullarian hormone (AMH), 17α-hydroxyprogesterone (17-OHP), prolactin (PRL) and testosterone simultaneously in women with PCOS.

3. Method

3.1. Participants

In this pretest-posttest quasi-experimental study with control group, 40 single girls with PCOS age from 16 to 27 yrs and the mean of body mass index (BMI), 23.75±3.46 Kg/m² were recruited from Mullasadra Clinic in Isfahan, Iran. They were selected by convenience sampling method and the sample size was determined utilizing "the repeated measures menu: between factor approach G*power 3.1.2" software, considering $\alpha=0.05$, power=0.8, 10% attrition rate and based on the findings of Naserkhani and et al. study [1]. The study was carried out from July to September 2017. The inclusion criteria were as follows: physically inactive girls, no systematic exercise training last 6 months (<1 session/week), 16≤age≤27, having PCOS according to Rotterdam criteria [9] confirming it by at least two clinicians, lack of chronic diseases, absence of skeletal malformations. Exclusion criteria were: disability to perform exercise, having other disorders known to cause hyperandrogenism, smoking and alcohol consumption, use of medications (including over the counter preparations) within 90 d of study entry, unwillingness to continue participating in the study for any reason at any time. Also, the subjects were evaluated by the physician regarding the ability to perform physical activities. after completing the personal information medical and exercise records, subjects randomly were divided to two groups (intervention and control group (n=20)). The ethical aspects of this study were approved by the institutional ethics committee of Tabriz University of Medical Sciences, with code IR.TBZMED.REC.1397.238. Then the written consent was received from all patients. Participants were randomized into a two (intervention and control) group using NCSS PASS11 software, procedure menu, DOE submenu.

3.2. Materials and Exercise protocol

Subjects of intervention group performed endurance training and blood samples were collected before of first session training and 48 hours after the last training session, at 8 o'clock in the morning, after at least 10-12 h overnight fasting during the early follicular phase (2 to 4 menstruation days). The ELISA method was used to measure the prolactin, LH and FSH, variables. DHEAS, AMH, androstenedione,17-OHP, testosterone, progesterone, estradiol was measured by enzyme immunoassay (EIA). The levels of SHBG were measured using an immunoenzymometric assay (IRMA), and the free androgen index (FAI) was calculated [T(nmol/l)/SHBG(nmol/l) × 100]. The intra- and inter-assay coefficients of variation for DHEAS: 2.0% and 4.1%; for 17 OH-P: 4.1% and 5.8%; for A4: 1.9% and 3.3%; for LH- 2% and 4.8%; for FSH: 2.9% and 3%; for PRL: 2.3% and 3.9%; for SHBG, they were 1.3% and 5.2%. After 10 minutes of warming with stretching and flexibility movements the subjects running at 65-70% of maximum heart rate in the first four weeks for 20 minutes. From the fourth week to the eighth week the duration of the exercise increased to 30 minutes and the severity increased to 70-75% the maximum heart rate. To control the intensity of exercise the maximum heart rate is controlled by the equation (maximum heart rate =220 – age) and then the equivalent heart rate for each individual and during exercise. At the end of every session of training cooling down performed with jogging and stretching movements.

3.3. Statistical analysis

Data are presented as mean±SD. Shapiro–Wilk test confirmed the normal distribution of the data. With respect to association between the biomarkers, multivariate longitudinal modeling approach was used with R 3.4.1 software at a significant level of 0.05.Multivariate assumptions were assessed using Mardia`s test for multinormality and the Box`s M test for homogeneity of the variance – covariance matrix [3].

4. Results

In this study, 40 PCOS women with mean±SD age of 24.09±3.71 and weight of 68.50±12.90 Kg were evaluated. No significant difference was found in age, weight and height between groups at baseline (not shown). Table 1 displays the descriptive statistics for anthropometrical and hormonal profile in PCOS-Intervention and PCOS-Control groups at 2 time points. Also, the results of paired t-test showed that only the levels of LH, AMH, SHBG, androstenedione and prolactin in the intervention group after eight weeks significantly changed (table 1).

Table 1. *Baseline and 8-week anthropometrical and hormonal profile in PCOS-Intervention and PCOS-Control groups*

Variable	Group	Baseline (mean±SD)	8 weeks later (mean±SD)	p*
BMI (kg/m2)	Intervention	24.57±4.02	24.07±3.93	0.689
	Control	22.93±2.89	22.94±2.87	0.991
WHR	Intervention	74.1±3.1	72.3±3.3	0.082
	Control	73.2±4.1	73.1±4.5	0.942
LH (mIU/mL)	Intervention	12.36±0.99	11.58±0.89	<0.001
	Control	12.74±1.02	12.83±0.83	0.578
FSH (mIU/mL)	Intervention	5.72±0.88	5.61±0.79	0.240
	Control	5.94±0.64	5.94±0.59	0.999
PRL (mIU/L)	Intervention	315.29±64.66	260.71±51.99	<0.001
	Control	304.25±59.55	302.80±63.02	0.758
E (pm/L)	Intervention	120 ± 30.5	105 ± 32	0.145
	Control	118 ± 26.1	116 ± 29	0.821
P (nm/L)	Intervention	1.2 ± 0.2	1.3 ± 0.3	0.075
	Control	1.2 ± 0.1	1.1 ± 0.2	0.707
T (ng/mL)	Intervention	0.48±0.22	0.39±0.16	0.073
	Control	0.50±0.17	0.47±0.12	0.731
SHBG (nmol/L)	Intervention	27.2 ± 4.3	30.4 ± 3.5	0.016
	Control	27.8 ± 4.4	28.2 ± 3.7	0.755
FAI index	Intervention	8.5 ± 2.1	8.5 ± 2.4	0.431
	Control	8.6 ± 1.7	8.6 ± 2.2	0.943
A (nmol/L)	Intervention	5.7± 0.7	4.8 ± 0.9	<0.001
	Control	5.6 ± 0.8	5.5 ± 0.7	0.124
DHEAS (µmol/L)	Intervention	4385 ± 450	4154 ± 516	0.149
	Control	4260 ± 435	4275 ± 405	0.911
17-OHP (nmol/L)	Intervention	1.7 ± 0.2	1.6 ± 0.4	0.252
	Control	1.6 ±0.3	1.7 ± 0.2	0.183
AMH (ng/mL)	Intervention	14.2±3.5	16.9±3.6	0.023
	Control	14.6±4.3	15.1±5.2	0.738

*Paired sample T-Test result

Abbreviations: FSH, follicle stimulating hormone; PRL, prolactin (1 µg/l = 20 mU/l); T, testosterone; A, androstenedione; E, estradiol; P, progesterone; SHBG, sex hormone binding globulin; FAI, free androgen index; A, Androstenedione; DHEAS, dehydroepiandrosterone sulphate; 17-OHP, 17*α*-hydroxyprogesterone, AMH, antimüllarian hormone.

To clarify the behavior of these significant variables at different time points, error bars charts were displayed in figure 1.

In the final step of data analysis, because of the repeated and significant correlated nature of hormonal profile together, after examining and confirming the assumptions of multivariate longitudinal modeling the multivariate longitudinal modeling with GEE methodology were utilized. The significant effect of the intervention on the latent variable of ovarian androgens was observed (Wilks' $\lambda=0.45$, Partial Eta Square=0.55, $P<0.001$). Regarding to significant effect on ovarian androgens, the estimate of parameter of exercise for each variable were displayed in table 2. After 8-week training, the intervention showed a significant improvement in AMH ($P=0.031$), SHBG ($P=0.016$). Also we observed significant reduction in LH, androstenedione and prolactin variables ($P<0.001$). After 8 weeks, no significance changes were observed in testosterone, FSH, estradiol, progesterone, DHEAS and 17-OHP.

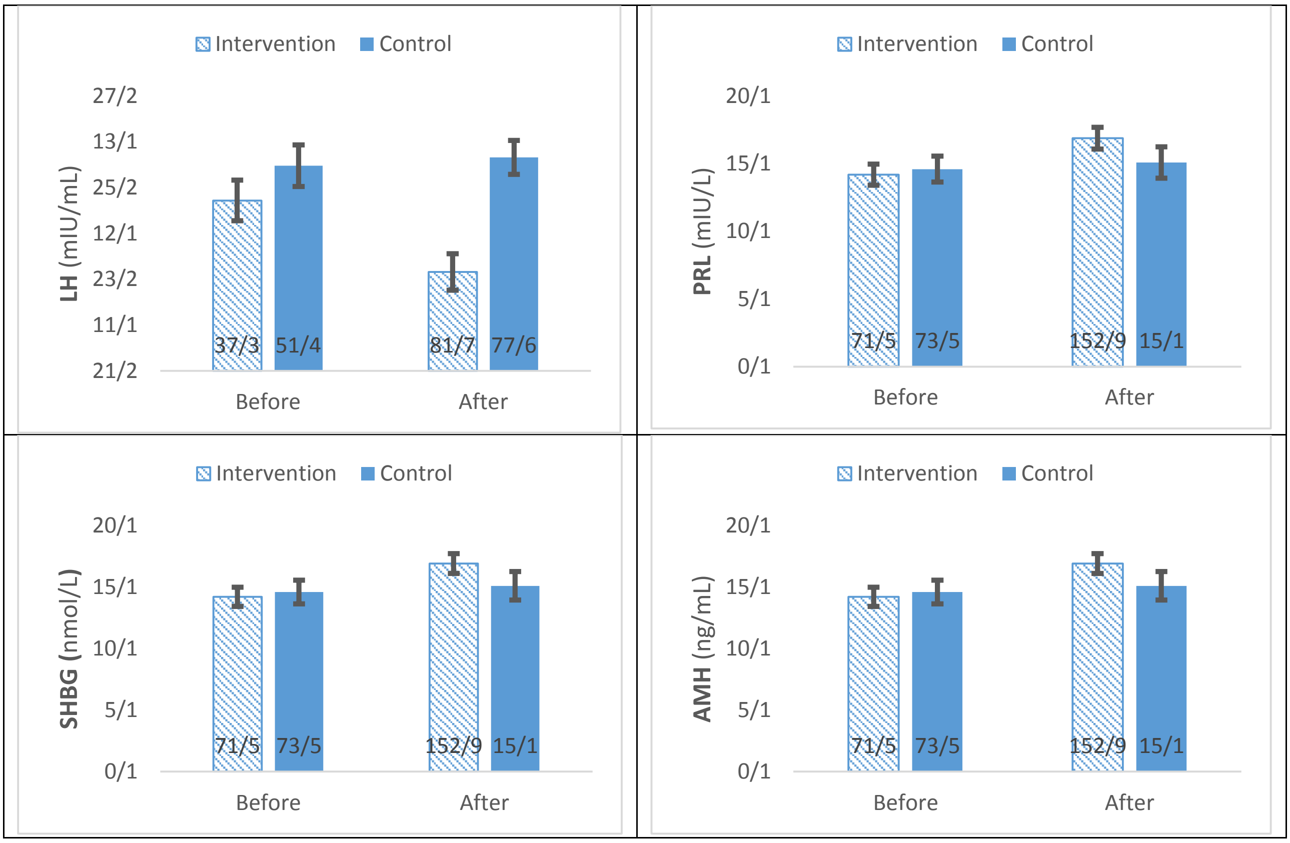

Figure 1. Mean of LH, PRL, SHBG and AMH in PCOS-Intervention and PCOS-Control groups at 2 time points

*Table 2. Results of multivariate marginal model with AR (1) correlation structure**

Variable	Parameter	β(S.E.)**	p
LH (mIU/mL)	Exersice	-0.89(0.24)	<0.001
	Time	0.01(0.02)	0.628
FSH (mIU/mL)	Exersice	-0.11(0.13)	0.415
	Time	0.003(0.001)	0.996
PRL (mIU/L)	Exersice	-53.14(11.25)	<0.001
	Time	0.01(0.03)	0.768
E (pm/L)	Exersice	-0.22(0.14)	0.133
	Time	0.002(0.001)	0.623
P (nm/L)	Exersice	0.31(0.17)	0.084
	Time	0.02(0.03)	0.513
T (ng/mL)	Exersice	-0.53(0.29)	0.084
	Time	0.09(0.12)	0.462
SHBG (nmol/L)	Exersice	3.28(1.24)	0.016
	Time	0.24(0.15)	0.127
DHEAS (µmol/L)	Exersice	-64.2(34)	0.085
	Time	24(18)	0.199
FAI index	Exersice	1.21(0.92)	0.205
	Time	0.83(0.68)	0.238
A (nmol/L)	Exersice	0.73(0.14)	<0.001

	Time	0.26(0.18)	0.166
17-OHP (nmol/L)	Exersice	0.16(0.09)	0.092
	Time	0.09(0.08)	0.275
AMH (ng/mL)	Exersice	2.41(1.03)	0.031
	Time	0.34(0.29)	0.256

* Adjusting for age, fat percentage, BMI and WHR
** Estimation of parameter (Standard error of estimation)

5. Discussion and Conclusion

The results of this study showed a significant and moderate effect size of intervention on the latent variable of ovarian androgens. Totally endurance training significant increases in AMH, SHBG. Also significant reduction in LH, androstenedione and prolactin variables observed. After 8 weeks, no significance changes were observed in testosterone, FSH, estradiol, progesterone, DHEAS and 17-OHP. In this regard Sweatt and et al. (2015) examined the effects of exercise and diet on women with PCOS which showed that regular exercise could lead to lower levels of LH and upper levels of FSH [17]. Ennour-Idrissi and et al. (2015), in their meta-analysis reported that physical activity induces a significant increase of SHBG while was observed a statistically decline of free testosterone, DHEAS, androstenedione and adiposity markers [8]. Researchers believe that due to exercise pressure and activation of the hypothalamus–pituitary–adrenal axis there was inhibitory effects on function of the female reproductive system. Thus the growth hormone (GH) prevents the release of the gonadotropin (GnRH) releasing hormone. The glucocorticoid produced during exercise also prevents the release of the hormone LH from the pituitary and secretes estrogen and progesterone from the ovaries. Exercise with this mechanism can lead to a decrease in LH. Based on studies, due to moderate and high intensity training observed the decrease in the activity of the sympathetic nervous system and increased parasympathetic activity and recommended that regular exercise should be recommended for the women with PCOS [18]. Also results of this study showed that eight weeks' moderate exercise training resulted in a significant decrease in prolactin hormone in women with polycystic ovary syndrome. However, Vigorito et al (2007) showed no significant changes in Prolactin levels after 3 months of exercise which was the cause of hypothyroidism [20]. Since depression medication can also increase Prolactin levels exercising with stress relief and depression reduces the use of antidepressant tablets and can reduce prolactin levels in these patients. In our study, eight weeks of aerobic exercise with moderate intensity decreased testosterone but wasn't significant. This result is consistent with the founding of McBreairty et al (2016) which showed that exercise has no effect on women`s testosterone levels [14]. Although lopes and et al (2018), reported lower levels of testosterone after 16 weeks continues and intermittent aerobic training and reduced the anxiety and depression and improved the sexual function of women with PCOS [12]. Performing exercise in women while reducing the amount of adrenal gland disorders does not change their testosterone level. There are some limitations to our study, total number of participants was only 40 and in this study we didn't control of nutrition. However, further research is needed to advance our conclusions, and establish exercise guidelines. Although, it seems that changes in sex hormones appear to be independent of body weight. However, recommended that exercise interventions may improve insulin resistance and cardio metabolic profiles in women with PCOS [5]. Based on the results, it can be concluded that eight weeks of regular aerobic exercise improves ovarian androgens in PCOS women and can be considered as a safe treatment for these patients.

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Declaration of Interest Statement

Authors have no conflict of interests.

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On the Improving Health and Familiarizing Students and Teachers of the Agricultural University with a Healthy Lifestyle

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Abstract

The state of readiness of modern students of Agricultural University to physical training is analyzed in the article; the current state of inclusive education in higher education in the Russian Federation, as well as the implementation of the program "Accessible environment" is examined. According to the authors, first-year students are in an especially difficult situation, because after learning at school they get into new, specific social relations and conditions of activity that require additional mobilization of adaptive reserves of the body. The main task of physical education in Northern Trans-Ural State Agricultural University is to preserve and strengthen the health of students, familiarizing students and teachers with a healthy lifestyle. A comprehensive solution to the problems of physical education at the University ensures the readiness of graduates to more active learning, the ability to learn the skills quickly and to master new agricultural professions. Physical development and spiritual development of students organically supplement each other and contribute to the social activity of the individual.

Keywords: physical training, health, health care, disability, hippotherapy, swimming, sports club, Spartakiada, Agricultural University.

Introduction

A new definition of health was first formulated by the World Health Organization (WHO) in 1940. It sounds so: “Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.” An analysis of the health state of university students shows that in recent decades it has deteriorated significantly. At present, up to 90% of university-entering students have certain morphofunctional abnormalities and chronic diseases, and 40% of them need physical therapy. The deterioration in mental health and social adaptation of Russian students is also noted [1, 2, 3].

For example, Aishat Shakhmanova, a professor of the Moscow City Pedagogical University, during a meeting of the social platform of the party "United Russia" appealed to Tatyana Sinyugina, Deputy Minister of Education and Science of the Russian Federation, with a proposal to strengthen the psychological health requirements of pedagogical university applicants. According to the professor, today there are practically no health restrictions for pedagogical universities applicants, which may later become carriers of serious psychological diseases. Aishat Shakhmanova cited as an example a case when during the state examination was found out that a student had epilepsy. According to the professor, parents have the right to bring the child to a group or school and be sure that the teacher will not have an epileptic seizure while working [4].

Methods

The analytical method (analysis of theoretical literature on the subject of research) and descriptive method (system of methods for the characteristic of the reality phenomena at this stage of development) were applied in this article.

For students with disabilities special conditions at entrance examinations are defined. In particular, entrance tests for applicants with disabilities are conducted in a separate lecture hall. The number of applicants with disabilities in one lecture hall should be on the average from 6 to 12 people. The duration of the entrance examination for applicants with disabilities can be increased by the decision of the organization, but not more than for 1.5 hours, it is also allowed to conduct entrance tests using distant technologies.

An adapted individual curriculum is important condition for the successful education of persons with disabilities. Its need is written in the law "On education" and is being introduced in higher educational institutions, which contributes to the transition to inclusive education and provides an opportunity to study for students with different needs by increasing the duration of learning and reducing the study load. Forms of education such as distance education, external studies meet these requirements and are effective for students with disabilities. They include the possibility to study according to an individually adapted program, the implementation of extended terms of education, do not provide a unified educational schedule and do not require the creation of physical conditions for the movement of students.

At the present stage, it is worth noting that the "Accessible environment" program has influenced accessibility and comfort for people with disabilities, contributed to the involvement of students with disabilities in educational institutions and their training on equal terms with other students. At the same time, the following shortcomings in the implementation of this program were identified: many higher educational institutions have created suitable conditions only in one of their buildings, often in the main building, despite the fact that people with disabilities are forced to attend classes in different buildings; some educational institutions have not still adapted the conditions and have not organized the educational process. It is also often difficult for students with disabilities to access institutions where they can apply to when carrying out a research. These can be scientific libraries, research institutes, archives, museums.

Considering the current situation of inclusive education in the system of higher education in the Russian Federation, it can be noted that not all conditions have been developed yet. At present, it is difficult to determine how long the process of transition of the higher education system, including special or public educational institutions, to inclusive universities will last. Inclusive education in the Russian Federation has been developing behind the European countries and the USA, but it is possible to analyze the experience of other countries, identify positive features of inclusion and adapt them to the conditions of the Russian education system. Combination of traditional features of Russian special and general education with practical international experience is reflected in the concept of inclusive education in the Russian Federation [5].

The main diseases of the so-called "liberated of sport" students are diseases of the circulatory system, musculoskeletal system, and vision. The most often diagnosed among them are vegetative-vascular dystonia, hypertension, arrhythmias and cardiac conduction, scoliosis, myopia. It should be emphasized that the diseases have developed before entering higher educational institution and are relatively benign. A comprehensive assessment of the data obtained, analysis of the state of established diseases, the age of students allows justifying the implementation of complexes of physical exercises "sitting on a chair". Taking into account the specifics of the future profession of agricultural university students, these complexes are designed to increase the functional activity of the cardio respiratory system, musculoskeletal system, improve vision. The combination of such classes with theoretical seminars increases the psycho-emotional impact of classes on students and allows them to form a outlook on the importance of physical education in achieving a healthy lifestyle and professional activity.

Modern conditions of education in universities are characterized by the intensification of mental work of students, an increase in information flow, the widespread introduction of computer technologies [7, 8, 9, 10]. The learning process requires memory strain, stability and concentration; it is accompanied by the occurrence of stressful situations, especially during the examinations. The continuous increase in the volume of information in the of lack of time conditions for its processing, the wrong daily routine and diet can contribute to the development of overwork and lead to the breakdown of adaptive reserves of the body and the development of psychosomatic diseases. First-year students are in an especially difficult situation, because after learning at school they get into new, specific social relations and conditions of activity that require additional mobilization of adaptive reserves of the body [12, 13].

A study day of most students is full of heavy mental and emotional stress, which can cause fatigue that accumulates and turns into overwork. Fatigue is a functional condition that temporarily occurs under the influence of prolonged and intensive work and leads to a decrease in its effectiveness. It manifests itself in the fact that the strength and endurance of muscles decreases, coordination of movements deteriorates, energy costs increase when performing work of the same nature, the speed of information processing slows down, memory deteriorates, the process of concentration and switching attention as well as the assimilation of theoretical material becomes difficult. Fatigue is associated with a feeling of tiredness, and at the same time it serves as a natural signal of possible exhaustion of the body and a protective biological mechanism that protects it from overstrain. To prevent fatigue and overwork, it is necessary to replace one activity with another. The most effective form of rest during mental work is active rest in the form of moderate physical work or physical exercise.

It often leads to a decrease in motor activity (hypodynamia), and the simultaneous increase in the load on the psyche has a negative effect on the body, complicates studying and physical preparation for future production activities. Lack of movement leads to detraining of the body. A sedentary lifestyle is one of the main causes of severe chronic diseases of internal organs. At the same time, mental performance decreases, negative changes in the central nervous system occur, attention, thinking, memory functions decrease, and emotional stability weakens.

Participants

The object of the study was Northern Trans-Ural State Agricultural University.

The main task of physical education in Northern Trans-Ural State Agricultural University is to preserve and strengthen the health of students, familiarizing students and teachers with a healthy lifestyle. This is achieved by the annual University sports festival "Cheerfulness and health" and the annual competition for the "Rector's Cup", which allows each participant to fulfill their own needs for motor activity, helps to form the need for a healthy lifestyle and exercise outside the University, and also helps to realize that regular care for one's own physical activity is a means of maintaining high work efficiency and improving the quality of life [14,15].

The material base of the University makes it possible to conduct lessons and extracurricular activities in different areas: sports, swimming, cyclic sports (skiing, skating, and athletics), competitive gymnastics, equestrian sports, a special medical group and a group for students exempt from sports for health reasons. While distributing of students in sections personal priorities of the student are taken into account: desire, skills and interest. There are 701 first-year students, 556 second-year students and 469 third-year students at the university, altogether 1726 students. Classes are conducted from Monday to Friday from the first to the fourth lesson, there are about 150 students on the course. From 16-40 to 19-00 all sports facilities are available for training process and sport events among students and among the teaching stuff. Today, students and the teaching stuff of the University are engaged in 18 kinds of sports: basketball, volleyball, kettlebell lifting, judo, table tennis, swimming, skiing, athletics, mini-football, chess, boxing, orienteering, athleticism, etc.

University sports club conducts its activities on the University sports facilities, which include:

- stadium with six 400 meters long running tracks
- football field with 3000 seats stands for spectators
- sectors for throwing, projectile pushing, jump pits
- shooting gallery that includes 4 shooting directions with a maximum range of 50 m and is equipped with automatic target installations having 6th class of bullet protection
- hockey court with lighting (20 m×61 m)
- sports complex with a swimming pool (4 lanes×25 m), sports halls (9 m×18 m, 12 m×24 m) for team sports and martial arts (table tennis, judo, boxing)
- climbing wall
- equestrian sport club with 60 heads of riding horses
- gym
- sauna
- ski base with 150 pairs of skis and skates
- volleyball and basketball courts.

All of the above-listed objects are included in the Federal register of the Ministry of Sports of the Russian Federation and have licenses to hold competitions of the All-Russian level that allows to organize mass sports and recreational activities of various level: "Ski Track of Russia", "Russian Azimut", University games and Spartakiads of federal, sectoral and regional level.

Testing center of the All-Russian sports programme "Ready for Labour and Defense", abbreviated as

GTO, is opened, which gives students and teachers of the University the opportunity to pass the GTO standards, without leaving the territory of the University. The All-Russian sports programme "Ready for Labour and Defense" will be able to solve many problems, not only increasing physical activity level of the population, but also improving health, raising the morale of students and teachers.

The equestrian sport school of the Olympic reserve of the Agrarian University exists for already 37 years. It was a place where equestrian sport in Tyumen region began. In 1995, on the basis of the school, the Cup of the Governor of Tyumen region was held in all types of equestrian sports: show jumping, dressage, and triathlon. Since 1996, the school annually holds championships among universities and colleges, and in September 2016, the first All-Russian triathlon competitions among students were held.

The school includes 17 Masters of Sports of Russia, 2 International Masters of Sports. In 2008, the Horse Dagger took part in the Olympic Games in Beijing. To date, none of the Russian riders at the Olympics has surpassed its results. The university's horses Brigantine and Serenade in 2012 and in 2014 were officially recognized as the best horses in Russia.

It should be noted that the equestrian school is an excellent base for practical training of students-future veterinarians and zooengineers. In the current academic year 64 students are engaged in equestrian sports.

Hippotherapy has long been recognized in Western European countries as an effective method of correcting physical and mental development. Interest in it in our country has grown significantly. At the moment, there are about 100 hippotherapy centers in Russia. Hippotherapy is effective for people with disorders of the musculoskeletal system and some mental disorders. For example, autistic people engaged in hippotherapy have a gradual escape from indifference and isolation, the horse becomes a friend to them, many of them begin to communicate with the outside world; for children suffering from cerebral palsy the reduction of spasticity, reduction of hyperactivity and excitability, coordination of movements and balance is a good result [18].

The university pays special attention to swimming, which, depending on the tasks solved in the lesson, is subdivided into recreational, therapeutic, air-conditioned, adaptive and sports [19, 20]. It harmoniously develops all muscle groups, contributes to the development and improvement of such physical qualities as endurance, strength, speed, flexibility, agility, coordination. Due to symmetrical movements and the horizontal position of the body, the spinal column is unloaded from the pressure of the body weight on it; it becomes possible to treat postural disorders such as stoop and scoliosis. Continuous fast-paced footwork with constant water resistance trains the muscles and ligaments of the ankle joint.

When swimming a crawl on the chest, breaststroke or dolphin, inhaling and exhaling are difficult, because when inhaling it is necessary to overcome the water pressure on the body, and when exhaling - the water resistance, therefore the respiratory muscles strengthen and develop over time, the lung capacity and chest volume increase. Swimming lessons increase the protective properties of the body's immune system and capacity for work, have a calming effect on the nervous system and completely exclude traumas of the musculoskeletal system, concussions and fractures [22, 23].

Discussion and conclusion

Physical development and spiritual development of students organically supplement each other and contribute to the social activity of the individual [24, 25].

The observance of hygienic standards, the creation of a good psychological climate in student groups, stimulating mass physical activity, proper organization of working time are the necessary conditions for a healthy lifestyle. Thus, a comprehensive solution to the problems of physical education at the University ensures the readiness of graduates to more active production activities, the ability to master the skills quickly, to learn new professions [26, 8]. Sport contributes to the manifestation of the best properties of the student's personality. At the same time, one of the most important social needs – communication with people – is realized at a high emotional level.

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Does Smart Electronic Devices Influence the Body Deficiencies Development at Kids Who Practice Swimming?

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Abstract

Our research started from the idea that swimming activity can help in reducing the sedentary among youth and having a positive impact on the bio-motor result of children highlighted through the comparative analyzer of anthropometric indices from our sample and also keeping them away from physical deficiency such as spine and knee deficiency and also flat feet. Also, we investigated the influence of the electronic device usage such as a laptop, smart phone and iPad on the physical development. The research took place at the TFM MARCO POLO Water Sports Club from Tîrgu Mureş in partnership with the University of Medicine, Science and Technology of Tîrgu Mureş and had as research a sample of 97 kids that practice swimming.

We used in our inquiry the Pearson and the Mann Whitney correlation with whom we calculated the relevance of differences between cases.

The results of our research revealed that if we had multiple instances of knee deficiency or flat feet in our experiment group, the swimming prophylactic proprieties showed by many scientific studies helped our experiment group to overcome and enhance the knee and feet deficiency, meanwhile the only substantial variation identified in our experiment group was at the usage of the laptop, with a $p>0.05$, we found out that kids that use this device have significant spine deficiencies because of the body position.

The conclusions showed us that electronic devices used by more and more youth population with influence on physical development and physical deficiency and that swimming activities can be decisive in the prophylactic program for youth efficient development.

Keywords: Swimming, Development deficiency, Sedentary, Electronic devices.

1. Introduction

Regular physical activity has long been considered as a main condition for a healthy lifestyle [1]. This idea was recently strengthened with some new scientific evidence linking regular physical activity to a set of physical and mental health benefits [2]. Swimming is a popular sport [3] that is practiced from infancy both as a form of recreation and for training and competition. Like other physical activities it is recommended as a way of maintaining cardiovascular and musculoskeletal health [4], as well as resulting in improved body perception [5].

2. Literature Review

Most research concerning leisure swimming have focused on health benefits such as anthropometric indicators[6], effect in blood pressure [7], a decrease in morbidity risks or general well being [8].

Some authors affirm that understanding the process of learning children's movement skills is very important because the enroling in motor activity is a prerequisite for development of the motor skills that are fundamental to some functional tasks, participation in school activities, and games and recreation [9] in later years of life.

It is a fact that regular sports activities have been reported to have positive effects not only on one's physical and physiological health but also on one's mental and psychological conditions. Worldwide, studies [10], determined the situations where regular swimming exercise lowers blood pressure and improves vascular function.

Among the benefits of swimming highlighted by many authors we can include improved fitness and specific agility, well developed muscle strength, mobility and flexibility, improved mood, and decreased depression [11] [12].

Some authors proved that people experience greater enjoyment level and can practice longer when they exercise in aquatic environment when compared with exercise on land [13] [14]. Practicing swimming and aquatic exercise can raise the level of enjoyment across a person's lifespan and is good opportunity to exercise for people with disabilities or chronic conditions [15].

Media and electronic devices are more and more popular nowadays and are serious treats of physical and mental health. The portable electronic devices, such as smartphones or similar, have developed as an increasingly pervasive part of our lives, therefore it has also developed to be capable of supplementing, or even substitutes, various mental functions [16].

Smartphones are increasingly integrated into everyday life [17]. At the same time, the prevalence of insomnia and sleep deprivation have risen.[18] Poor sleep (too little or too much, and poor quality) has been shown to be a risk factor for obesity, diabetes, cardiovascular disease, depression, and overall mortality. [19] [20].

Hypothesis of the research

In the present research we started from the presumption that swimming activities have a positive impact on the bio-motor development of children highlighted through the comparative analyzer of anthropometric indices from our sample.

3. Method

3.1. Participants

The research took place at the *MARCO POLO* Water Sports Club from Tîrgu Mureş from in partnership with the the University of Medicine, Science and Technology of Tîrgu Mureş. We respected the European Union regulations regarding the privacy of personal information and sign an accord with every legal respondent of our subjects from the sample considering that our participants were under 18 years old and are considered minors in our country.

This investigation was performed in accordance with the Declaration of Helsinki (2013) and approved by the Ethics Committee of the University of Medicine, Science and Technology of Tîrgu Mureş before the commencement of the study. It also met the ethical standards for Sport and Exercise Science Research [21].

Our experiment took place at the swimming lessons at the *TFM MARCO POLO* Water Sports Club, assisted by professional instructors, the lessons aiming more the enjoyment part than the obtainment of performance in swimming.

As research sample we had 97 kids with the age between 5 and 12 years old (5-7 years old 52.58%, 8-9 years old 35.05% and 10-12 years old 12.37%) with an average age of 7.495 ± 1.745 years that are beginners in swimming sports.

Table 1. *The sample of students divided on age groups*

Age category	Frequency	Percentage	Interval of confidence 95%
10-12 years	12	12,37%	6,56%-20,61%
5-7 years	51	52,58%	42,18%-62,81%
8-9 years	34	35,05%	25,64%-45,41%
Total	97	100,00%	

Table 2. *Sample of students regarding their gender*

Gender	Frequency	Percentage	Interval of confidence 95%
Female	46	47,42%	37,19%-57,82%

Male	51	52,58%	42,18%-62,81%
Total	97	100,00%	

3.2. Materials

As methods of research we used the Mann-Whitney test, non-parametric test, D'Agostino & Pearson omnibus normality test and Fisher test for analyzing the statistical significance of association between the usage of electronic devices and body deficiencies development.

3.3. Procedure

The experiment followed the effects of swimming activity as a method of combating sedentary and also preventing physical deficiency. We wanted to see if swimming can influence body development and can help in preventing spine and knee deficiency and also flat feet. Also, the experiment analyzed the influence of electronic devices like a laptop, smart phone and iPad on the spine, knee and feet deficiency found in our experiment group.

We started our research by investigating the numbers of body deficiency in our research sample; we counted the lordosis, kyphosis and scoliosis cases and found out the frequency of apparition, percentage and the interval of confidence. Then we registered the percentage of cases with spine deficiency and without physical development problems. The same routine was taken for knee deficiency and also for flat feet development problems.

The next step in our investigation was to find out if there is any statistically significant relation between the usage of electronic devices such as the laptop, smartphone and iPad and the development of body deficiency such as spine, knee and flat feet deficiency.

4. Results

As we can see in Table no. 3, we noted all the spine and knee deficiency and also flat feet in our experiment sample. In spine deficiency we were interested of how many cases of lordosis, kyphosis and scoliosis we had in the experiment sample, their frequency, percent and an interval of confidence. Also, we were interested to see the percent and frequency of kids with spine deficiency and without deficiency. The results were:

Table 3. *Number of spine, knee deficiency and flat feet in our research sample*

Spine deficiency	Frequency	Percent	Interval of confidence 95%
Lordosis	7	7,22%	2,95%-14,30%
Kyphosis	2	2,06%	0,25%-7,25%
Scoliosis	15	15,46%	8,92%-24,22%
Total	24	24,74%	
Without spine deficiency	76	78,35%	68,83%-86,07%
With spine deficiency	21	21,65%	13,93%-31,17%
Total	97	100,00%	
Knee deficiency	**Frequency**	**Percent**	**Interval of confidence 95%**
Knee deficiency (valgus)	36	37,11%	27,52%-47,52%
Knee deficiency (varum)	11	11,34%	5,80%-19,39%
Total	47	48,45%	
Without knee deficiency	50	51,55%	41,18%-61,82%
With knee deficiency	47	48,45%	38,18%-58,82%
Total	97	100,00%	
Flat feet	**Frequency**	**Percent**	**Interval of confidence**

			95%
Without flat feet	72	74,23%	64,35%-82,58%
With flat feet	25	25,77%	17,42%-35,65%
Total	97	100,00%	

The next step in our investigation was to analyse the usage frequency of electronic devices like a laptop, smart phone and iPad in our experiment group. The results can be seen in Table no. 4:

Table 4. *The usage of electronic devices in our research sample*

LAPTOP	Frequency	Percent	Interval of confidence 95%
Not using laptop	86	88,66%	80,61%-94,20%
Using laptop	11	11,34%	5,80%-19,39%
Total	97	100,00%	
SMART PHONE	**Frequency**	**Percent**	**Interval of confidence 95%**
Not using smart phone	47	48,45%	38,18%-58,82%
Using smart phone	50	51,55%	41,18%-61,82%
Total	97	100,00%	
iPad	**Frequency**	**Percent**	**Interval of confidence 95%**
Not using iPad	56	57,73%	47,28%-67,70%
Using iPad	41	42,27%	32,30%-52,72%
Total	97	100,00%	

In the next phase we analyzed the influence of electronic devices such as the laptop, smart phone and iPad on the development of children body and apparition of deficiency such as lordosis, kyphosis, scoliosis, flat feet and knee deficiencies (valgus and varum).

5. Discussion and Conclusion

Discovering physical abnormalities in children on time ensures efficient intervention given the plasticity and dynamics of the body at this age.

In our study although we found none statistically significant differences between the deficiency and usage of an electronic device, we concluded that the swimming prophylactic proprieties showed by many scientific studies helped our experiment group to overcome and improve the speeding of spine, knee and feet deficiency. One of the researches that proves the swimming prophylaxis discovered that at the experimental group who had included in the treatment program and therapeutic swimming as a means of recovery had a faster progression than the others, the values got by them being normal or close to the normal due to the period short rehabilitation [22].

Other research studies were following the same hypothesis as us regarding the prophylactic proprieties that swimming exercises have on kids' development have also proven that therapeutic swimming helps in the prevention of functional spine deficiency in pubertal age at kids. Also, in the same article the author affirms that concerning the prophylaxis of the spinal physical functional abnormalities in prepubertal children, gymnastics and swimming are recommended by 70.47%, which is a satisfactory result given that 25.71% of the specialists choose other variants [23].

Using swimming means in the complex therapy of physical therapy proves its effectiveness in correcting the physical deficiencies, both by the positive influences of the technical procedures and by increasing the objectivity of the correction sessions, to which the subjects take part with a higher interest [24].

In our investigation we found out regarding body development we had 21 cases of spine deficiency (7 cases of lordosis, 2 cases of kyphosis and 15 cases of scoliosis), 47 cases of knee deficiency (36 cases of valgus and 11 cases of varum), and 25 cases of flat feet. Regarding the usage of electronic devices, we discovered 11 cases of using a laptop, 50 cases of using smart phone and 41 cases of using iPad.

Then we tried to find out if there is a statistically significant link between the usage of electronic devices and body deficiency and found out:

- Regarding children with spine deficiency/no spine deficiency and the usage of laptop device we found statistically significant difference between groups with a value of p 0.0456. Furthermore, at the lordosis spine deficiency we found a statistically significant difference between those who use a laptop and those who don't, with a p value of 0.0212; at the kyphosis spine deficiency we also found statistically significant difference between groups with a value of p of 0.0215; also, at the scoliosis spine deficiency we also found statistically significant difference with a value of p of 0.0368.
- As comparing children with spine deficiency/no spine deficiency and the use/no use of smart phone we found also no statistically significant difference with a value of p 0.3304.
- Also, we compared children with spine deficiency/no spine deficiency and the use/no use of iPad devices and find no statistically significant difference with the value of p 0.2127.
- Then we compared the children with knee deficiency/no knee deficiency with the use/no use of laptop/smart phone/iPad and found also no statistically significant difference.
- As for the children with flat feet/no flat feet and the use/no use of laptop/smart phone/iPad we also found no statistically significant difference.

The conclusion of our research showed that even if we had multiple cases of knee deficiency or flat feet in our experiment group, we found none statistical significance between the deficiency and the usage of electronic devices like smart phone or iPad, meanwhile we found significant statistical difference between the usage of laptop and spine deficiency. We concluded that the spine deficiency comes from the improper position of kids' body when using the laptop.

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Modalities of Exploitation the Information Provided by the Click&Scout Statistical Program in Preparing Volleyball Attack Players

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Abstract

The purpose of the study is to value the statistical information provided by the Click&Scout software to increase the efficiency of CSU Medicina Tîrgu Mureş's performance during the second part of the 2016-2017 National Volleyball Championship. All the analyses that we use for this research are made with statistical software Click & Scout, based on the match report file in the 22 rounds, first and second part of the championship. After we got all the information from the Click&Scout statistical program, we calculated the effectiveness of all attackers for the technical elements service, receiving and attack. To highlight the difference between the efficiency of the first part and the second part of the championship we applied the Z test; given that when the difference is high between the first part and the second part, it will be identified the statistical significance. Of all the technical elements analyzed by us (attack, service, and receive), for the attack players, we found a statistical correlation only for attack. According to our study results, the attack is the only element that influences the final result, with a p = 0.05. The data provided by us is important but not exclusive support for training, the athletes' level of training and the way they interact on the court remain a determining factor in winning the games.

Keywords: Volleyball, Sports performance, Training, Athletes, Attack.

1.Introduction

In high-performance sports, there is a broad range of instruments and means from mathematics and informatics domain, different in form and complexity, which have improved over the last few years regarding the versatility and technical possibilities, the extent of their applicability and the facile way with which they used at present. Whereas dedicated personnel in volleyball become multidisciplinary and increasingly comprises coaches, doctors, nutritionists, and psychologists [1], the best training methods can reach all teams and players and can make teams more competitive. As games become more balanced, there is a greater need to understand whether winning teams are better at putting into practice the skills of playing more points or making fewer mistakes.

2. Literature Review

Previous studies have shown widespread use of the offensive area in attacks during volleyball matches, often at the expense of the defense area [2]. When the setter is in the defense area, he has five attack options, which makes this area preferable to him as compared to the attack area with only four attack options. Thus, the attack is the most important component for getting points and thus has proved to be a crucial aspect of the attack strategy of any volleyball team [3]. By attacks, teams earn a high percentage of total actions, given that almost half of all executed attacks lead to a point [4].

According to other studies, receiving the service is a factor that influences the organization of the offensive maneuver and presents a relation between the quality of the service and the success of the team [5]. However, the efficiency of receiving the service depends on the service performed by the opponent.

The purpose of the study is to value the statistical information provided by the Click&Scout software to increase the efficiency of the team performance during the second part of the 2016-2017 National Volleyball Championship. The Click&Scout program provides in real time technical and tactical information on behavior in the game of their own team (and) but also of the opposing team, to place in the court, arranging the teams to take on each rotation, organizing the defense and attack system, so that the main coach can manage the game tactics of the team and counteract the opponent's game.

3. Method

3.1. Participants

Place of research the study took place at the National University Center of Excellence - Women's Volleyball within the Tîrgu Mureş University Club. The actual location was the Sports Hall of the University of Medicine and Pharmacy in Tîrgu Mures. The research itself took place for 8 months during the first and second part of the National Volleyball Championship, 2016-2017 edition, on a sample of 12 volleyball players legitimated at CSU Medicina Tîrgu Mureş. Players: Two OPPOSITE (TS and IV), one OPPOSITE/OUTSIDE HITTERS (KO), five OUTSIDE HITTERS (TR, RA, BA, DO, CA), four MIDDLE BLOCKERS (IA, LU, MA, PE). This investigation was performed under the Declaration of Helsinki (2013). It also met the ethical standards for Sport and Exercise Science Research [6].

3.2. Materials

All the analyses that we use for this research are made with statistical software Click&Scout, based on the match report file in the 22 rounds, first and second part of the championship.
(http://www.dataproject.com/Products/EU/en/volleyball/ClickAndScout), [7] [8].

After we got all the information from the Click&Scout statistical program, we calculated the effectiveness of all attackers for the technical elements service, receiving and attack.

3.3. Procedure

To highlight the difference between the efficiency of the first part and the second part of the championship (Table 1, 2 and 3), we applied the Z test; given that when the difference is high between the first part and the second part, it will be identified the statistical significance, expressed by the p-value of less than 0.05.

The graphical representation of this link was achieved with the scatter diagram of dispersion, which by the orientation and dispersion of the cloud point provides an image of the relationship between the two variables.

To make these correlations we used the following encodings: a score of 3-0 we coded with 3 (3 minus 0), a score of 3-1 we coded with 2 (3 minus 1), a score of 3-2 we coded it with 1 (3 minus 2). We considered the clear victory 3-0 to be coded with a large number and the close victory with 3-2 with a smaller number. These correlations we made for the matches we won.

Correlation between the efficiency of a particular post / technical parameter and the final result.

4. Results

Comparative analysis of attack player performances

A. Effectiveness of Z4 attack players (BA, TR, RA)

Table 1. *Effectiveness of player BA, TR, RA at service, receiving and attack parameters.*

PLAYER	Analysed parameter	E% First	95% Interval of confidence	E% Second	95% Interval of confidence	Difference of first-second	95% Interval of confidence	P-value
BA	Efficiency of service	0,4	0,28 to 0,54	0,5	0,37 to 0,65	-0,1	-0,28 to 0,085	P = 0,29
	Efficiency of receiving	0,00	0,00025 to 0,05	0,43	0,31 to 0,57	-0,43	-0,55 to -0,29	**P < 0,0001**
	Efficiency	0,00	0,00025 to	0,40	0,28 to 0,5	-0,40	-0,51 to -	**P <**

	of the attack		0,05		4		0,26	**0,0001**
TR	Efficiency of service	0,33	0,22 to 0,46	0,45	0,32 to 0,60	-0,12	-0,29 to 0,05	P = 0,17
	Efficiency of receiving	0,7	0,54 to 0,88	0,59	0,45 to 0,76	0,11	-0,11 to 0,33	P = 0,33
	Efficiency of the attack	0,2	0,12 to 0,30	0,21	0,13 to 0,32	-0,01	0,13 to 0,11	P = 0,87
RA	Efficiency of service	0,47	0,34 to 0,62	0,44	0,31 to 0,59	0,03	-0,15 to 0,21	P = 0,75
	Efficiency of receiving	0,61	0,46 to 0,78	0,57	0,43 to 0,73	0,04	-0,17 to 0,25	P = 0,71
	Efficiency of the attack	0,21	0,13 to 0,32	0,19	0,11 to 0,29	0,02	-0,10 to 0,14	P = 0,75
TOTAL	Efficiency of service	0,4	0,28 to 0,54	0,46	0,34 to 0,62	-0,07	-0,25 to 0,11	P = 0,45
	Efficiency of receiving	0,66	0,51 to 0,83	0,53	0,39 to 0,69	0,13	-0,08 to 0,34	P = 0,23
	Efficiency of the attack	0,21	0,13 to 0,32	0,27	0,17 to 0,39	-0,06	-0,19 to 0,07	P = 0,38

Service - In the second part of the championship we had a superior efficiency at the service with an average of 46.3 points compared to 40 in the first part of the championship, and the only player who had a better efficiency in the first part was RA, with 47 successes, compared to 44 in the second part.

Receiving - in the first part of the championship, we had a superior receiving, with an average of 65.5 compared with 53 in the second part, all the players having a better efficiency in the first part of the championship.

Attack - according to the average of 26.6 points in the second part of the championship, we had a better efficiency than in the second part, where the average was only 20.5, even if BA played only in the second part, where it had a high efficiency of 40.

B. *Effectiveness of middle blocker players* **(LU, PE, IA)**

Table 2. *Effectiveness of players LU, PE and IA at service and attack parameters*

PLAYERS	Analysed parameter	E% First	95% Interval of confidence	E% Second	95% Interval of confidence	Difference of first-second	95% Interval of confidence	P-value
LU	Efficiency of the attack	0,41	0,29 to 0,55	0,39	0,27 to 0,53	0,02	-0,15 to 0,19	P = 0,82
	Efficiency	0,44	0,31 to 0,5	0,33	0,22 to 0,4	0,11	-	P = 0,21

	of service		9		6		0,06 to 0,28	
PE	Efficiency of the attack	0,67	0,51 to 0,85	0,26	0,16 to 0,38	0,41	0,22 to 0,59	**P < 0,0001**
	Efficiency of service	0,4	0,28 to 0,54	0,52	0,38 to 0,68	-0,12	-0,30 to 0,06	P = 0,21
IA	Efficiency of the attack	0,38	0,26 to 0,52	0,32	0,21 to 0,45	0,06	-0,10 to 0,22	P = 0,47
	Efficiency of service	0,47	0,34 to 0,62	0,42	0,30 to 0,56	0,05	-0,13 to 0,23	P = 0,59
TOTAL	Efficiency of the attack	0,42	0,31 to 0,57	0,44	0,31 to 0,59	-0,01	-0,19 to 0,17	P = 0,91
	Efficiency of service	0,5	0,37 to 0,65	0,3	0,20 to 0,42	0,2	0,02 to 0,37	**P = 0,02**

Service - in the second part of the championship we had a superior efficiency of the service with an average of 44.3 compared with 42.6 in the second part, although only one player had higher efficiency in the second part, the player PE with 52 successful services, compared to 40 in the first part.

Attack - According to the average of 49.6 successful attack plays in the first part of the championship we can conclude that we had better efficiency in the second part, 30.3 points and all the players had the best performance parameters in the first part.

As seen, the middle blocker players have recorded a significant difference in the efficiency of service between in the first part compared with the second part of the championship.

C. *Effectiveness of opposite players* (IV, TS)

Table 3. *Effectiveness of player IV at service and attack parameters*

PLAYERS	Analysed parameter	E% First	95% Interval of confidence	E% Second	95% Interval of confidence	Difference of first-second	95% Interval of confidence	P-value
IV	Efficiency of the attack	0,19	0,11 to 0,29	0,34	0,23 to 0,47	-0,15	-0,29 to -0,007	**P = 0,03**
	Efficiency of service	0,38	0,26 to 0,52	0,53	0,39 to 0,69	-0,15	-0,33 to 0,03	P = 0,11
TS	Efficiency of the attack	0,23	0,14 to 0,34	0,25	0,16 to 0,36	-0,02	-0,15 to 0,11	P = 0,77
	Efficiency of service	0,5	0,37 to 0,65	0,46	0,33 to 0,61	0,04	-0,15 to 0,23	P = 0,68
TOTAL	Efficiency of the attack	0,21	0,13 to 0,32	0,295	0,20 to 0,42	-0,09	-0,23 to 0,05	P = 0,20
	Efficiency of service	0,44	0,31 to 0,59	0,495	0,37 to 0,66	-0,06	-0,25 to 0,13	P = 0,53

Service - In the second part of the championship we had a superior efficiency of the service with an average of 49.5 compared with 44 in the first part, even if player TS had a better performance in the first part, with 50 successes, compared to 46, in the second part.

Attack - According to the average of 29.5 successful attacks in the second part of the championship we had a better efficiency compared with the first part, where the average of the successful attacks was 21.

Total of the effectiveness of attack players (outside hitters, middle blockers, opposite):

Service - In the second part of the championship we had a superior efficiency of the service with an average of 46.3 points, compared to 42 in the first part.

Receiving - worked much better on the first part, with an effective execution average of 65.5 compared with 53 in the second part.

Attack - According to the average of 33.7 successful attacks in the first part of the championship we had a better efficiency than in the second part, where the average was 28.7.

Table 4. *Correlations between attacks, service, and receive parameters on the 3 positions*

Player post	**Correlations between parameters**	**Sample size**	**Spearman's coefficient of rank correlation (rho)**	**Significance level**	**95% Confidence Interval for rho**
Opposite	*Correlation Service-Score, **Opposite** variable Y – service variable X - score*	21	0,0628	P=0,7870	-0,379 to 0,481
	*Correlation Attack-Score, **Opposite** variable Y – attack variable X - score*	23	0,163	P=0,4584	-0,267 to 0,539
Middle blockers	*Correlation Service-Score, **Middle blockesr** variable Y – service variable X - score*	25	-0,00353	P=0,9866	-0,398 to 0,392
	*Correlation Attack-Score, **Middle blockers** variable Y – attack variable X - score*	23	0,404	P=0,05	-0,0102 to 0,700
Outside hitters	*Correlation Service-Score, **Outside hitters** variable Y – service variable X - score*	30	0,0576	P=0,7623	-0,309 to 0,409
	*Correlation Receiving-Score, **Outside hitters** variable Y – receiving variable X - score*	32	-0,176	P=0,3345	-0,495 to 0,184
	*Correlation Attack-Score, **Outside hitters** variable Y – attack variable X - score*	27	0,393	P=0,0425	0,0153 to 0,673

Table 5. Equation of regression in positions

Player post	Independent variables	Coefficient	Std. Error	T	P
Opposite	**R^2-adjusted**	-0,03704			
	ATTACK	0,009565	0,008471	1,129	0,27
	SERVICE	-0,001636	0,008991	-0,182	0,85
Middle blockers	**R^2-adjusted**	0,05580			
	ATTACK	0,01029	0,005681	1,811	**0,05**
	SERVICE	0,0005854	0,008727	0,0671	0,94
Outside hitters	**R^2-adjusted**	0,03609			
	ATTACK	0,01092	0,006160	1,773	**0,05**
	RECEIVING	-0,005002	0,008848	-0,565	0,57
	SERVICE	0,005300	0,01472	0,360	0,72

From the point of view of the attack (0.404), we achieved a significant association between high efficiency and clear victory.

The attack has an important contribution in adjudicating victory. It can also be seen on the graph the direct relationship between efficiency and score, the higher the efficiency, the higher chance for a victory with 3-0. Middle blocker players scored a satisfactory evolution only in attack, the value of p = 0.05 </ = p = 0.05.

Multiple regression, reveals a significant "p" only for attack.

Again, the attack has a significant correlation with an index of p = 0.0425 <p = 0.005, which shows that this tactical action plays an important role in winning.

Again, we record a significant correlation only for attack, with p = 0.0501

5. Discussion and Conclusion

In this paper, we have attempted to systematize, synthesize and present a variety of scientific material, with many information from the advanced and modern sports practice of volleyball, in the form of a unitary theory.

The volleyball game requires expertise in more motor skills, and performance often depends on an individual's ability to jump and land [9]. Optimal muscle strength and power overall, together with technical and tactical skills are required to practice this sport at the highest level of performance [10]. To reach this high level, different strategies can adopt during the planning and development of the training process, and they can be implemented through careful guiding the training [11].

Changing the scoring system in volleyball has affected the way teams get their points during a ball exchange [12]. Because of this change in regulation, the first structure of the game (S1) or receiving from opponent service has gone from the role of preventing the opposing team from pointing to the structure in which 40-45% of the total points of the team got. This modification of the scoring system, besides the rule that allows the ball to hit the net during service together, has affected the execution and the risk that the athlete assumes during the service, given that each wrong service gives the opponent a point [13] [14].

Service performance affects the balance between service and receiving. In high-performance volleyball, this balance inclined to the receiving. Thus, 62.0%–72.6% of receiving is perfect in male volleyball (allowing the game coordinator to hold all the variants in the attack), and 53.0%–70.5% are excellent at female volleyball [15] [16]. These values are higher than those found in male volleyball to guarantee the success of the service (4.4%–6.8%), and female volleyball (3.3%–5.0%) [17] [18]. This imbalance in the efficiency of receiving compared with the effectiveness of the service is, in part, the foundation of success for the first game structure (Palao et al., 2009). For women's volleyball, the effectiveness of the service is higher due: to a lower net height; a lower capacity of the parameters of force and slower movement parameters on the court [19] [20].

The studies of the international specialized literature consulted, show the following speed service values: topspin jump of 85.3 km/h [21], 91.4 km/h [22] and 82.9 km/h and "float" service of 41-43 km/h in boys [23] and 47.52 km/h in girls.

In volleyball, both observational analysis and match analysis allow researchers to characterize a wide variety of technical procedures in various circumstantial contexts. The tactical principles of these methods not only strengthen the collective structure of any volleyball team [24] but are also essential for optimizing the training process and for supporting the development of concepts and strategies aimed at increasing the efficiency of individual and collective performance [25].

Introducing new physical training exercises, meant to develop the muscle groups are in contraction at the moment of execution, has provided more efficiency, thus improving the number of direct points.

In the matches against the weaker teams, we found, following interpreting the statistical data, that the team relaxed, entered the opponent's game and did not respect the tactical plan established.

The good results got when receiving the ball can also be attributed to the transfers made before the start of this championship, 2016-2017, when the team has benefited from players with an excellent technical luggage in terms of execution of this item, which has accumulated with a suitable program training, led the organization of an efficient defence at all stages of the 2016-2017 championship.

In conclusion, the data provided by the Click & Scout program is important but not exclusive support for training, the athletes' level of training and the way they interact on the court remain a determining factor in winning the competition.

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Galectin -3 and Aldosterone Responses to An Altitude Cross-Country Skiing in Elite Endurance Skiers

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Abstract

Introduction: In endurance athletes, the tissue muscle fibrosis in the heart muscle and reduction in its function are more possible due to excessive physiological pressure. Galectin is a reflection of the possible fibrosis caused by excessive pressure on the myocardium structure. In the present study, galectin-3 and aldosterone levels in elite endurance skiers were evaluated.

Methodology: Fourteen elite endurance skiers (mean age: 25 years; mean body fat: 14%) were selected for this study. Cross-country skiing activity was performed at the Dizin Ski School at an average altitude of 3140 meters. The cross-country skiing program included a skiing route for 8.5 km, a mean time of 65 minutes, and mean intensity of 70-90% of the maximal oxygen consumption. Two weeks after the skiing, the running on the treadmill with slope and distance and time spent similar to ski resort was performed. Galectin-3 and aldosterone were evaluated by ELISA method. Dependent t-test and independent t-test were used for examining the inter-group and intra-group changes by using SPSS 25 software.

Results: The results showed that galectin- 3 ($p = 0.004$) and aldosterone ($p = 0.009$) levels were significantly higher after endurance skiing than those in treadmill running.

Conclusion: Increasing physiological pressure on the heart caused by exposure to hypoxia and dehydration may lead to changes in the levels of aldosterone and galectin-3 as a fibrotic cellular marker.

Keywords: cross-country skiing, hypoxia, myocardium inflammation, dehydration, aldosterone.

Introduction

Galectin-3 has recently been recognized as a new marker for heart failure and one of the main causes of mortality in many populations. In addition, galectin-3 plasma level in humans is an independent predictor for the diagnosis of chronic and acute heart failure. Galectins are family of proteins, which 15 of them have been identified so far (6,16). Galectin-3 is a protein, which includes a binding area for identifying the carbohydrates with 130 amino acids (12). An increase in Galectin-3 level is associated with the risk of death due to acute and chronic heart disease (13). Thus, an increase in galectin-3 level in patients with heart failure has particular importance. In addition, it has been proven that an increase in the level of galectin is involved in cancer, inflammation and tissue damage (1,14).

Galectin-3, as a beta-galactose binding galectin, plays a key role in increasing cardiac fibrosis by activating macrophages and fibrocytes. This protein is one of the 15 diagnostic elements of the secondary family of lectins, which have one common characteristic. All of them have at least one branch, which is able to diagnose and bind to carbohydrate. More importantly, galectin-3, along with the secretory hormone of the right atrium, namely neuropeptide peptide, acts as a chronic and acute inflammatory regulator not only in the myocardium, but also in many cells and tissues, through applying its effects on intracellular and extracellular signaling of macrophages and neutrophils (5,22,19). Although regular training activities at moderate intensity are beneficial for health, new studies report that morphological and heart function changes caused by high- intense training are the cause of increase in cardiovascular diseases (7), especially in trainings in which physiological stress is high, such as skiing at altitude, which its results are affected by cold, atmospheric pressure, altitude, dehydration, and terrain accidents and ups and downs, leading to imbalance in intensity of activity. In fact, endurance training is one of the effective ways to prevent and treat heart failure. However, experimental studies suggest that excessive and high-intense trainings may have acute and chronic effects on the heart, especially fibrotic changes in myocardium tissue, resulting in degradation and gradual loss of myocardium function. In addition, high-intensity endurance training is associated with biochemical disorders, which may reflect negative consequences on the heart structure and its biology (10,9). Accordingly, it seems that galectin as a biochemical marker can be potentially considered as a reflection of possible fibrosis formed by excessive pressure on the myocardium structure. It can be an indicator of the accumulation of fibrotic syndrome in endurance athletes.

On the one hand, as high levels of galectin-3 plasma are a risk predictor in the general population and for patients with heart failure, the low levels of this biomarker are expected in the athletes. While protective effects of endurance trainings on the cardiovascular system have been recognized, levels of this variable increase after endurance trainings. Some studies suggest that galectin, as a standard biochemical marker, more likely represents a part of the physiological responses to endurance trainings, rather than a parameter indicating a heart attack in healthy athletes. Athletes can freely select their speed. As intensity of endurance training is one of the most important factors affecting the increase in concentration of this marker, it can affect the relationship. Galectin 3 is a unique protein belonging to big family of galectins. This protein contains a collagen-like branch and carbohydrate recognition, binding to a large number of extracellular matrix proteins, carbohydrates, and cell surface receptors (such as laminin, fibronectin, and tenascin). Galectin-3 expression has been identified in several tissues (17, 11).

However, its synthesis in cases of heart failure is considerable. Interestingly, Galectin-3 is not only a reliable marker indicating heart dysfunction and its complications, but also involved directly in diagnosing the progression and exacerbation of heart failure. As a result, it leads to proliferation of myofibroblasts, collagen sedimentation, and lateral reconstruction of the heart muscle. In addition, there is evidence suggests that galectin-3 inhibition effectively prevents inflammation, fibrosis, hypertrophy and heart dysfunction, which are common in endurance trainings athletes (2,3). Limited studies have been conducted on galectine-3. For example, Hatash et al. (2013) reported an increase in galectin -3 levels after 30 km of running (12). Salovagno et al. (2014) reported an increase in this protein level after 60-km super marathon running (21). In another study conducted on 22 non-elite and elite but non-active male endurance runners, the results revealed that 30 minutes of running would increase galectin-3 plasma levels significantly in athletes compared to non-athlete control group. In this research, which was the first study evaluated the galectin-3 plasma levels after endurance training; they found that an increase in galectin-3 levels was associated with the history of running, so that the level of increase was low in more experienced runners (22).

The base plasma level of galectin-3 in healthy athletes is higher than that of non-athletic control group. Galectin plasma level increased after training in endurance athletes. Experienced runners showed lower increase in galectin- 3 level, reflecting an adaptation to long-term endurance training. In fact, galectin-3 plays a significant and direct role in two main pathophysiologic mechanisms (fibrosis and undesirable heart reconstruction), involved in development of heart failure (6,4). It seems that high-intensity endurance trainings with biochemical disorders may leave side effects in heart structure and its biology. This hypothesis has also recently been proposed by Wilson et al. They reported that long-term high-intense aerobic trainings were associated with adverse adaptive changes in the structure and the electrical activity and function of heart (8). In addition, endurance skiers lose much of their water due to long-term activities, leading to dehydration in their bodies. It also leads to increased concentrations and osmolality of the blood (15).

Athletes are always experiencing a chronic hypoxia due to performing hard and high-intense trainings, performed mainly at high altitude, in which partial oxygen pressure is lower than the sea level. Some permanent changes are created in structure and size of the heart muscle of their vessels, increasing their ability to effects of this hypoxia. However, it may be associated with sudden death in these athletes due to reduced ventricular cavity space as well as greater cardiac muscle activity to cope with high blood pressure (17,8). Thus, the evaluation of indicators that are pathologically predicting the potential disability of the myocardium in the extreme conditions of cross-country skiing activity is crucial. Moreover, as high-intense aerobic trainings represent a unique and ideal model for the re-development of physiological heart stress and kinetics study of heart biological markers, the current research evaluates the level of galectin-3 and aldosterone in endurance elite athletes in two real skiing conditions and running on treadmill.

Methodology

After coordinating with the Islamic Republic of Iran Ski Federation, the Center for Assessing the National Olympic Academy and Dizin Ski Resort Management, and obtaining the required licenses, the research was coordinated with elite skiers for assessing their condition including the level of their readiness and current trainings, taking their consent, and explaining various dimensions of the study. Adequate information was provided on the process of conducting the research for the subjects. After determining the inclusion criteria, out of 19 athletes, 14 athletes with mean age of 25 years and body fat of 14% were selected as subjects. The health status was measured by a medical-sports questionnaire and people who had a history of cardiovascular, respiratory, metabolic and muscular disorders as well as severe physical injuries, such as fractures which might affect the outcome of research were excluded.

Measurement

Body composition was measured by bioelectric resistance method and by body composition analysis device (Inbody 3.3 model manufactured by Olympia Corporation of South Korea).

The maximal oxygen consumed by the subjects was measured by Bruce's protocol [15] and by respiratory gas analysis device (manufactured by Technogym Company, Germany). In order to eliminate the effects of high-intense activity on blood variables and performance, the maximal oxygen consumed was measured one week before start of the training program [119].

Blood pressure was measured by the digital brachial sphygmomanometer (M40 Beaver manufactured by Germany) in four steps before and after the tests.

Resting heart rate was also measured in the supine state after 15 minutes of complete rest for 15 seconds.

Heart rate during and after training, similar to the resting time, was measured by the sphygmomanometer (PM80 Beaver manufactured by Germany).

The percentage of oxygen saturation was measured by digital Oximetry Pulse (I HEALTH PO3 manufactured by Finland) in 4 steps before and after the tests.

Laboratory assay

To measure the blood variables of subjects, after a minimum of 12 hours of fasting, 10 ml of blood was taken from brachial vein of each person and blood samples were immediately poured into EDTA-containing tubes. Samples were centrifuged at 4 ° C with 1000 rpm for 20 minutes. Then, the plasma and serum were poured into the encoded tubes separately. To minimize the effects of previous training on the research results, the subjects did not perform any training for 48 hours before the main test.

Ski activity was performed between 9 am and 13 pm. Blood sampling was performed before and after it. After packaging the blood samples in bag of ice, it was transferred by technician to the Noor laboratory located at Tehran Keshavar Blvd in order to do hematological tests. Some amounts of the serum were transferred to the Noor laboratory in central Tehran to measure hematological variables including CBC, sodium, potassium, creatinine and albumin. To measure the variables, they were kept at freezer at -70 ° C. Galectin-3 concentrations were measured using a special human kit (D systems, Zellbio, Germany R & D) and ELISA method.

Blood aldosterone values were measured by ELISA method and Human insulin-specific radioimmunoassay (RIA) kit. The sensitivity of the measurement method was 0.15 µg/l. For higher accuracy, measurements were performed in two steps.

Ski protocol

The cross-country skiing protocol was performed at the Dizin Ski School at altitude of 2720 meters from the sea level, temperature of -2 C and a humidity of 65%. After 12 minutes of warm-up, the subjects travelled the 8.5-km ski route from the ski school to Dizin Hill at altitude of 3620 meters, while they were equipped with pulsation monitoring device, with a mean time of 65 minutes and an intensity equal to 70 to 90 of maximal oxygen consumed by skiers (Ski time with a FORTEX chronometer with an accuracy of 0.01 seconds, manufactured by Germany, and heart rate was recorded using the sphygmomanometer device, German Beaver). The slope of the ski route varied and it reached up to 30% (positive or negative) in some places. The mean ski slope in the route from the starting point to the end point is 17+ percent. Immediately after the end of the ski by athletes, the final heart rate and oxygen saturation were recorded, and their blood pressure was measured. Then, with interval of 2 minutes and in sitting position, blood sampling was performed from the anterior vein of the forearm. Two weeks after skiing, the running on the treadmill test was performed at the National Olympic Academy (NOA) at 9:00 am. Similar to the skiing day, the initial evaluations including blood pressure, heart rate and oxygen saturation measurements were performed. Then, initial blood sampling was performed by a laboratory technician. Then, subjects performed a protocol designed for phasing of slope, time and distance traveled similar to the ski resort. The running on the treadmill time for every person was same with skiing time. For this purpose, the 8.5-km ski route was divided into 9 stages of 1000 meters and the number of routes with positive and negative slopes was calculated, and based on it, the running on treadmill protocol was defined (Dizin Ski Resort has a map in which the distance, distance phasing, slope of each uphill and downhill, mean slope per thousand meters, mean of total slope and difference of the first slope and end slope have been defined). When running on a treadmill, activity intensity was calculated by measuring the heart rate and Burg's scale. Immediately after running on a treadmill, and similar to skiing activity, the final heart rate and oxygen saturation level were recorded and their blood pressure was measured. Then, within 2 minutes and in sitting position, blood samples were taken from the anterior vein of the forearm.

Statistical analysis

To describe the data, the central and distribution indices were used. The results were presented as mean±SD. To determine the normality or non-normality of data distribution, Shapiro-Wilk test was used. For intergroup comparison of variables, t dependent and t independent parametric tests were used at a significant level of 5% using SPSS 22 software.

Results

1.Characteristics related to age, height, weight, and body mass index of subjects are presented in Table

Table 1

Table 2

Based on Table 2, it is seen that galectin indices increased by 42.8% in the skiing group and b39.5% and in the treadmill group, aldosterone increased by 16.4% in the skiing group and b 22.2% in the treadmill group, albumin increased by10.7% in the skiing group was and 9.1 % in the treadmill group, systolic blood pressure increased by 26.1% in the skiing group and 27.1% in the treadmill group, diastolic blood pressure increased by 20.7% in the skiing group and 24% in the treadmill group, and hematocrit increased by 7.1% in the skiing group and 6.9% in the treadmill group.

Table 3

There was a significant difference between Galetian-3 serum level in two states of long –term skiing activity and endurance running on treadmill in skillful skiers ($P < 0.05$). The levels of this variable were more in endurance skiing compared to that in running on treadmill. The results of dependent t-test and independent and t-test showed a significant difference in aldosterone levels in both long -term skiing activities and endurance running on treadmill in skillful skiers ($P<0.05$). Moreover, significant change was seen in both running on treadmill and skiing before and after activity and the level of these change was more in endurance skiing than that of running on treadmill (Table 3).

Discussion

The results of this study revealed that levels of galectin-3 in endurance skillful skiers after endurance skiing at higher altitudes were significantly higher than those in running on treadmill at lower altitudes. Thus, it seems that activity at high altitude, associated with lower temperature and hypoxia conditions, might increase blood levels of this marker specific for performance and heart dysfunctions compared to the more natural conditions of activity. In other words, performing long-term endurance activity at high altitude

is associated with more serious physiological responses than activities performed in more normal conditions.
In addition, as skiing at high altitude is inherently voluntary activity and running on treadmill is a compulsory activity. It is expected that the level of pressure applied on the heart muscle to be more in compulsory activities that than in voluntary activities, while the results of this research reject this hypothesis. Some reasons proposed in this regard include reduction in body water at high altitude compared to running in a more natural environment, even with assuming that the activity is voluntary. Thus, the water level of body in skiing at high altitude could be significantly lowered compared to running on treadmill, despite the lower temperature in the altitude and the lower probability of sweating; imposed more physical and physiological pressure on the myocardium. An increase in the secretion of the aldosterone hormone in skiing activity at altitude can prove this claim. Theoretical foundations and litrature of research suggest that whenever body water level decreases and viscosity and blood osmolality increase, one of the natural responses to these conditions is the activation of renin-angiotensin-aldosterone mechanism. In this mechanism, aldosterone leads to increased sodium retention and reabsorption into the kidneys by effecting nephrocytes. It results in preventing urine loss, increasing plasma volume, and a balance in blood pressure (18).

Significant increase in galectin-3 has been observed in endurance runners, and this marker deserves special attention for the pathophysiological outcomes resulting from long-term high-intensity trainings and activities such as marathon and cross-country skiing. Although past studies indicated differences in the structure of the heart as a result of performing the trainings (16,10), it is not clear whether the form of trainings can affect the heart-secreted hormones or not. However, it seems that higher physical fitness and more experience in performing the sporting activities to be influential in galectin blood level changes (12). The base galectin-3 plasma level is higher in athletes than that of healthy non-athlete people. Galectin plasma level increases after training in endurance athletes. More experienced runners show less increase in galectin-3 level, indicating adaptation to long-term endurance training (12). Galectin-3 increase is negatively correlated with running experience. This issue can be due to adaptation to reduced inflammatory response to training due to performing long-term trainings and probably along with long-term positive effects as a result of long-term training (20, 12). This increase is crucial in athletes, given high level of base galectin-3, compared to non-athletes.

It suggests that proper defense mechanisms to prevent possible complications and myocardial injuries in endurance athletes require an inherent protective system, which an increase in the base level of galectin-3 is one of these mechanisms. It seems that more increase in its level in skiing compared to that in treadmill running in the present study is due to longer activity as well as higher adaptive coping to low water levels at altitude and hypoxia effect on increasing heart function during such activities. The results of this research are in contrast to the above-mentioned claim. In the present study, galectin-3 levels were higher in skiing at altitude than those in running on treadmill. This difference might be attributed to the factors discussed above, including low air temperature at altitude, lack of oxygen, and more reduction in body water. Access to water during skiing is less than that in running at lower altitude.

Conclusion

The results of the present study which is among the unique and rare studies done on the ski athletes, show that the probability of physiological pressure on the heart of skiers is high and it can affect the function of the heart to meet the metabolic and immune needs of the cells. It seems that its main reason to be hypoxia and dehydration, which increases the heart muscle function to meet the needs of muscular cells and the general metabolism of the body during such activities.

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Table 1- mean and standard deviation of subjects' characteristics (N = 12)

Variables	Mean ±SD
Age (year)	30.50±5.46
Height (cm)	175.1±6.13
Weight (kg)	72.12±6.52
Body mass index (kg / m 2)	23.38±2.361
Body fat (%)	11.61±3.09
Fat-free mass (kg)	58.12±2.77
Maximal aerobic power (ml / kg / min)	62.65±4.91
Resting systolic blood pressure (mmHg)	11.25±0.84
Resting diastolic blood pressure (mmHg)	7.66±0.49
Resting heart rate (beats / min)	63.12±3.7

Table 2. mean and standard deviations of research variables (N = 12)

	Endurance skiing (n=12)		Treadmill running (n=12)	
	Pre-test	Post-test	Pre-test	Post-test
Galectin(pg/ml)	568.58±213.91	995.58±225.71	531.05±143.02	878.39±199.81
Aldosterone (ng / dl)	39.81±3.36	47.66±5.83	35.45±4.82	45.61±6.12
Albumin (g / dl)	4.84±0.25	5.42±0.36	4.97±0.21	5.47±0.23
Systolic blood pressure (mmHg)	11.75±0.87	15.92±0.9	11.01±0.95	15.23±0.9
Diastolic blood pressure (mmHg)	7.66±0.49	9.67±0.77	7.41±0.51	9.16±0.58
Hematocrit (percent)	48.33±3.31	52.04±3.49	46.16±3.25	49.6±3.19

Table 3- dependent t-test and independent t-test results on the difference on Galectin -3 and Aldosterone levels in both skiing and endurance running states

Variables	Endurance skiing (n=12)		Treadmill running (n=12)	
	Pre-test	Post-test	Pre-test	Post-test
Galectin (pg / ml)	568.58±213.91	995.58±225.71	531.05±143.02	878.39±199.81
dependent t-test and significant level	P=0.048	t= -1.87*	P=0.028	T=-2.523*
Independent t and significance level	P=0.004		T=-3.112**	
Aldosterone (ng / dl)	39.81±3.36	47.66±5.83	35.45±4.82	45.61±6.12
dependent t-test and significant level	P=0.005	t=-3.548*	P=0.015	t=-2.926*
Independent t-test and significance level	P=0.009		t=-4.618**	

*Significant with dependent t-test; **significant with independent t-test to compare the difference between means of Galectin-3 in subjects of two activities

The Effectiveness of Autogenic Training in the Preparation of Elite Athletes in Rhythmic Gymnastics

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Abstract

Introduction: As the athletes in rhythmic gymnastics achieve the peak of their physical and technical capabilities, increases the role of psychological training to achieve high sporting results. One of the most effective means of training an athlete is the methods of psycho-regulation, the central focus of which is autogenous training. However, this method is practically not developed in the practice of the training process of gymnasts. Objective: to reveal the influence of the use of non-traditional complex psycho-regulation methods on the competitive performance and special physical fitness of athletes in rhythmic gymnastics. Methods: The study involved 20 gymnasts (girls) – masters of sports: the control group (n=10) and the experimental group (n=10). A method of autogenic training was developed, which consists in presenting abstract natural images for relaxation. In autogenic training were applied also mental representations of the correct implementation of technical elements. Were registered expert assessments of gymnasts in the main competitions of the year in programs with hoop, clubs, ribbon; as well were registered indicators of special physical and technical readiness. Digital information was processed using traditional methods of mathematical statistics. Results: The use of the developed autogenic training method contributed to the improvement of the competitive performance of the experimental group of athletes. Experimental group athletes experienced a significant increase in results with each subsequent year competition ($p<0.01$, $p<0.001$). The positive effect of autogenic training is observed according to the results of testing special physical and technical preparedness of athletes ($p<0.05$). Conclusion: The significance and effectiveness of the application of autogenic training methods to improve competitive performance, special physical and technical preparedness and functional state of highly qualified gymnasts has been revealed and scientifically grounded.

Keywords: rhythmic gymnastics, autogenous training, psycho-regulation, technical preparedness.

1.Introduction

The modern process of sports training in aesthetic sports requires the maximum stress of the body of athletes in artistic gymnastics [1; 2; 3; 4]. As the athletes achieve their physical and technical capabilities, the role of psychological training increases to achieve high sporting results. One of the most effective means of training an athlete is the methods of psycho-regulation, the central place of which is occupied by autogenous training [5; 6; 7].

2. Literature Review

In literature there is evidence of an increase in the level of abstract and artistic thinking when raising the class of athletes-gymnasts [7]. Therefore, the susceptibility to the influence of autogenous training increases with the increase in the skill of gymnasts and as they become their person [7; 8]. However, this method is practically not developed in the practice of the training process of gymnasts, therefore the chosen direction of research has a certain urgency and novelty. The abundance and specificity of the means determines the features of rhythmic gymnastics, among which, according to the authors [9; 10; 11], the most characteristic are the following:

Firstly, the free movement of the gymnast on the site, which includes elements of dance, ballet, facial expressions, plastics, elements without the object and objects, as well as some elements of simplified, stabilized acrobatics. Secondly, artistic gymnastics is associated with the art of owning a body in a natural environment. Thirdly, the feature of artistic gymnastics is musical accompaniment. Due to the merging of the dynamics of movements with the nature of musical accompaniment, movements get different emotional colors and acquire dance. This connection is carried out not only in coordinating the movement with the size and pace of musical accompaniment, but also in the education of those who are engaged in the ability to correctly understand music and perform movements in accordance with its content and form. Music creates a brighter view of the nature of the movement.

Fourthly, the peculiarity is the ability to effectively influence aesthetic education

Fifth, the feature is related to motor memory and attention.

To perform complex combinations, the original gymnast's exercises need to have good memory and attention. The complexity of the structures of motor activities of gymnasts causes the need to memorize the large volume of independent movements. It imposes demands on the motor memory of gymnasts, as well as to such qualities as diligence, clarity and accuracy of motion reproduction. Such responsible activity forces the athlete to experience a range of experiences, regardless of his experience [12; 13; 14].

Even a highly skilled athlete sometimes can not restrain his nerves at the right moment, remove excessive nervous tension and calm down. As a result, there can be a "psychological disruption" [15; 16; 17; 18].

Thus, means of psycho-regulation are important for the success of competitive activities. But the technique of psycho-regulation has some difficulties in the application, since not every athlete can easily master the means of psycho-regulation. Therefore, the actual problem is the development of effective and sufficiently comprehensible methods of psycho-regulating training, in particular, methods of autogenous training.

In our study, the hypothesis that the development and application of an effective method of autogenic training will promote the increase of competitive performance of athletes and the quality of performance of technical elements.

The purpose of the work is to reveal the influence of the use of non-traditional complex psycho-regulatory methods on competitive performance and athlete specific fitness in rhythmic gymnastics.

3. Method

3.1. Participants

The study involved 20 gymnasts - masters of sports, members of the team of Ukraine. The effectiveness of the developed system of application of non-traditional practice of autogenous training was determined by indicators of competitive performance, special physical and technical preparedness.

3.2. Materials

Method of analysis of competing performance of gymnasts of high qualification

As indicators of competitive performance, estimates of gymnasts were used in the main competitions of the year (Championship of Ukraine, 2017; All-Ukrainian Tournament, 2017, Ukraine Cup, 2017, Games of Ukraine, 2017) in programs with hoops, clubbing, ribbons.

As indicators of competitive performance, the results of the expert evaluation in scores on each of the competitions in the specified programs were used.

Methods of testing

1. Anthropometric indicators: height (cm), body weight (kg) [19; 20; 21].
2. Astringency by the method of Abalakov (sm) [22; 23; 24; 25].
3. Implementation of the ribbon of the image "Snail" within a minute (number of times) [26].
4. The threshing was 3-4 m without going from the place to the right and left hands. The number of successful attempts in succession (number of times) [26] is fixed.
5. Throws a ball with a fly in "jerk" on the chest without leaving the place. The number of successful attempts in succession (number of times) is fixed [26].
6. Jumping through the rope to make an error. The time is fixed (min) [27; 28].

3.3. Procedure

Initially, athletes were tested on the indicators of physical and technical preparedness and on competitive results in early 2017. The groups were virtually identical to the experiment, the estimated values of Student's t-criterion were less critical. Each group consisted of 10 gymnasts.

The groups trained under identical programs during 2017, however, the experimental group used a developed system of autogenous training. Indicators of competitive performance and physical fitness indicators were determined.

Pedagogical testing was carried out at the beginning and end of the experiment.

Psychotraining was conducted after each workout, while mastering the technique of gymnasts engaged in autogenous training independently. The control group trained without the use of means of autogenous training.

Modified method of autogenous training for use in the practice of training high school gymnasts [26].

From the experience of carrying out autogenous training according to the classical scheme it is known that the learning process of this practice is very complex and time consuming. In addition, far from all athletes master this practice. The greatest effect in the application of autogenous training is achieved in the last stages of practice, with the emergence of images and bright dreams. However, this stage does not come at once, although it is most effective in influencing the processes of relaxation. Therefore, we developed a method of autogenous training, different from the traditional one. The traditional method of blood pressure assumes a gradual concentration on different parts of the body in order to induce feelings of warmth, weight, ease and so on. According to some authors, this type of autogenous training leads to excessive activation of consciousness and the subsequent stress, and not the relaxation of the muscles, and the desired effect of relaxation is not achieved. For this reason, the method of autogenous training, which is a powerful means of relaxation, recovery and psychological training, is not widely used.

Our method of autogenous training was based on author's development [6; 26].

When developing a modified method of autogenous training, we were based on the fact that gymnasts are distinguished by advanced imaginative thinking, and it is not difficult for them to think of creating any image and gradually plunging into it, although according to literature, this is the highest degree of possession by the method of autogenous training. In addition, the imaginary observation of natural images is the most ancient and natural for human practice relaxation. The description of the technique of "appeasement of thoughts" in ancient treatises on physical culture, mainly on martial arts, built on the description of natural images that smoothly change each other and follow from each other. The simplest example of an autogenous training for children - a lullaby - is often built on the principle of describing the process of falling asleep of nature - birds, animals and even elements.

Based on the above-mentioned provisions, we developed an autogenous training method that is fairly simple, accessible and provides a quick, deep, and lasting relaxation effect [6; 26]. The essence of the technique is to repeat by the instructor or athletes themselves a text that describes the alternation of natural images.

Excerpt text from autogenous training

Close your eyes Listen to my words and follow them. You swim across the great ocean. You are a small droplet in the infinite space of water, and at the same time - a huge sea. You merge with its waters deeper and deeper. You are completely alone with the ocean and with the whole Universe. This ocean is your life, and one of its trends is sport. You are alone with your partners and rivals, quickly reacting to all their thoughts and movements. You are completely subject to balls, hoops, maces ... You accurately perform all movements from any position in any physical and mental condition. You repeat the thoughts that you perform in competing exercises. With the horses, every move you get is getting better. You slowly return to the present, but the ocean, the universe and the perfection of movements forever remain with you.

When continuing the autogenous training session, the instructor, the trainer himself or the athlete, may arbitrarily include the alternation of natural images that naturally arise in thoughts already during the first sessions of practice. Autogenic training can be conducted for music that is most suitable for practitioners.

When applying this method of AT, its text may vary quite broadly, but to achieve the desired effect, it is necessary to adhere to the basic principles:

1. The best effect of relaxation is achieved when creating the image of a large landscape of nature, that is, "huge ocean", "deep river", "lawn with a lot of flowers," "starry sky," etc.
2. Images of nature should be beautiful, easy to perceive, familiar to athletes from everyday life.
3. The text of the autogenous training is selected in such a way that during the session there is a gradual process of immersion into the natural image and merging with it.

Together with the use of autogenous training, special conversations were used that contributed to the appropriate psychological mood of athletes.

3.4. Statistical analysis

The digital information obtained during the study was processed using traditional methods of mathematical statistics. For each indicator, the mean arithmetic X, the standard deviation S (standard deviation), the standard error (m), the reliability of the differences between the parameters of the initial and final results and between the control and experimental groups on the Student t-test with the corresponding level of significance (p) were determined. .

Mathematical data processing was carried out using Microsoft Exel Data Analysis Software SPSS. Differences were considered significant at the significance level of $p < 0{,}05$.

4. Results

As shown by the results of the major competitions in rhythmic gymnastics in 2017, the use of autogenous training contributed to improving the competitive performance of athletes experimental group (Table 1-3). Thus, the experimental and control groups did not differ significantly from the results of the competition for the experiment, and already in the first competitions after the start of the experiment (Championship of Ukraine), according to the results of the competition, the experimental group in programs with clubs and ribbons has significantly differed from the control ($p<0.05$, $p<0.01$) (Table 3). In the following competitions, these distinctions are even more pronounced: the results of the competitions of the athletes of the experimental group showed significantly higher results in the program with a hoop, clubbing and ribbon ($p<0.001$) (Table 3).

Table 1. *Indicators of competitive performance of gymnasiums of the experimental and control groups during 2017*

The title of the competition	Subject	Group	$\bar{x}$	S	m	t	p
Ukrainian Championship	Hoop	experimental	18.37	0.80	0.25	-0.30	>0.05
		control	18.69	3.29	1.04	-0.30	
	Bulava	experimental	18.76	1.39	0.44	2.42	<0.05
		control	17.65	0.40	0.13	2.42	
	Tape	experimental	19.02	1.37	0.43	3.03	<0.01
		control	17.61	0.53	0.17	3.03	
Allukrainian Tournament	Hoop	experimental	21.21	1.27	0.40	7.06	<0.001
		control	18.11	0.57	0.18	7.06	
	Bulava	experimental	21.92	1.24	0.39	8.39	<0.001

		control	17.86	0.89	0.28	8.39	
	Tape	experimental	22.27	1.10	0.35	12.52	<0.001
		control	17.61	0.41	0.13	12.52	
Cup of Ukraine	Hoop	experimental	23.26	0.63	0.20	19.54	<0.001
		control	18.17	0.53	0.17	19.54	
	Bulava	experimental	23.53	0.50	0.16	16.10	<0.001
		control	17.86	0.99	0.31	16.10	
	Tape	experimental	24.27	0.37	0.12	13.34	<0.001
		control	18.40	1.34	0.42	13.34	
Spartakiada of Ukraine	Hoop	experimental	24.19	0.57	0.18	15.06	<0.001
		control	18.12	1.14	0.36	15.06	
	Bulava	experimental	24.31	0.44	0.14	15.46	<0.001
		control	18.18	1.17	0.37	15.46	
	Tape	experimental	24.06	0.87	0.28	17.14	<0.001
		control	18.52	0.53	0.17	17.14	

This tendency persists further: in all subsequent competitions the difference between experimental and control groups (p <0,001) (Table 2, 3).

In addition, athletes of the experimental group with each subsequent competitions of the year showed a significant increase in the results (p <0.01, p <0.001) (Table 2, 3). The only exception is the difference in the results of competitions in the program with the ribbon in the Ukrainian Cup and the Games of Ukraine (p> 0,05) (Table 3).

Table 2. *Indicators of competitive performance of gymnasiums of the experimental group during 2017*

Subject	The title of the competition	$\bar{x}$	S	m	t	p
Hoop	Ukrainian Championship	18.37	0.80	0.25	-5.74	<0.001
	Allukrainian Tournament	21.21	1.27	0.40		
Bulava	Ukrainian Championship	18.76	1.39	0.44	-4.44	<0.01
	Allukrainian Tournament	21.92	1.24	0.39		
Tape	Ukrainian Championship	19.02	1.37	0.43	-6.24	<0.001
	Allukrainian Tournament	22.27	1.10	0.35		
Hoop	Allukrainian Tournament	21.21	1.27	0.40	-4.66	<0.001
	Cup of Ukraine	23.26	0.63	0.20		
Bulava	Allukrainian Tournament	21.92	1.24	0.39	-3.61	<0.01
	Cup of Ukraine	23.53	0.50	0.16		
Tape	Allukrainian Tournament	22.27	1.10	0.35	-7.02	<0.001
	Cup of Ukraine	24.27	0.37	0.12		
Hoop	Cup of Ukraine	23.26	0.63	0.20	-5.03	<0.001
	Spartakiada of Ukraine	24.19	0.57	0.18		
Bulava	Cup of Ukraine	23.53	0.50	0.16	-4.63	<0.001
	Spartakiada of Ukraine	24.31	0.44	0.14		
Tape	Cup of Ukraine	24.27	0.37	0.12	0.77	>0.05
	Spartakiada of Ukraine	24.06	0.87	0.28		

If we analyze competitive performance in programs with a hoop, clubbing, ribbon individually for individual athletes of the experimental and control groups, then it can be noted that for athletes of the experimental group there is an increase in individual performance with each competition in 2017 (Table 1). Athletes of the control group do not show such positive dynamics of individual effectiveness (Table 2).

The obtained results testify to the positive influence of the developed method of psychoregulation on the adversarial performance of high school gymnasiums and the possibility of its application in the broad practice.

Table 3. *Indicators of competitive performance of the gymnasts of the control group during 2017*

Subject	The title of the competition	$\bar{x}$	S	m	t	P
Hoop	Ukrainian Championship	18.69	3.29	1.04	0.50	>0.05
	Allukrainian Tournament	18.11	0.57	0.18		
Bulava	Ukrainian Championship	17.65	0.40	0.13	-0.68	>0.05
	Allukrainian Tournament	17.86	0.89	0.28		
Tape	Ukrainian Championship	17.61	0.53	0.17	0.00	>0.05
	Allukrainian Tournament	17.51	0.41	0.13		
Hoop	Allukrainian Tournament	18.11	0.57	0.18	-0.28	>0.05
	Cup of Ukraine	18.17	0.53	0.17		
Bulava	Allukrainian Tournament	17.86	0.89	0.28	0.03	>0.05
	Cup of Ukraine	17.76	0.99	0.31		
Tape	Allukrainian Tournament	17.61	0.41	0.13	-1.67	>0.05
	Cup of Ukraine	18.4	1.34	0.42		
Hoop	Cup of Ukraine	18.17	0.53	0.17	0.13	>0.05
	Spartakiada of Ukraine	18.12	1.14	0.36		
Bulava	Cup of Ukraine	17.86	0.99	0.31	-0.60	>0.05
	Spartakiada of Ukraine	18.18	1.17	0.37		
Tape	Cup of Ukraine	18.4	1.34	0.42	-0.26	>0.05
	Spartakiada of Ukraine	18.52	0.53	0.17		

Table 4. *Indicators of testing on the special physical and technical training of gymnasiums of the experimental and control groups of the national team of Ukraine before the experiment*

Indexes	Experimental group		Control group		p
	$\bar{x}$	S	$\bar{x}$	S	
Jump up (cm)	40.2	2.4	40.9	2.8	>0.05
"Draw" tape (number of times)	31.4	4.3	30.4	3.5	>0.05
Throws up (a few times)	14.5	1.6	14.8	1.7	>0.05
Throws the ball (a few times)	11.3	1.8	12.1	1.9	>0.05
Jump through a jumping rope (min.)	19.4	3.6	20.4	3.7	>0.05

Table 5. *Indicators of testing on the special physical and technical preparedness of the gymnasts of the experimental group before and after the experiment*

Indexes	By experiment		After the experiment			p
	$\bar{x}$	S	$\bar{x}$	S	% grow	
Jump up (cm)	40.2	2.4	44.1	2.3	9.70	<0.05
"Draw" tape (number of times)	31.4	4.3	35.6	3.9	13.38	<0.01
Throws up (a few times)	14.5	1.6	19.3	1.8	33.10	<0.001
Throws the ball (a few times)	11.3	1.8	14.8	1.9	30.97	<0.001
Jump through a jumping rope (min.)	19.4	3.6	52.5	4.2	170.62	<0.001

The use of autogenous training led to improved indicators of technical and special physical fitness. Indicators of special physical fitness improved due to better execution of movements and activation of means of restoration of work capacity. Prior to the experiment, the control and experimental groups did not significantly differ from each other (p> 0.05) (Table 4), then, after the experiment, there were significant differences in the testing indices of the athletes of the experimental and control groups (p <0.05) (Table. 7), and in the indicators of special endurance, the greatest differences were detected (test "Jumping through a jumping rope, min.", p<0,001) (Table 7).

Table 6. *Indicators of testing on the special physical and technical preparedness of the gymnasts of the control group before and after the experiment*

Indexes	By experiment		After the experiment			p
	$\bar{x}$	S	$\bar{x}$	S	% grow	
Jump up (cm)	40.9	2.8	41.1	2.5	0.49	>0.05
"Draw" tape (number of times)	30.4	3.5	32.6	4.2	7.24	>0.05
Throws up (a few times)	14.8	1.7	15.3	2.3	3.38	>0.05
Throws the ball (a few times)	12.1	1.9	12.8	2.1	5.79	>0.05
Jump through a jumping rope (min.)	20.4	3.7	24.3	2.2	19.12	<0.05

In addition, athletes of the experimental group maintain a significant increase in the test indicators as a result of the experiment (Table 6). Thus, the results of the upward jump improved by 9.7% (p <0.05), the results of the "Drawing of the tape" test improved by 13.38% (p <0.01), the results of the test "Kiddy Bulov" improved by 33.1 % (p <0.001), the results of the test "Throws of the ball" improved by 30.97% (p <0.001), the results of the "Jumping Jump" routine improved by 170.62% (p <0.001) (Table 6) . The high increase in the results of the test "Jumping through the rope", we explain that, due to the ontology of autogenous training, athletes began to perform movements more precisely, which allowed them to do more jumpsprimand without a mistake. In addition, the special mental mood allowed them to jump longer without fatigue.

In the athletes of the control group, the growth of the test indicators is valid only in the test "Jumping through the jump", but with a lower level of significance than in the experimental group (p <0,05) (Table 5). Changes in the performance of other tests in athletes of the control group are unreliable (p> 0.05) (Table 5).

We believe that positive changes in the test scores of athletes in the experimental group were due to the practice of ideomotor training, which was used in one session with autogenous training.

Table 7. *Indicators of testing on special physical and technical preparedness of experimental and control group gymnasts after an experiment*

Indexes	Experimental group		Control group		p
	$\bar{x}$	S	$\bar{x}$	S	
Jump up (cm)	44.1	2.3	41.1	2.5	<0.05
"Draw" tape (number of times)	35.6	3.9	32.6	4.2	<0.05
Throws up (a few times)	19.3	1.8	15.3	2.3	<0.05
Throws the ball (a few times)	14.8	1.9	12.8	2.1	<0.05
Jump through a jumping rope (min.)	52.5	4.2	24.3	2.2	<0.001

Such an effect of ideomotor training is associated with the fact that autogenic and ideomotor training consists in a conscious active presentation of the technique of motion [6; 26]. In ideomotor training it is accepted to allocate three basic functions of representations: program, training and regulatory. The first one is based on the idea of an ideal movement, the second one is on representations that facilitate the learning of skills, the third one is on representations about possible correction, control of movements and connections of individual elements. Accordingly, the structure of ideomotor training, which includes internal updating (exposure phases, observation, ideomotor) and external implementation (phases of simulation and practical training) is developed. Ideomotor training is most effective for increasing the speed of movements (up to 34%), accuracy (6-18%).

Thus, the comprehensive application of methods of psycho-regulation has improved as indicators of special physical and technical preparedness, as well as the adversarial performance of gymnasts.

5. Discussion and Conclusion

The obtained results testify to the positive influence of the developed method of psychoregulation on the adversarial performance and the special physical and technical preparedness of high school gymnasts and the possibility of its application in the broad practice.

The psychophysiological state of the athlete is an integral part of the general functional state of the organism [29; 30; 31; 32]. The psychophysiological state unites, on the one hand, the psychological reactions, at an athlete in the conditions of training and competitive activity, on the other hand, the state of physiological systems that ensure the performance of sports activities. Study of the structure of sporting activities of complex coordination sports, sports games and martial arts [22; 33] indicates the presence of regulatory systems of the body responsible for the functional and coordination side of preparedness of athlete of high qualification, among which psychomotor and cognitive components are detected [34; 35]. From this perspective, our work is a confirmation of the data presented in the works of G. Korobeinikov [22].

In our study, we relied on the data obtained in our previous works [6; 26] on the necessity of applying in aesthetic sports methods of influencing the consciousness of athletes. From this perspective, the data obtained in our work confirm and extend the provisions contained in the above-mentioned works.

It should be noted that in this paper, for the first time, the justification of the effectiveness of the use of autogenous training for psychophysical training in artistic gymnastics is carried out. From this point of view, the obtained results have the prospect of practical and theoretical implementation in sports science.

The proposed method of autogenous training is actually the training of internal visions. It has now been proven that the training of internal visions is of great importance for people of different specialties, and especially to such practices, people with a humanitarian, artistic-figurative composition of the mind are inclined [5; 6; 26].

It is known, for example, that actors, writers, artists, all people of figurative thinking - is usually a recourse to the internal vision [6; 26].

Some authors [7; 26] found that the effect of the word is more effective, the more it is "charged", that is, figuratively colored. Prepared by microcirculation, the disturbed visions of this word leads to a greater biological potential of systems that provide the required action, and causes increased excitability of certain areas of the cerebral cortex [22].

Emotionally stained trace processes are initially called consciously, then arise involuntarily, and at this moment, the actual actions of the environment are inhibited. The locking function is then carried out in the second signaling system, but beyond the conscious perception [22].

The mechanism of suggestion opens the properties of processes, one of which - the memory of the actions and states of the organism in a direct sequence and communication in time, and in repeating the chain of action of the cerebral cortex launches in the course of those communications that existed at the moments of these actions, and allows called processes at the right time.

If the suggestion is realized in the cheerful state of man and the perception becomes conscious, it is imperative that the athlete believes in the cause of the affairs, he wants to accept the suggestion and, in such a way, that he himself maintains the connection between them and inspires. It is noteworthy that it is impossible for a person to instill (even in a state of hypnotic sleep) any ideas and actions that are in contradiction with his convictions, with his ethical standards.

Scientific novelty consists in revealing and scientific substantiation of significance and effectiveness of application of the technique of psychoregulation, the basis of which is autogenous training for improvement of competitive performance, special physical and technical preparedness and functional state of gymnasts of high qualification.

Recommendations

The practical significance of the study is expressed in the high pedagogical effect of the proposed method of psychoregulation. The developed effective form of autogenous training quickly and deeply influences the presentation of movements and is quite accessible in the development.

When continuing the AT session, the instructor, the trainer himself or the athlete, may arbitrarily include the alternation of natural images that naturally arise in thoughts already during the first sessions of practice. AT can be spent on music that is most suitable for practitioners.

When applying this method of AT, its text may vary quite broadly, but to achieve the desired effect, it is necessary to adhere to the basic principles:

1. The best effect of relaxation is achieved when creating the image of a large nature conservation, that is, "huge ocean", "deep river", "lawn with a lot of flowers," "starry sky," etc.

2. Images of nature should be beautiful, easy to perceive, familiar to athletes from everyday life.

3. The text of the AT is selected in such a way that at the AT there is a gradual process of immersion into the natural image and merging with it.

Conclusions

1. Application of the developed method of autogenous training contributed to improving the competitive performance of athletes experimental group. Athletes of the experimental group with each subsequent competitions of the year showed a significant increase in the results ($p < 0.01$, $p < 0.001$).

2. Positive influence of autogenous training is observed on the results of testing of special physical and technical fitness of athletes. Before the experiment, the control and experimental groups did not differ significantly ($p > 0.05$), and after the experiment, there were significant differences in the test scores of athletes in the experimental and control groups ($p < 0.05$). In the indicators of special endurance, the greatest differences were detected (jump rope test, min., $p < 0.001$). Athletes of the experimental group revealed a significant increase in the test indicators as a result of the experiment.

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Conflict of interests

The author declares that there is no conflict of interests.

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Association Between the ACE I/D Gene Polymorphism and Comparison of 3000 m Running Performance With and Without Equipment During the Basic Military Training

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Abstract

Purpose: The aim of this study is to reveal the relationship between the ACE I/D gene polymorphism in response to 3000 m running performance (both equipped and equipment-free), and the compatibility of considering the ACE gene variables as a criterion in the selection of operational duties.
Methods: The study group consisted of 103 non-elite Turkish army recruits. All subjects were measured for 3000 m running performance both equipped and equipment-free. Homogenous working conditions were established by providing the same type of feeding, resting and loading parameters for the subjects in the boot camp. ACE gene polymorphisms were examined by PCR method.
Results: According to the results of our study, while the best performance between fully equipment running performance and equipment-free running performance was observed in the subject with DD, ID and II genotype respectively. We observed that individuals with ACE DD genotype seems to be more advantageous than the ID and II genotypes in response to the fully equipped and equipment-free 3000 m running performance ($P < 0.05$).
Conclusion: The findings in this study may be utilized for further assessments in evaluating the operational planning with regard to personnel allocation to specific tasks requiring certain level of metabolic and physical characteristics.
Keywords: genetics, physical fitness, load carriage, basic military training.

Introduction

Throughout the military history, load carrying has been regarded as an important aspect of military operations. It has been the focus of many researches over the years. Technological developments of weapons and armor are designed to increase the effectiveness of the soldiers and to ensure their survival at the operational area. During training on the operational field, soldiers must be carrying loads as they travel in difficult conditions (short-medium and long distance running or marching, climbing, crawling etc.) However, the increase in load carriage due to technological developments may have negative effects on the agility and stamina of the soldiers at the battlefield.

Today, carrying heavy loads into the battlefield remains a key part of military operations. On the other hand, the increase in the load of the soldier leads to decrease in performance at the theatre [1]. Within this framework, the increasing weight of the soldiers on their backs in trainings and operations also forces the physical exertion levels.

From a military perspective physical performance directly affects the individuals' capacity at the battlefield. Soldiers who are physically fit and higher endurance capacity can survive more easily in the battlefield. However, not only do individual goals vary, but also individuals respond and adapt to exercise differently [2]. There is increasing evidence for strong genetic influences on physical performance and for an evolutionary "trade-off" between performance traits for speed & power and aerobic/anaerobic endurance activities [3].

In recent years there has been a great progress in molecular biology techniques, which has enhanced the influence of the research both on genetics and on human performance [4]. There are specific regions of

DNA that can vary among individuals. Such variations may explain why some individuals give differentiated responses to certain stimuli, including the responses to physical performance or training. In a particular sport or physical activity, the presence of specific polymorphisms may contribute to higher levels of performance [5] at the battlefield or the training area.

Basic military training is a quite challenging period of physical training for soldiers. In this framework, the development of the aerobic/anaerobic and strength endurance is the main objective of the period of basic military training for the soldiers. On the other hand, running 3000 meter with fully equipped (back bag, weapons, flasks etc) is an important theme of the the basic military training during combat phase.

In this study, in order to investigate whether the physical performance of the soldiers in fully equipped and equipment-free 3000 m running is depending on a genetic variable or not; we specifically aimed to analyze the effect of the angiotensin I-converting enzyme (ACE) gene, whose association with the human physical performance has also been extensively studied.

The ACE gene is the most frequently studied gene on the response to exercise when investigating the physical performance of the human body. It is thought to have influence on traits such as aerobic/anaerobic and strength endurance, speed, power & trainability. The ACE gene is known to have effects on the muscular force & the degree of fatigue (aerobic endurance) and adaptation to workout sessions [6]. I-allele of the ACE gene has been generally associated with improved endurance performance, while D-allele of the ACE gene has been associated with sprint and power related phenotypes [4].

ACE gene includes a polymorphism (DD, ID, and II alleles) enclosing of the availability (insertion, I) or nonentity (deletion, D) of a 287 base pair sequence in intron 16 [7,8]. comprising 26 exons and encode for ACE, which perform operative role on various substrates. ACE gene polymorphism appears to have significant mission on ACE at a tissue level [9,6]. and may effect angiotensin II production [10]. Higher ACE levels increase angiotensin II productivity (DD genotypes) and thus the increased level of plasma angiotensin II restricts the blood flow to the tissues [4].

The level of physical performance must be at a certain level for soldiers to achieve their operational duties. Running or walking for miles under difficult conditions, performing long periods of time with heavy loads, reaching targets on time, crawling for hours in challenging terrain and being able to act quickly and safely under stress in operational duties are highly complex activities requiring high physical effort. In this regard, the military field performance is dominated by aerobic endurance (low intensity, long duration activities), anaerobic endurance (high intensity, short duration activities) and strength endurance (long duration power performance without fatigue) [11].

Taking into consideration the above mentioned assessment, the aim of this study is to reveal the relationship of the ACE I/D gene polymorphism in response to 3000 m running performance (both with and without equipment), and the ACE gene variables' being considered as a criterion in the selection of operational duties and to provide some positive contributions to the planning efforts of soldiers' training loads while considering their specific individual requirements.

Methods

Participants

The study group consisted of 103 male subject non-elite Turkish army recruits. All subjects have provided written consent to participate in the study and appropriate ethics committee approval has also been granted. The male subjects participating in the research study did not regularly deal with any sports activities as professionally, and homogenous working conditions were established by providing the same type of feeding, resting and loading parameters for the subjects in the boot camp. Mean age of the subjects was 24 ± 3.6, body weight was 73 ± 2.1 kg, and height was 174 ± 2.4 cm.

At the beginning of the boot camp, all subjects participated in 3000m running test with sportswear. And then, one week later, they run the same distance with fully equipped (a rifle G3 4250 gr, magazine 5 x 75 = 3760gr, bayonet 550 gr, battle dress uniform 1146 gr, cartridge belt 250 gr, boot 1800gr, flask 1400gr, assault vest 1140 gr, helmet 1560 gr; total weight is 15.856 kg) [12]. In general, activities have been carried out in an open and sunny weather (the average air temperature during boot camp was between 18 & 24 degrees).

Genetic Analysis

"The genotype analysis of the subjects participated in the current study had been evaluated during the study conducted in 2004" [13], and the method used in this evaluation is explicated below.

Each subject provided with a written consent to participate in the study and appropriate ethics committee approval. Peripheral venous blood of subjects receiving the approvals were collected on K2EDTA scrapers and stored at -20 ° C until used for DNA isolation. All molecular analyses were carried out in the Molecular Medicine Research Laboratory of the Department of Pediatrics, Ege University Medical Faculty Hospital.

"Genomic DNA was extracted from 200 l of EDTA- anticoagulated peripheral blood leucocytes using the QIAmp Blood Kit (QIAGEN, Ontario, Canada, Cat. no:51,106). Amplification of DNA for genotyping the ACE I/D polymorphism was carried out by polymerase chain reaction (PCR) in a final volume of 15 l containing 200 M dNTP mix, 1.5 mM MgCl2, 1£ Buffer, 1 unit of AmpliTaq® polymerase (PE Applied Biosystems) and 10 pmol of each primer. The primers was used to encompass the polymorphic region of the ACE were 5-CTGGAGACCACTCCCATCCTTTCT-3 and 5 -ATGTGG CCATCACATTCGTCAGAT-3"[14]. "DNA was amplified for 35 cycles, each cycle comprising denaturation at 94°C for 30 s, annealing at 50°C for 30 s, extension at 72°C for 1 min with final extension time of 7 min. The initial denaturizing stage was carried out at 95°C for 5 min. The PCR products were separated on 2.5% agarose gel and identified by ethidium-bromide staining. Each DD genotype was confirmed through a second PCR with primers specific for the insertion sequence" [15]."The samples with II and DD homozygote genotypes and ID heterozygote genotype were randomly selected. These samples were then purified by PCR products purified system (Genomics, Montage PCR, Millipore) and directly sequenced by the ABI 310 Genetic Analyzer (ABI Prisma PE Applied Biosystems)" [16].

Statistical Analysis

Statistical analyses were performed using SPSS for Windows version 10 (SPSS Inc., Chicago, IL, USA). Methods applied were frequencies, descriptive statistics, and means. Statistical significance was set at the $P < 0.05$ level. The mean differences between groups those were split on two factors that are ACE genotype group and type of 3000 running (with and without full accoutered) were compared with two-way ANOVA. The post hoc analysis was conducted with Least Significant Difference method (LSD). Lastly, the differences between running score values for participants with equipment and without equipment were observed and analyzed by paired t-test.

The effect of genotype on the difference between 3000m running time with equipment and without equipment is analyzed by using two way ANOVA. In this method, before constructing a model, the necessary assumptions whose normality and equality of variances are checked using the appropriate tests. Shapiro Wilk test satisfies the normality of samples and Levene Test shows that the equality of variances between samples ($p=0.859$).

The following table shows related summary statistics for case and the result of ANOVA. The dispersion of genotypes in the entire group (16.48 % II, n = 16; 50.47 % ID, n = 56; 33.05 % DD, n = 31) did not diverge from substantially from those estimated by the Hardy–Weinberg equilibrium.

Genotype	n	Without load (n=103)	With load (n=103)	Effect of load (P value)	Genotype effect (P value)
II	16	12,25±1.28	15.33±1.25	0.000	0.005
ID	56	12,19±1.34	15,14±1.21		
DD	31	12,18±1.12	14,38±1.21		
Total	103	12,20±1.29	15,15±1.23		

Table 1. Two Way ANOVA (Significance level *P < 0.05).

Results

The mean of 3000m running time is achieved for participants with full body loaded and unloaded. It is seen that the average running scores without equipment is highest for DD, ID and II genotypes respectively, and the **table 1** shows that this difference is statistically significant (p=0.000). In other words, it can be said that the performance of unloaded subject is better than with full body loaded on the average.

In addition, when this averages are compared in terms of genotype, it is seen that the mean running performance is best for subjects with genotype II, intermediate for subjects with genotype ID, and lowest for subjects with genotype DD.

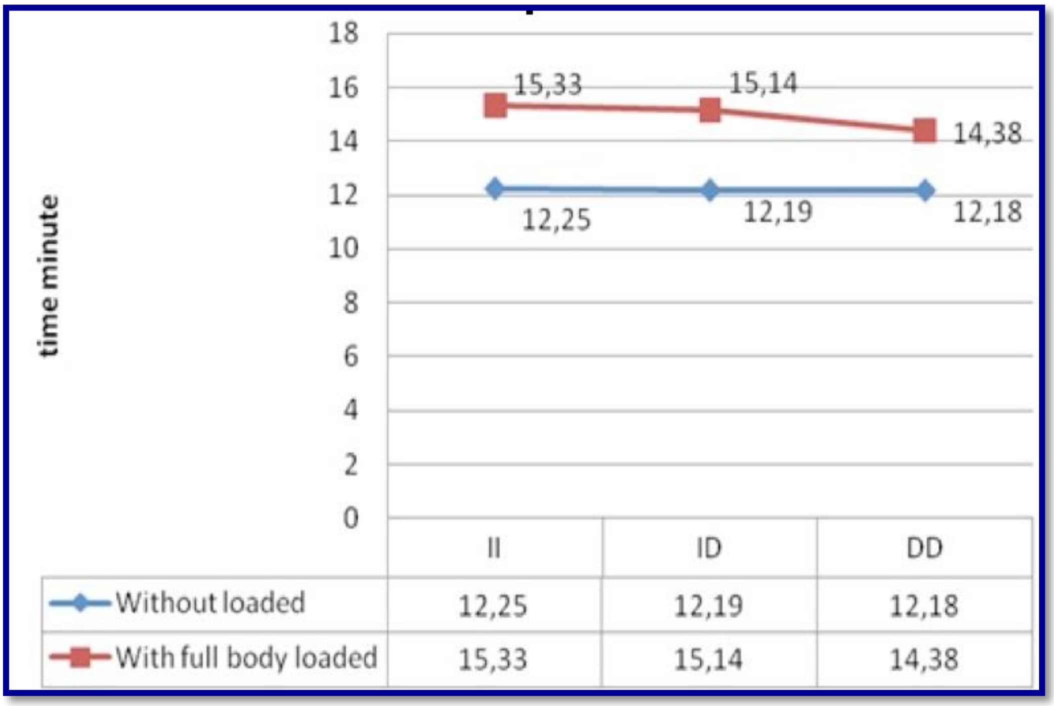

Table 2. Running scores and genotype.

It is revealed that these differences among genotypes are significant (p=0.005). In order to find out which differences are significant, Least Significant Difference (LSD) test is conducted and it is revealed that the differences between genotype DD & ID (p=0.006) and genotype DD and II are statistically significant. (p=0.004). On the other hand, the difference for genotype ID and II is not statistically significant (p=0.469).

Moreover, the effect of full body loaded on genotypes is examined using paired t-test. For every genotype, it is revealed that there is a significant differences between running score with & without full body loaded (**Table 2**). Participants for each genotype showed a worse performance with full body loaded. However, it can be said that the DD genotypes showed better performance than II and ID genotypes.

Discussion and Conclusion

In literature, there is a scarcity of genetics studies related to this area, in particular the influence of ACE I/D gene on the soldiers' performance during military running or walking both with and without equipment. Majority of the works conducted have focused on the endurance capacity development, which also led to the unavailability of sufficient number of studies required to conduct a comparative study. In this sense our study is a strong candidate to be the first example of its kind. The studies conducted so far, have excluded the gene factor and mainly considered the efforts exerted by the soldiers during medium and long ranges under different loads (the loads that are carried by soldiers may differ from country to country). Besides their being focused on medium and long-range efforts, there is no available study, which also dealt and related with short-term high-intensity efforts or fast-paced (as loaded) movements or difficult terrain walking's. In this study, we aimed to study which ACE genotypes will show a better performance in reaching the end point during a 3000 m equipped military running. Taking into consideration the time as a critical factor impacting the level of success especially in the conduct of military operations or during any location changes in operations, we assumed that the ACE D genotype would present a better performance in short-term operations in comparison to other types.

There are few studies investigating the physiological reasons, and the effects of heavy load carriage during the performance of short duration, high intensity performance [17,18, 19]. During military applications in the field, a soldier will always be carrying or wearing an external load. The primary intent of physical standards in the military has always been to select soldiers best suited to the physical demands of military service [1]. The ability of the soldiers to maneuver fastly with heavy backpacks is critical for completing the mission and surviving operations. This situation becomes more difficult for the tasks performed in different environmental conditions [19].

The training programs made for the purpose of improving the mobility of the soldiers on the terrain can be listed as aerobic/anaerobic, strength and endurance, upper and lower body speed and agility trainings. All these parameters aimed to be developed through specific trainings are essential for moving in theatre with ease and comfort. However, each individual is prone to show different levels of performance depending on the varieties of their genetic specifications [4]. In other words, the aerobic or anaerobic training ability varies between individuals. It appears to be genetically determined among individuals, partly due to the composition of the muscle fiber types [20]. Normally, the fast twitch muscle fibers are important for short-duration and high-intensity work bouts, where as the slow twitch muscle fibers are better suited for sub-maximal and prolonged activities [20]. The percentage of each of these major types in a given muscle appears to be genetically determined [6].

The effects of ACE gene variables on the physical performance will be better understood in the framework of studies focusing on the relation between the ACE gene and physical performance. In our study, the metabolic and physiological characteristics of individuals with ACE DD genotype, which granted them more advantageous results in the field in comparison to ones with other types of ACE genotype, have obviously resulted from the genes that those individuals do carry. Because, ACE DD genotype is related with higher ACE activity [7]. angiotensin II secretion rate & the high rate of the fast twitch muscle fiber [10, 21]. This genotype plays a key role in the development of speed & power parameter, which is the determinant of anaerobic activities [22, 23]. Cerit et al. (2006) stated that ACE DD genotype seems to have an advantage in development in short duration aerobic performance development that requires high-level VO_2max. There was also a linear trend in performance enhancement as ACE DD > ID > II [7].

Moreover, individuals with DD allele carriers showed positive improvement in VO_2max following high intensity interval training than those with II allele carrier. Furthermore, It is also stated in some studies that ACE DD genotype improves the aerobic capacity and increases the VO_2max levels and shows better performance in short duration aerobic endurance training [24, 25]. VO_2max (aerobic power) levels can be sustained 10–12 min [26]. ACE DD genotypes have more performance improvement in maximal efforts, in which VO_2max is dominant and lasting between 8-10 minutes [22]. In this respect, high performance in short duration aerobic performance requires higher VO_2max and strength endurance levels [13].

On the other hand, in a number of some studies have shown that there is no relationship between ACE genotypes and VO_2max development. [27]. Sonna et al. have reported that ACE genotype was not strongly related to physical performance in their studies on the effect of training on aerobic power and muscular endurance in 147 healthy US Army recruits. [27].

Taking into consideration the above-mentioned analysis, ACE DD genotype is more effective in terms of specific bio-motor characteristics such as aerobic power, muscular strength, muscular endurance, and anaerobic power which are required to show high performance in the theatre especially during short-duration but high-intensity operations (shorter than 15 mins) [4] have a positive impact in sustained combat performance [17].

Likewise, running economy is also a significant factor in determining running performance [28]. The weight of the body becomes important for running efficiency [26]. When determining the amount of weight the soldiers carry on the back, the person should not be more than one-third of body weight [29]. In fact, individuals with ACE II genotype, have better walking and running performance in long-term efforts (more than 30 min). However, it is a prerequisite to possess a lower and upper body strength in order to be able to proceed under high loads. Therefore, beside the aerobic/anaerobic and strength endurance, the upper and lower body strength is also an important factor in short-term high-intensity efforts conducted under heavy loads [4].

New technological development increases the physical capacity of soldiers. However, together with the technological development, the amount of load they carry on the back of the soldiers is increasing. In this regard, additional loads negatively affect the running economy of the soldiers. The studies of Cureton et al. (1978) reported that loading additional weights to the subjects (adding 5%, 10% and 15% of their body weight) decreased running performance (12 min). This distance decreased by average 89 meters on for every 5% load increase [30]. In our study, subjects with each genotype showed a poorer performance during a fully equipped 3000m running. However, DD genotypes showed better performance than II and ID genotypes (Table 1 and 2).

A survey of endurance athletes, they were dressed in weight jackets between 9% and 10 % of their body weight to investigate how they were influenced as metabolic. Lactic acid levels were significantly lower in subjects who were running with vest during submaximal running and running with additional load was found to increase the anaerobic mechanism in leg muscles [31]. Therefore, the leg muscles should have a higher strength and endurance capacity. In our study, due to the genotypes DD having higher anaerobic capacity and better performance in short duration aerobic endurance than the ID and II genotypes, their score in 3000 m running performance with and without additional load were observed as better than the others.

Running with additional weights is a condition that will affect the physical performance. Upper body and lower body strength & power are strongly related to the performance of high intensity (as in DD genotypes) military tasks with and without heavy load carriage. Daniels found that the 100g increases in shoes enhancement aerobic consumption and the performance decreased from 5: 39.17 to 5:40 minutes per mile [32]. Also, lean body weight (DD genotype has more lean body weight in comparison to ID and II genotype) is very important in determining performance in with additional loaded run [33]. However, the ACE genotypes, who have lesser muscle mass will be able to continue to run for a longer period of time. Such as lighter soldiers are more advantageous in medium and long distance aerobic endurance performance, because of lacking in extra load.

In conclusion; in our study, the average running scores without equipment is highest for DD, ID and II genotypes respectively. In other words, it can be concluded that the performance of unloaded soldiers is better than the ones with full body loaded on the average. Also, the results of our study support the study of Cam et al. (2007) [34]. The subjects with DD genotypes were more successful than the II and ID genotypes in 3000 m equipped-running which requires more strength.

Throughout the study, we observed that individuals with ACE DD genotype seems to be more advantageous than the ID and II genotypes in response to the fully equipped and equipment-free 3000 m running performance. The findings in this study may be utilized for further assessments in evaluating the operational planning with regard to personnel allocation to specific tasks requiring certain level of metabolic and physical characteristics. However, we also acknowledge that there is still much to be investigated regarding ACE genotypes and their role in not only the physical performance of individuals but also the combat relevant tasks and load carriage performances. In this respect, further research should be encouraged in order to better understand and determine the relationship between ACE gene polymorphism and its effects on load carriage of soldiers on the battlefield and evaluation of task oriented skills.

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Identification of Strategic Instruments to Improve the Competitiveness of the Road Industry Enterprises, Sustainability and Strategic Development

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Abstract

The article presents the importance of assessing the competitiveness of enterprises in the Russian Federation, which is determined by the needs of the real sector of the national economy. At present, in world practice, investments in the road sector are growing, but at the same time, investors have become more prudent and demanding in their expectations from investment proposals. The purpose of this study was to identify the main development trends of competitiveness, sustainability and strategic development of the Russian Federation enterprises, allowing to assess the potential of the studied industry and its internal environment (personnel). The author's research results presented will allow to formulate "recession points" and determine the development trends of this industry, including the regions of the Russian Federation. The article will be useful to business owners, civil servants, educational organizations, which prepare students and undergraduates in the economics of enterprises (by industry) and personnel management.

Keywords: competitiveness, sustainability, strategic development, personnel.

Introduction

In today's competitive environment, absolutely all Russian enterprises need modernization and optimization, namely, the need to create innovative conditions for the future development of the Russian economy and its transition to a new stage of development. We believe that it is impossible to come to this without studying foreign experience and introducing basic technologies into innovative business processes, which is of great importance for the sustainable and competitive development of the road industry, which is key in the national economy.

Literature Review

In the article institutional approaches, rating method and particular methods of economic analysis, such as grouping, qualitative and quantitative analysis, expert assessments, were used.

The works of Gamble P., Kotler F., Merlin P., Porter M., Taylor S., Hayek F. are devoted to general theoretical questions of studying competitive development.

The scientific analysis of institutional economics and institutional approaches to the development of various institutions is reflected in the works of Veblen T., Lakatos I., North D., Hodzhons J.

Studies on the strategic management of the national economy enterprises are reflected in the works of Russian scientists Andreev A., Vesnin V., Gusev Yu., Egorov D., Ivanova E., Kuznetsova E., Nerovnya T., Ragimov F ., Fatkhutdinov R., Fashiyev H.

It is necessary to highlight famous scientists who are trying to find a scientific answer to the real challenges of modernizing of Russian economy branches: Aganbegyan A., Borodin A., Voronin V., Galazova S., Deniskin V., Izryadnova O., Kerefov M., Kostenkova T., Novoselov S., Savvateev E., Fomin P., Cherkesova E.

Method

For the analysis of this problem, theoretical and empirical methods, quantitative and qualitative analysis methods, data aggregation methods, expert evaluation method, classification and structuring of information method, comparison method, reference and statistical data were used.

Procedure

Based on the study of methodology "The Global Competitiveness Report" of K. Schwab were revealed the points of the decrease in the social and economic indices of Russia [1]. In our opinion they have a negative impact on many branches of the Russian economy, including the road sector.

Thus, there is a need to develop the author's vision of the rating assessment of competitiveness, sustainability and strategic development of enterprises in the road sector, based primarily on the efficiency and quality of work of managerial staff, middle and lower level employees, on the internal environment analysis of enterprise, and to determine the role and place of the enterprises in the institutional environment.

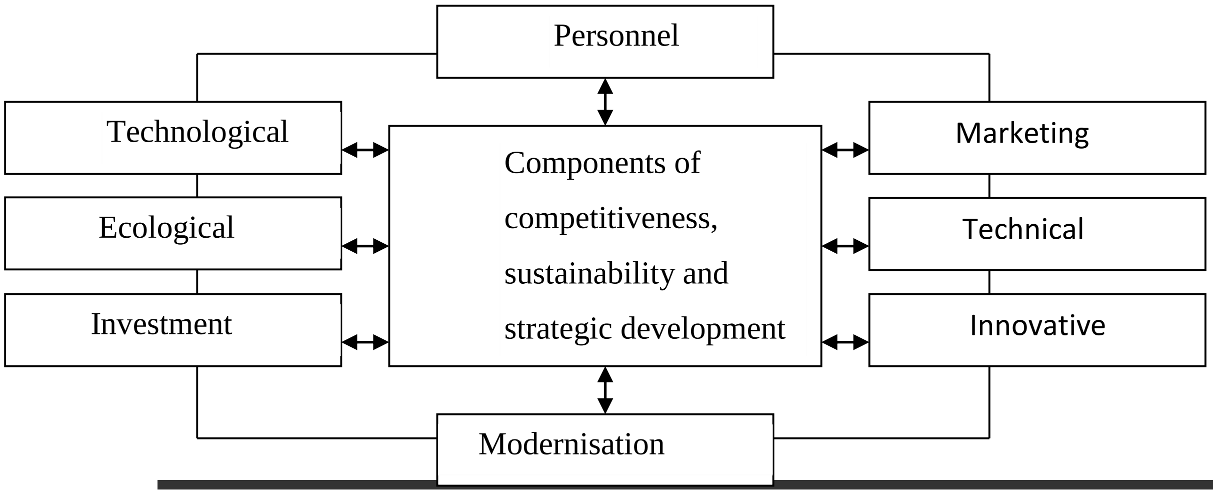
Results

As a result of the study, both general trends of the studied economic category in the world and in the Russian Federation were described. Justification of these trends makes it possible to assess the tactical, strategic and personnel potential at the enterprises of the Russian Federation.

The main problems of the road industry competitive development are the critical points, such as insufficiently developed technological base, non-compliance with basic professional standards, insufficient professional responsibility of personnel in the implementation of a collective goal. An important problem is the impact of the level and quality of life of the population on the performance of their work and contribution. In this regard, it is appropriate to note that according to the rating results of the international economic forum in determining the index of global competitiveness, the Russian transport industry for 2017-2018 ranks the 123rd place among 138 countries [1]. It is far from the leading countries on the main indicators and criteria of assessing competitiveness. And if you study the roads quality rating in the world, then the situation in Russia is deplorable – 123rd place out of 138 countries analysed. The leading echelon countries are currently the UAE, Singapore and Hong Kong [1].

Therefore, the problem is acute for all of us, and it affects the population safety of life. Let us study such a centuries-old problem for our country as competitiveness. It is closely connected with such significant concepts as sustainability and strategic development, and as a well-established definition, it has a rather complex structure (Fig. 1). In our opinion, technological, personnel, marketing, technical, innovative ecological and investment components should be singled out as the most important components, and then, based on the hierarchy of the system, it is clear that each of its components consists of several elements [5].

Fig. 1. *The proposed components for the formation and maintenance of competitiveness, sustainability, strategic development of the road industry enterprises.*



It follows from the table that all components are interconnected and interdependent. Analysing the concept of improving competitiveness, sustainability and strategic development, we came to the conclusion that all the efforts of economists to create a universal concept are quite far from reality. In our opinion, the technologies of the process management of strategic and sustainable development in road sector enterprises, based on the situational methodological approach, that is, taking into account many factors that influence a specific situation, can be more adequate.

Let us consider the economic category of strategic sustainability in more detail. We understand the strategic sustainability of enterprise as balanced ability to create, develop, modernise and use tools effectively for successful long-term development (institutional capabilities, strategic priorities, striving for a comparative advantage, compliance of product quality with quality management system), taking into account personnel, financial, market, investment, technological, informational, innovative sustainability in the efficiency and quality of work of all parts.

As part of expanding the methodological and informational base for making management decisions, we propose a comparative analysis to identify the features of various existing approaches to assessing competitiveness, sustainability and long-term strategic development of enterprises as key characteristics of the institutional environment.

Thus, marketing approach to assessing competitiveness, sustainability of enterprises and their strategic development for the long term is to identify weights to assess the market situation in a competitive environment and to determine indicators of changes in the market situation, which will make it possible to forecast how the competitive advantages in the market will change in the future.

In our opinion, application of systematic approach, which is one of the basic ones, will allow us to logically reach a number of equivalent technical management decisions, and the objective of the systems approach will be to express the principles and concepts of system research at the level of a unified general scientific methodology.

An innovative approach to the assessment of enterprise competitiveness, sustainability and strategic development is very important and is both strategic and innovative-managerial in nature. On the one hand, it gives the right to create innovations, and on the other - to evaluate those who create them.

A complex approach examines a complex assessment of enterprise competitiveness, sustainability and strategic development on the base of the identification not only tactical, but also potential degree of stability with respect to innovation activity.

Competence approach is relevant to the assessment of enterprise competitiveness, sustainability and strategic development. He studies the internal environment, namely: the personnel and the interrelation of personal- behavioural and professional competencies of the employees necessary for working in a competitive environment, offering innovative tools and a niche for delimitation of competences, both in the sectors of the national economy and in life of society, and when it reaches the “qualitative result”.

Thus, a strategically important adaptation process to institutional changes is needed - improving the tools of competitiveness and sustainability management in the road-building complex through the implementation of strategic tools. Investigating cross-country analysis, it should be noted that a complex of strategic planning and forecasting for top, middle and entry management is used as an effective tool for sustainable development, and the influence of exogenous and endogenous factors is promptly determined and taken into account.

Accordingly, we believe that the management mechanism in the road-building complex should be improved, adapting and improving it at all stages of the life cycle. To do this, it is advisable to determine the tool and its socio-economic significance. The development of the industry in a dynamically changing environment we are studying is a strategic tool for building sustainable development path of the Russian economy. For this, it is necessary to develop a methodology of rating assessment of competitiveness, sustainability and strategic development, which allows us to assess the level of enterprise development, minimizing the risks associated with bankruptcy and the crisis management.

Despite Russia's leading position in the world rating on the availability of natural resources, all of the listed components of competitiveness, including innovation, are characterized by rather low results with a high scientific potential.

According to the results of the WEF rating, the United States ranks 3rd from 138 countries in competitiveness in the world (for 2017) [1]. Let's highlight the following advantages of this country from a large number of advantages: high growth efficiency (Fig. 2), payment, productivity and a willingness to delegate authority (Fig. 3).

Fig. 2. *Cross-country rating of effectiveness and economic growth for 2016-17. (compiled by the authors).*

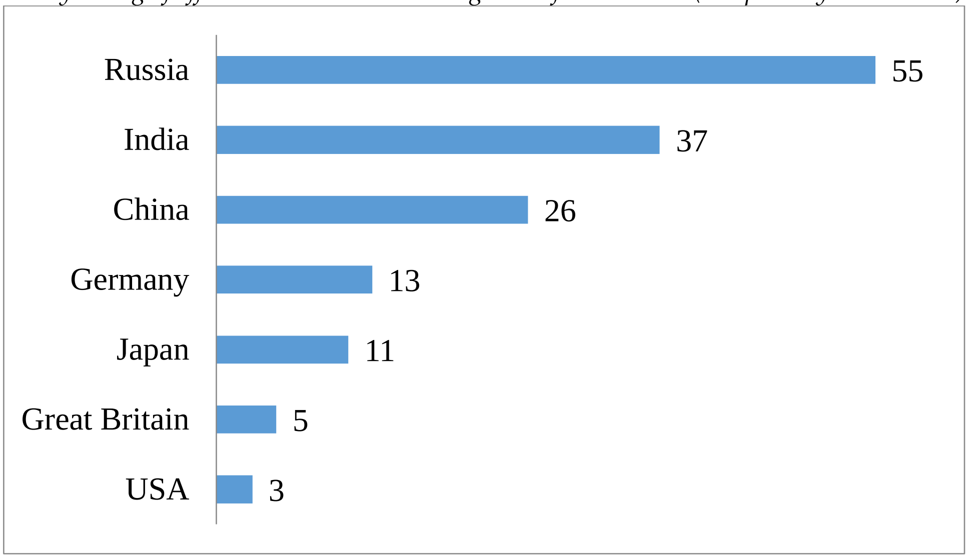
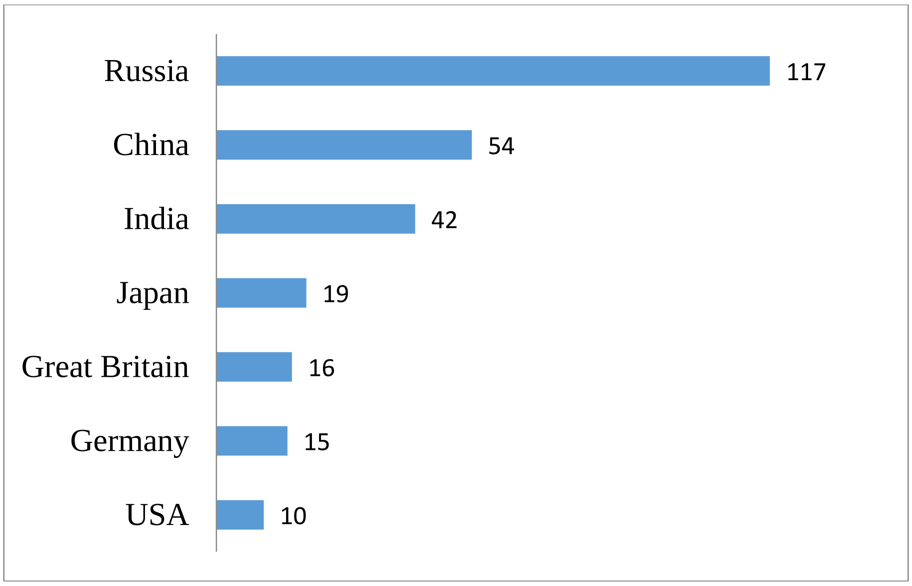


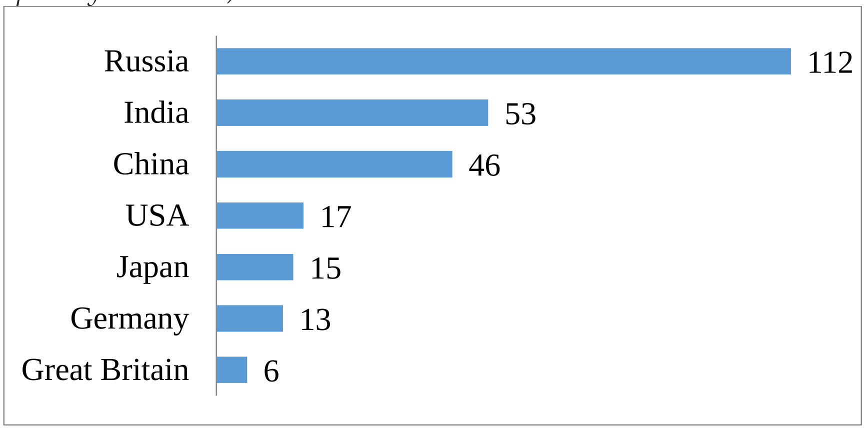
Fig. 3. *Cross-country rating of managers' readiness for delegation of authority (compiled by the authors).*



Thus, according to the WEF, the UK ranks 6th out of 138 countries analyzed in competitiveness [1].

Let us single out such advantages from the rating as high trust to professional managers and efficiency of corporate governance implementation (Fig. 4).

Fig. 4. *Cross-country rating of trust to professional managers and effectiveness from corporate governance implementation (compiled by the authors).*



So, it should be noted from the above that the education level and competence of managers, top managers of the UK companies, their international experience reduce the priority of additional staff training. In recent years, since 2009, it has more often been dictated by global crisis phenomena as an opportunity to reduce financial costs [3].

Discussion and Conclusion

We have substantiated that, in terms of innovation potential, Japan is one of the leading countries in the field of scientific research such as high technologies, biomedicine and robotics. Transport and communications play a significant role in the Japanese economy [2]. On the territory of the country there are a large number of medium-sized and small enterprises related to others industries and enterprises in economic groupings. This relationship is based on the historical traditions of Japan, from the depths of which economic relations between enterprises (corporate groups), their management and staff (the principle of life-long employment) [4] are built. In the rating for 2016-2017 WEF, Japan ranks 11th from 138 countries in competitiveness. Let us highlight the following from the large number of advantages of this country: high innovation potential (Fig. 5), degree of customer orientation (Fig. 6), the level of personnel training (Fig. 7) and the level of cooperation between the employer and employees (Fig. 8).

Fig. 5. *Rating of countries on innovative potential (compiled by the authors).*

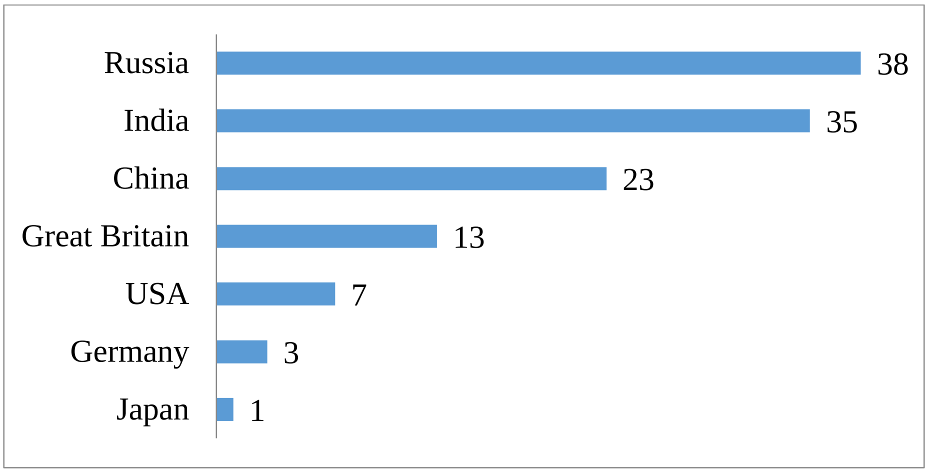


Fig. 6. Rating of countries in terms of customer orientation (compiled by the authors).

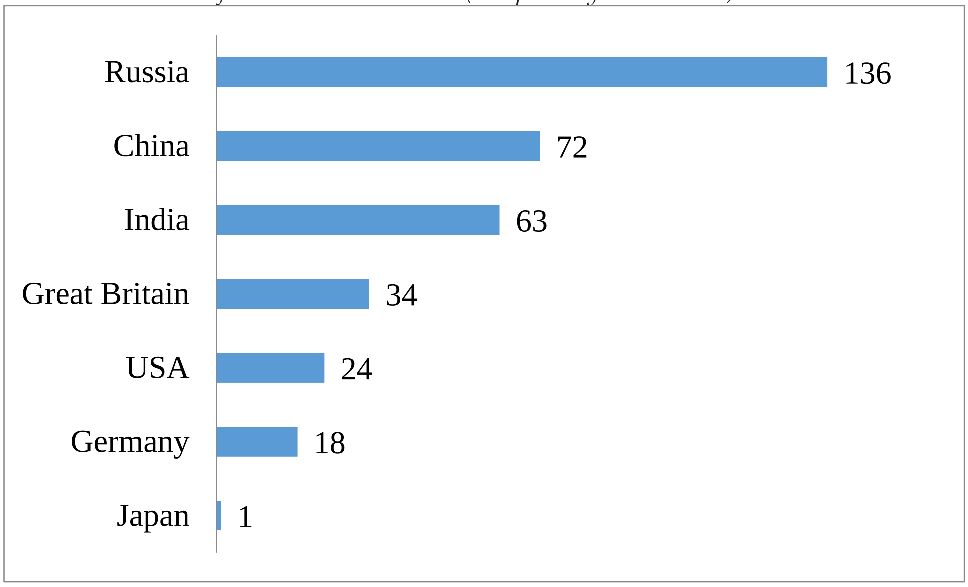


Fig. 7. Rating of countries in terms of staff training (compiled by the authors).

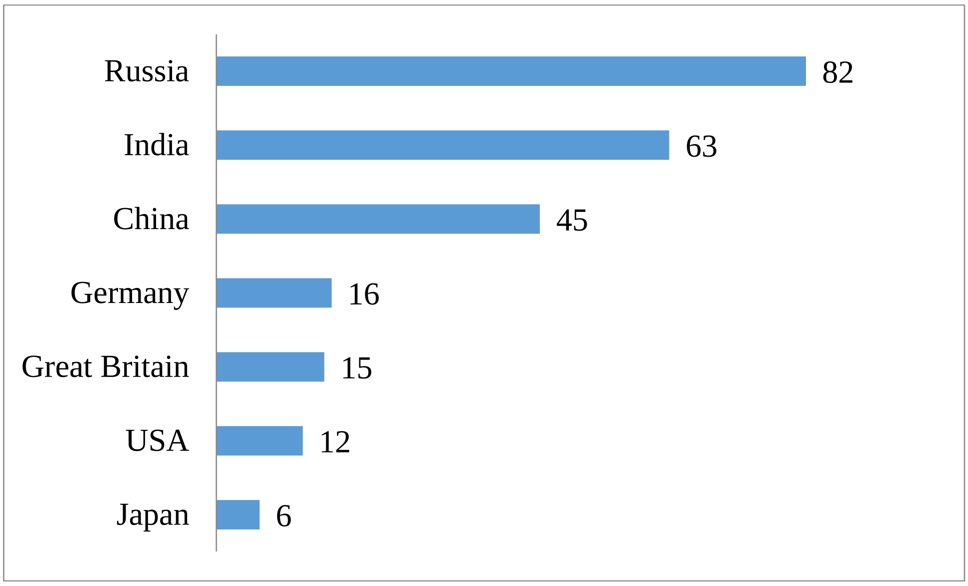
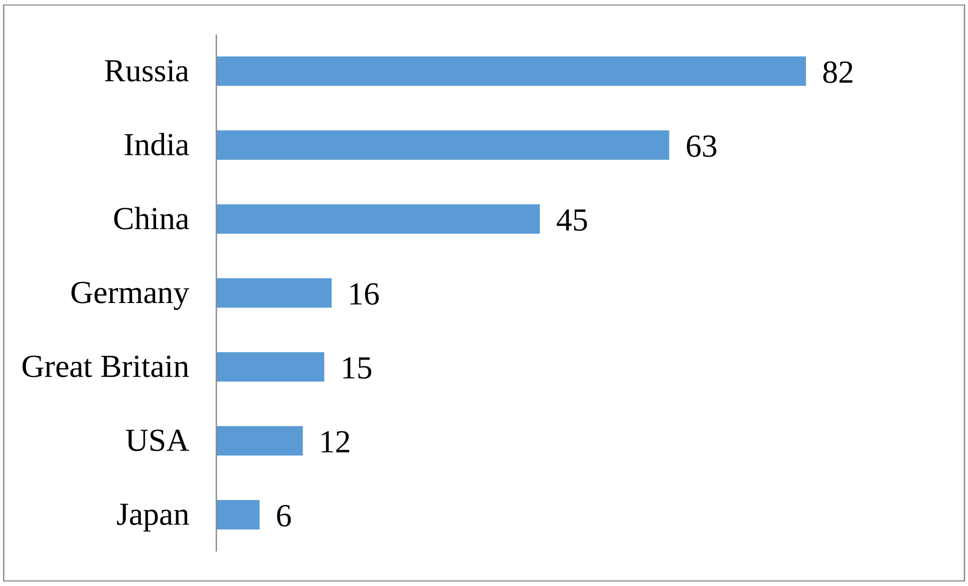


Fig. 8. Rating of countries in terms of staff cooperation (compiled by the authors).



Despite the shortcomings in the quality level of higher education that meets the requirements of a competitive economy and education management, which does not fully meet the requirements of the business community, one of the priorities of Japanese companies is staff training, high social responsibility of business leaders, employee motivation. Accordingly, in our opinion, corporate values should be taken into account in accordance with the values of the enterprise personnel itself, because customer satisfaction is an important goal of the enterprise.

Thus, the key factors that adversely affect the formation of competitiveness, sustainability and strategic development were identified as a whole by an expert method by Russian scientists of Higher School of Economics and supplemented by the results of an anonymous survey of employers in urban districts of Rostov region.

Key factors: insufficient demand for companies products in the domestic market; high level of taxation; lack of financial resources; the uncertainty of the economic situation; deterioration and lack of equipment; a high percentage of commercial loans; lack of qualified personnel; competing imports; insufficient demand for companies products in the foreign market; imperfection of the regulatory framework.

In his speeches, the president of the Russian Federation V.V. Putin has repeatedly emphasized that “the only alternative to such a course of events is the strategy of innovative development of the country”, that relies on one of our competitive advantages - human potential realization, the most effective use of people's knowledge and skills for continuous improvement of technologies, economic results of each of us, the life of society as a whole [5].

Summarizing all the above, we come to the following conclusion:

In our opinion, it is necessary to work out a clear toolkit of actions - from development to introduction of innovations, contributing to the increase in innovation and business activity of employees, enterprises and the industry as a whole.

Thus, we believe that the imperatives of expanding the scope of market institutional tools as a strategy for the long-term development of national industry dictate the need for anti-crisis measures to protect against the negative impact of risks affecting the sectors of the national economy. This will make it possible to strengthen the argumentation of the support for the formation of innovative “points of growth” in the Russian economy sector, while enhancing the role of effective management and the use of institutional capabilities.

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Interrelation of Students' Motivation for Physical Education and Their Physical Fitness Level

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Abstract

The level of the motivational values-based attitude of the students of the Ukrainian medical educational institutions towards the physical education and the level and dynamics of the students' (men and women) physical fitness during the 1st and the 2nd years of studying are investigated in the article. The timeliness of the research is conditioned by the need to improve the efficiency of the physical education of the students of the medical educational institutions in order to improve their physical fitness, health and the efficiency of their future professional activity. The participants of the research: in order to investigate the motivation of the future doctors, a questionnaire survey was conducted among 435 students (238 men and 197 women) according to the form, which consisted of 10 questions in 2016–2017. To investigate the initial level of physical fitness, the level of the main physical qualities development was examined among 437 students of the 1st year of study (231 men and 206 women) during 5 years (2013–2017). 73 students (38 men and 35 women) took part in the research of the level and dynamics of physical fitness of the future doctors during the studying. The level of physical fitness was defined according to the next tests: 100 m race, pull-ups, push-ups (for women), 3000 m race, 2000 m race (for women), standing long jumps, sit-ups and forward inclinations of body. The methods of the research included: theoretical analysis of scientific and methodological literature, questionnaire survey, pedagogic observation, testing and methods of mathematical statistics. The low level of the students' motivation for physical education has been discovered: 47.1 % men and 50.3 % women miss 30 % or more physical education classes during the term,

mentioning that the main reason of their absence is lack of interest in the traditional classes in physical education; 57.7 % men and 42.1 % women attend classes only to pass the exam. The decrease in the level of strength and endurance development of the students of the 1st year of study is discovered in the last 5 years ($p<0.05$–0.001). The absence of the increase in the level of physical fitness of male and female students during studying in the medical educational institution ($p>0.05$) and low/below the middle levels of physical fitness of the students concerning the majority of the exercises have been discovered that means the lack of efficiency of the traditional system of physical education. Conclusions: the study concluded that the lower level of the motivation for physical training students have, the worse is the level of their physical qualities development and the physical capability during the educational and future professional activity respectively.
Keywords: educational continuity, motivation, physical education, physical fitness, students.

1. Introduction

The aim of the students' of the Ukrainian medical educational institutions physical education is training of the future specialists for the efficient labor, development of the students' need in systematic physical trainings and sport to maintain their physical and mental state depending on the peculiarities of their future professional activity, health promotion, formation of the abilities and skills in the application of various methods and means of physical education and sport in the future preventive and curative activities and formation of the health value of all social groups [1, 2]. The peculiarities of the doctors' professional activity include: irregular working hours (night and unscheduled duties); hard physical activity (hard work of the workers of ambulance, the doctors of the Ministry of Emergency Situations, family and neighborhood doctors, medical workers in the countryside, lasting many hours and exhausting surgeries carried out by the surgeons and their assistants, first aid treatment, transportation of sick or injured people); precision in movement and muscular coordination (the vital work of the anesthetists, heart and neurological surgeons, obstetricians, traumatologists, orthopedists etc.) [3, 4]. To succeed in the performance of the professional duties the future doctor should have all physical qualities developed enough, but the scientific works [2, 5, 6] prove that the most important physical quality of the future doctor's professional activity is endurance which means the low exhaustion, high capacity for work and coordination abilities. At the same time, the low level of physical fitness and health of the youth that enters higher educational institutions, lack of efficiency of the traditional physical training and other reasons do not ensure the formation of the sufficient physical preparedness of the future doctors for the professional activity [7, 8, 9] that determined the viability of the research.

2. Literature Review

The results of the scientific investigations [5, 10] emphasize the necessity of the new approaches to the education of the youth that are aimed at the implementation of the modern sanative methods in the process of physical education of the students in order to improve their health, increase the level of physical capacity and readiness for the future professional activity. The scientists [2, 9, 11, 12] mention that the level of physical development, health and physical fitness of the students from the youth of Ukraine is worsened, the majority of them have health problems and the diseases are progressing to chronic during studying in recent years. Investigating the physical fitness of the students of the Medical faculty, the scientists [1, 3] showed that 62.4 % people engaged in the research have the low and below the middle levels of the physical fitness, 21.5 % – the middle level and only 16.1 % – the higher than middle and high levels. The investigation defined the tests, which are the hardest for the medical students: push-ups for girls, forward inclinations of body for boys and endurance race for both genders [2, 3]. The analysis of the physical development of the students of the 1st – 2nd years of study of the different specialties [12, 13, 14, 15, 16] determined that 18.4 % men engaged in the investigation are overweight and 3.4 % – underweight. The women have a deviation from the norm more often: 22.7 % women engaged in the investigation are overweight and 14.1 % – underweight. The authors consider that the solution to this problem lies in the physical education of the students and the formation of their positive attitude towards physical training [14, 16].

[17, 18] showed that 40.7 % students have the values-based attitude towards physical education formed at a low level, 30.9 % – at the middle level, 28.4 % – at a high level. Bodnar I. R., Stefanyshyn M. V., Petryshyn Y. V. emphasize that 55.3 % students are totally not interested in physical education [7]. Low motivation of the youth is reflected in the attendance of the regular classes in physical education. Griban G. P. [19] mentions that 66.7 % students attend classes in physical education by reason of the necessity to implement requirements of the curriculum in order to pass the exam. Bliznevsky A., Kudryavtsev M., Kuzmin V., Tolstopyatov I., Ionova O., Yermakova T. [20] confirm the negative dynamics of the classes attendance: 46 % students attend classes in order to pass the exam, 32 % students attend classes in order to avoid the troubles concerning missed classes. The scientists [18, 19] single out the main reasons for the students' missed classes: 26.2 % – the lack of interest; 24 % – unsatisfactory conditions in classes, 8.4 % – the lack of sports classes which they are interested in.

3. Method

3.1. Participants

435 students of the 2nd year of study of different faculties (the main department) of Bogomolets National Medical University (Kyiv) (238 men and 197 women) took part in the questionnaire survey concerning future doctors' motivation for physical education and sport. The questionnaire survey was conducted in 2016–2017. To investigate the initial level of the students' physical fitness 437 students of the 1st year of study (231 men and 206 women) were examined concerning the level of the main physical qualities development during 5 years (2013–2017). 73 students of the Dentistry faculty (38 men and 35 women) participated in the research on the level and dynamics of the future doctors' physical fitness.
The research related to human use has been complied with all the relevant national regulations and institutional policies and has followed the tenets of the World Medical Association (WMA) Declaration of Helsinki – ethical principles for medical research involving human subjects.

3.2. Materials

To investigate the future doctors' motivation for physical education and sport we created the questionnaire survey consisting of 10 questions. The initial level of physical fitness was examined concerning the results in 100 m race (speed), pull-ups (men, strength), push-ups (women, strength), 3000 m race (men, endurance), and 2000 m race (women, endurance). The examination of the physical fitness indicators during the 1st and the 2nd years of study was conducted at the sports base of Bogomolets National Medical University through the next exercises: 100 m race (speed), pull-ups (men, strength), push-ups (women, strength), 3000 m race (men, endurance), 2000 m race (women, endurance), shuttle run 4 x 9 m (dexterity), sit-ups in 1 min (power qualities of the stomach muscles), standing long jumps (speed and strength qualities), forward inclinations of body from a sitting position (flexibility). The examination was conducted according to the Regulation on the state tests and standards of evaluation of the physical fitness of the population of Ukraine. The examination was held in the first half of the day. The uniform required for the tests was a physical fitness uniform. The faculty instructors recorded the results.

The methods of the investigation: theoretical analysis of the scientific and methodological literature, questionnaire, pedagogic observation, testing and methods of mathematical statistics.
During the researches, the authenticity of the difference between the indices of students by means of Student's criterion was determined. The significance for all statistical tests was set at $p<0.05$. All statistical analyses were performed with the SPSS software, version 21, adapted to medical and biological researches.

3.3. Procedure

The investigation of the level of the motivational values-based attitude of the students of the Ukrainian medical educational institutions towards the physical education involved the questionnaire survey. Answering the questions from the form, the students defined their attitude towards the content, organization, realization of the classes in physical education in the medical institutions, the changing of the traditional system of physical education in order to improve health, physical and mental capacity of the students, their engaging in the systematic physical training and sport. The investigation of the initial level of physical fitness of the students of the 1st year of study was conducted in order to discover the tendency of the physical fitness level of the students entering higher educational institutions. The analysis of the dynamic of students' physical fitness during the 1st and the 2nd years of study was carried out in order to investigate Interrelation of the motivation for physical education and the level of the future doctors' physical qualities development.

4. Results

Answering the question how many hours a week they take exercises (if the regular classes take 4 hours), 40.3 % male students mentioned that they took exercise for 1–2 hours per week; 28.2 % – for 4 hours as it was planned; 8.8 % – for 4 hours as it was planned and they also did sport in their free time (usually these are the students who are engaged in various sports activities). It should be mentioned that 21.4 % students answered that they did not take any exercises (missing the regular classes). The answers of the female students had a similar tendency – the majority of the students took exercise for 1–2 hours per week (42.6 %); 24.4 % students did not take any exercises; 23.4 % students – for 4 hours as it was planned; 9.1 % for 4 hours as it was planned and they also did sport in their free time; 0.5 % students gave their own answers. The analysis of the students' answers to the question for what purpose they take exercises showed that 51.7 % men and 42.1 % women answered that they attended classes in order to pass an exam; 40.1 % women and 24.8 % men – to improve the way they look, their well-being and mood; 16.8 % men and 13.3 % women – to improve the level of physical fitness and health; 4.2 % men and 2.1 % women – to increase the mental capacity and improve the studying activities; 2.5 % both female and male students had their own opinion. It proved that not all the students consider physical education to be the means of the improvement of physical fitness, health, working capacity and results of studying. Moreover, the majority of students attended classes in order to pass an exam. Answering the question how many classes in physical education they missed the previous semester, the half of the students engaged in the questionnaire (47.1 % men and 50.3 % women) mentioned that they had missed 10 classes and more (it makes one third of all classes); 19.3 % men and 18.8 % women – from 5 to 10 classes a semester. Only 10.1 % men and 6.6 % women mentioned that they had not missed classes. Concerning the question of what the reasons for their missing classes are, the majority of the students (41.2 % men and 42.1 % women) answered that they were not interested in the classes; 22.3 % men and 20.8 % women mentioned that they had missed classes because of the laziness; 21.1 % men and 16.8 % women missed classes because they had been sick. It should be mentioned that 14.7 % women and 8.8 % men consider unsatisfactory conditions as the reason for missing classes. The analysis of the students' answers to the question of how they usually spend their free time showed that 35.7 % men and 52.3 % women spend their leisure time on computer games and social networks; 27.2 % men and 20.8 % women – with friends or family; 20.2 % men and 8.6 % women – on watching TV; and only 9.7 and 9.6 % men and women respectively take exercises (attend sport groups). The investigation of the students' answers to the question how physical exercises influence youth's health defined that 91.4 % women and 87.8 % men mentioned the positive influence; 5.5 % men and 4.6 % women considered that physical training does not influence their health and 2.,5 % women mentioned the negative influence. The analysis of the questionnaire results shows that the students' answers correspond to the conclusions of many scientists [3, 5, 14, 19] concerning the positive influence of physical training on the health improvement of the students that ensures increased working capacity and efficiency of their future professional activity. Answering the question if they are satisfied with the level of their physical fitness, the majority of students of both genders mentioned that they were totally not satisfied (79 % men and 81.8 % women); 18.1 % men and 13.6 % women gave a positive answer. Some of the students (2.9 % men and 4.6 % women) could not decide. The analysis of the answers to this question shows not sufficient efficiency of the current system of physical education of higher medical educational institutions concerning the development of the students' physical qualities for the efficiency of studying. Concerning the question if they like traditional classes in physical education, 53.4 % men and 60.5 % women answered that they did not like them, 36.1 % men and 28.4 % women liked classes not fully; only 9.2 and 8.6 % men and women liked them. It proved the necessity of the improvement of the current system of physical education. Answering the question which classes in physical education are preferred for them, the majority of the students, both men (81.5 %) and women (84.8 %), mentioned the groups of different kinds of sport according to the students' interests. Only 11.9 % and 2.5 % men, 7.6 % and 1.5 % women mentioned general or professionally-applied physical training respectively. Concerning the question which kinds of sport they would like to do in classes in physical education, the students gave the answers choosing kinds of sport from the list suggested by the department of physical education who took into account the sports base and trainer-instructors. The answers were divided as follows: the majority of the students indicated their willingness to be engaged in the sports games sections (in football – 31.5 % men, in volleyball – 32.9 % women), fitness and CrossFit (29.8 % men and 31.5 % women), badminton (14.2 % women), powerlifting and athleticism (13.5 % men) (Table 1).

Table 1. *Percentage of answers of the students of a higher medical educational institution (n=435) to the question which kinds of sport they would like to do at physical education classes (%).*

Options available for answering the question	Male students (n=238)	Rating position	Female students (n=197)	Rating position
Football	31.5	1	3.7	8
Volleyball	4.2	7	32.9	1
Basketball	9.2	4	4.1	7
Track-and-field athletics	5.1	5	5.1	4
Fitness, CrossFit	29.8	2	31.5	2
Kettlebell lifting	4.2	6	4.6	5
Powerlifting, athleticism	13.5	3	4.1	6
Badminton	2.5	8	14.2	3

To define the efficiency of the current system of physical education of higher medical educational institutions we investigated the initial level of physical fitness of the students of both genders during 5 years (during the 1st semester of study) and dynamics of the students' physical fitness during the 1st and the 2nd years of study (during each semester). In order to examine the initial level of the students' physical fitness, we analyzed the level of their main physical qualities development at the beginning of studying at the medical educational institution through the next tests: 100 m race, pull-ups, 3000 m race for men; 100 m race, push-ups, 2000 m race for women. The results of the investigation are shown in Table 2 and Table 3.

Table 2. *The level of physical fitness of the male students of the 1st years of study at higher medical educational institutions (2013–2017, n=231, X±m).*

The indicators of physical fitness	Years of investigation					Statistical significance (p1-p5)
	2013 (n=50)	2014 (n=44)	2015 (n=53)	2016 (n=46)	2017 (n=38)	
100 m race, sec	14.2±0.10	14.1±0.13	14.3±0.09	14.3±0.12	14.4±0.13	$p>0.05$
Pull-ups, reps	11.1±0.41	10.6±0.51	10.4±0.38	9.8±0.43	9.3±0.69	$p<0.05$
3000 m race, sec	822.4±11.23	836.7±11.16	845.5±9.81	863.1±10.40	877.9±12.59	$p<0.001$

The analysis of the results of the students of the 1st years of study in 100 m race showed that between 2013 and 2017, the indicators of speed development were 0.2 sec worsened, but an authentic difference in the results at the beginning and at the end of the study is not discovered ($p>0.05$) (Table 2). Furthermore, the results in 100 m race were 0.1 sec improved in 2014 in comparison to the year before it. It should be mentioned that the level of students' speed development is rated as adequate during all the years of investigation and it proves the stable level of this quality development. The investigation of the students' results in pull-ups shows that the level of the students' of the 1st year of study power qualities was worsened in five years – the difference in the results in 2013 and 2017 is 1.8 reps ($p<0.05$). According to the state tests, the level of the power qualities of the male students is inadequate during all the years of research, that confirms the conclusions of many scientists [3, 7, 9] about the decreased level of development of physical qualities of the school graduates and applicants for the higher educational institutions. The most prominent is the negative dynamics of the indicators of endurance development. Therefore, the result in 3000 m race was 13 min 42 sec in 2013, 13 min 57 sec in 2014, 14 min 06 sec in 2015, 14 min 23 sec in 2016 and 14 min 38 sec in 2017 (Table 2). The difference in the initial and final results is 55.5 sec and it is significant ($p<0.001$). The level of endurance development is rated as inadequate during all the years of study.

The analysis of the results of the female students of the 1st years of study shows the similar tendency of the physical fitness indicators (Table 3). The indicators which characterize speed are the most stable – the results in 100 m race is 0.3 sec worse in 2017 (17.1 sec) that in 2013 (16.8 sec) ($p>0.05$). According to the standards, the level of speed development of the female students of the 1st years of study is rated as inadequate.

Table 3. *The level of physical fitness of the female students of the 1st years of study at higher medical educational institutions (2013–2017, n=206, X±m).*

The indicators of physical fitness	Years of investigation					Statistical significance (p1-p5)
	2013 (n=41)	2014 (n=42)	2015 (n=46)	2016 (n=42)	2017 (n=35)	
100 m race, sec	16.8±0.12	17.0±0.10	16.9±0.09	17.0±0.11	17.1±0.13	p>0.05
Push-ups, reps	16.3±0.82	15.6±0.71	15.1±0.57	13.9±0.64	12.8±0.87	p<0.01
2000 m race, sec	725.2±8.84	744.4±9.79	767.6±9.25	791.7±9.92	806.4±10.31	p<0.001

The investigation of the level of development of power qualities of female students concerning the results in push-ups showed that they were worsened every year (Table 3). Therefore, the result in this exercise was 16.3 reps in 2013, 15.1 reps in 2015, 12.8 reps in 2017. The difference in the initial and final results is 3.5 reps (p<0.01). The examination of the power qualities level of female students according to standards proved that the power qualities of female students were rated as adequate in 2013 and inadequate in 2014–2017. The level of female students' endurance development was rated based on the results in 2000 m race. The analysis showed that the average result was 12 min 5 sec in 2013. In the following years, the level of the development of female students' endurance was 19.2 sec worsened in 2014, 42.4 sec in 2015, 1 min 6 sec in 2016, 1 min 21 sec in 2017 (p<0.05–0.001). The level of female students' endurance development was rated as inadequate during all the years of research. It should be mentioned that the main department included 65–70 % students who entered the university, in 2013–2015 and their amount was decreased to 52 % students in 2017.

In order to investigate the efficiency of the current system of physical education of higher medical educational institution, we analyzed the dynamics of physical fitness of the students of both genders during the 1st and 2nd years of studying in 2017–2018. The research was conducted in the 1st – 4th semesters through the 7 exercises that characterize the level of the students' physical fitness in its entirety (Table 4).

Table 4. *The dynamics of the physical fitness of students during the 1st and 2nd years of study at a higher medical educational institution (n=73, X±m).*

Tests	The semesters of studying				Statistical significance (p1-p4)
	1st	2nd	3rd	4th	
Male students (n=38)					
100 m race, sec	14.4±0.13	14.3±0.12	14.2±0.12	14.3±0.13	p>0.05
Pull-ups, reps	9.3±0.69	9.8±0.65	10.2±0.63	9.9±0.67	p>0.05
3000 m race, sec	877.9±12.59	871.3±12.24	876.8±12.68	886.2±12.65	p>0.05
Shuttle run 4 x 9 m, sec	9.8±0.51	9.6±0.50	9.5±0.48	9.5±0.47	p>0.05
Sit-ups, reps	38.5±1.18	40.2±1.07	39.7±1.12	40.1±1.16	p>0.05
Standing long jumps, cm	221.5±2.87	224.7±2.56	225.3±2.44	226.1±2.61	p>0.05
Forward inclinations of body, cm	7.9±0.93	8.1±0.87	8.0±0.85	7.8±0.89	p>0.05
Total points	14	19	19	19	
Female students (n=35)					
100 m race, sec	17.1±0.13	16.9±0.11	16.8±0.10	16.8±0.11	p>0.05
Push-ups, reps	12.8±0.87	13.4±0.75	13.5±0.72	13.2±0.76	p>0.05
2000 m race, sec	806.4±10.31	809.1±10.14	815.3±11.05	817.9±11.26	p>0.05
Shuttle run 4 x 9 m, sec	11.4±0.63	11.2±0.59	11.2±0.57	11.1±0.60	p>0.05
Sit-ups, reps	28.1±1.04	30.5±1.11	30.8±1.03	30.7±1.09	p>0.05
Standing long jumps, cm	169.6±2.13	172.1±2.18	172.3±2.16	173.2±2.21	p>0.05
Forward inclinations of body, cm	12.8±0.97	13.2±0.96	13.6±0.94	14.1±0.91	p>0.05

Total points	12	14	15	15	

The analysis of the results in 100 m race showed that the indicators of the speed development of both male and female students had the uptrend during the 1st and 2nd years of study: the results of male students were 0.1 sec increased, and the results of female students were 0.3 sec increased (Table 4), but the difference in the initial and final results is not authentic ($p>0.05$). The highest results of male students in 100 m race are discovered in the 3rd semester (16.8 sec), and they have not changed in the 4th semester. According to the Regulation on the state tests and standards the results of male students in 100 m race were estimated at 2 points in the 1st semester, 3 points in the 2nd – 4th semesters, the indicators of female students were estimated at 2 points during all terms, that proves the lack of speed development of the students of medical educational institutions during the studying.

The investigation of the students' power qualities was held through the next tests: pull-ups (men), push-ups (women) and sit-ups in 1 min (men, women). Therefore, the analysis of the students' results in pull-ups showed that power indicators were 0.9 reps increased till the 3rd semester ($p>0.05$) and 0.3 reps decreased in the 4th semester, in comparison to the 3rd. The difference in the initial and final results is 0.6 reps and it is not authentic ($p>0.05$). The similar dynamics were observed in sit-ups by female students – the results in this exercise are increased till the 3rd semester (13.5 reps) and 0.3 reps decreased in the 4th semester ($p>0.05$). Moreover, the average result was just 0.4 reps increased during the 1st and the 2nd years of study ($p>0.05$). The indicators of male students were estimated at 1 point in the 1st semester, 2 points in the 2nd – 4th semesters; the results of female students were estimated at 2 points in all semesters. The conducted analysis proves the lack of efficiency of the current system of physical education of future doctors concerning the physical qualities development.

The indicators of the stomach muscles development of both male and female students did not change authentically in sit-ups in 1 min ($p>0.05$) (Table 4). The difference in the results in this exercise in the 1st and the 4th semesters is 1.6 reps for male students and 2.6 reps for female students. The results of male students in the exercise were estimated at 2 points in the 1st semester, 3 points in the following terms; the results of female students – 1 point in the 1st semester and 2 points in the next semesters.

The research of the results in endurance exercises ensures that the indicators of both male and female students were worsened during studying. Therefore, the average result of male students in the 3000 m race was 14 min 38 sec in the 1st semester, 14 min 46 sec in the 4th semester (Table 4). The difference is 8 sec and it is not authentic ($p>0.05$). The results of female students in the 2000 m race were 13 min 26 sec in the 1st term and then they were 12 sec decreased in the 4th semester (13 min 38 sec) ($p>0.05$). The best indicators of male students in the 3000 m race were discovered in the 2nd semester (14 min 31 sec), the best results of female students in the 2000 m race – In the 1st semester (13 min 26 sec). It proves authentically the lack of efficiency of the training according to the current system of physical education concerning the development and endurance improvement of future doctors. According to the table of standards the results of male students in the 3000 m race were estimated at 3 points in the 2nd semester, 2 points in the 1st, the 3rd and the 4th semesters; the results of female students in the 2000 m race were estimated at 2 points during all years of study.

The dynamics of the results in the shuttle run 4 x 9 m have positive character – the indicators of dexterity of both male and female students were 0.3 sec increased in the 1st and 2nd years of study, but the difference in the results in the 1st and the 4th semesters is not authentic ($p>0.05$) (Table 4). The best indicators of both groups were discovered in the 4th term (9.5 sec and 11.1 sec for male and female students respectively). The level of dexterity development of male students was estimated at 2 points in the 1st semester, 3 points in the next semesters; female students – 2 points in the 1st – 3rd semesters and 3 points in the 4th semester.

Concerning the analysis result of the level of speed and power qualities, it can be concluded that the indicators of the standing long jumps of male and female students have the upward trend during studying. Therefore, the results of men in this exercise were 4.6 cm increased ($p>0.05$), women – 3.6 cm increased ($p>0.05$) (Table 4). The results of both groups were the lowest in the 1st semester: the male students' result was 221.5 cm and it was estimated at 2 points, the result of female students was 169.6 cm and it was estimated at 1 point. The highest results in standing long jumps were discovered in the 4th semester: 226.1 cm for men (3 points) and 173.2 cm for women (2 points).

The analysis of the dynamics of students' flexibility indicators through the results in forward inclinations of body from a sitting position showed that the results of the male students were 0.2 cm increased in the 2nd semester ($p>0.05$) and 0.3 cm decreased in the next semesters ($p>0.05$) (Table 4). The difference in the flexibility indicators of men in the 1st (7.9 cm) and the 4th semesters (7.8 cm) was 0.1 cm ($p>0.05$). The results were estimated at 1 point during all the semesters. The indicators of flexibility of female students are better. The dynamics of the results of female students in forward inclinations of body have positive character: the indicators were increased from 12.8 cm to 14.2 cm, the difference was 1.3 cm ($p>0.05$). The flexibility indicators of women were estimated at 2 points in the 1st semester and 3 points in the 2nd – 4th semesters.

5. Discussion and Conclusion

The system of physical education of higher educational institutions should be a reliable basis for the high level of mental and physical working capacity of students during studying, their engaging in the systematic physical training, formation of the need in physical development and self-improvement for health support and professional longevity [1, 4, 11]. However, the conclusions of many scientists [3, 5, 8, 13, 17] state that the current system of physical education of higher educational institutions lacks the efficiency concerning the increased level of physical fitness, health, working capacity of students and their involvement into the systematic physical training and sport. Besides, the authors [14, 19] mention that the level of the students' physical fitness is being decreased in the last years and it is mostly rated as inadequate. Because of the decrease in the interest and motivation of students for the traditional form of organization of physical education training, there is a large proportion of missed classes in physical education. The result is a low level of physical fitness.

The conducted questionnaire of the future doctors concerning the investigation of their motivation for the classes in physical education showed that only 28.2 % male students and 23.4 % female students take exercises to the extent set by the amount for physical education at medical educational institutions (4 hours a week). Besides, 21.4 % men and 24.4 % women so not take exercises at all; the half of the students (47.1 % men and 50.3 % women) miss 30 % and more classes in physical education during a semester; 41.2 % men and 42.1 % women consider the main reason for missing classes to be the lack of interest in the traditional classes in physical education; 57.7 % men and 42.1 % women attend classes in physical education in order to pass an exam; 35.1 % men and 52.3 % women spend their leisure time on computer games and social networks and those who prefer leisure activities (taking exercises and sport) make only 9.7 % men and 9.6 % women (usually these are the students who are engaged in various sports activities); 79 % men and 81.8 % women are not satisfied with the level of their physical fitness; 53.4 % men and 60.5 % women do not like traditional classes in physical education and 81.5 % men and 84.8 % women prefer sections and the majority of students would like to be engaged in the sports games sections (in football – 31.5 % men, in volleyball – 32.9 % women) and fitness and CrossFit (29.8 % men and 31.5 % women).

The initial level of the physical fitness of the students of both genders during 5 years is investigated and the authentically ($p<0.05$–0.001) decreased level of physical qualities development is determined: the results of male students in pull-ups were 1.8 reps decreased, in 3000 m – 55.5 sec decreased; the results of female students in push-ups were 3.5 reps decreased, in 2000 m – 1 min 21 sec decreased. Only the results in 100 m race have not changed during studying ($p>0.05$).

The analysis of the level and dynamics of physical fitness of students during the 1st and the 2nd years of study at a higher medical educational institution proved no authentic increase in the results of both male and female students in all conducted exercises ($p>0.05$) and the low and below the middle levels of students' physical fitness in the majority of exercises that means the lack of efficiency of the current system of physical education concerning the development and improvement of physical qualities of students and the necessity of its modification in order to improve health, mental and physical working capacity of students, formation of motivation for the systematic physical training and sport. The indicators of endurance development (men, women), power qualities (men, women) and flexibility (men) had the worst level among all the physical qualities.

According to the Regulation on the state tests and standards, an individual assessment and also the level of students' physical fitness were defined through the total points in 7 matching exercises which characterize different physical qualities. In order to receive excellent individual assessment and high level of physical fitness, the total points should be within 45–50 points; the higher than the middle level (grade good) – 35–44 points; the middle level (grade adequate) – 25–34 points; below the middle level (grade inadequate) – 15–24 points; the low level (bad grade) – 10–14 points. The results in testing of the students of higher medical educational institution showed that male students have 14 total points in the 1st semester that corresponds to the low level of physical fitness, 19 total points in the 2nd – 4th semesters, the level is below the middle; female students have 12 total points in the 1st term (the low level of physical fitness) and 16 points in the next terms (below the middle level) (Fig. 1). Therefore, both male and female students have the increased level of physical fitness in the 2nd semester, in comparison to the 1st semester, but the level has not changed further that means the lack of efficiency of the current system of physical education of future doctors.

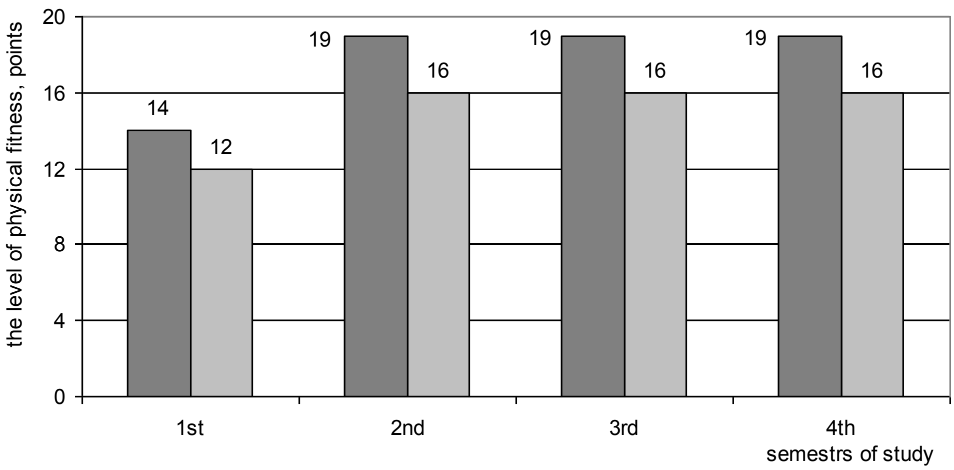

Fig. 1. *Dynamics of the physical fitness level of future doctors during the 1st and the 2nd years of study at Ukrainian higher medical educational institution (n=73, total points)*

– *physical fitness level of male students*
– *physical fitness level of female students*

Other scientists [6, 12, 16] also mention the low level of the students' physical fitness. The authors state that the students who have a low level of physical fitness show the low efficiency of professional activity in the future and they belong to the risk group for the development of cardiovascular diseases [8, 9].

Therefore, summarizing the results of the investigation and conclusions of many scientists [2, 5, 15, 18] it can be argued that the low level of the health and physical fitness of students results from the loss of social value of a healthy lifestyle; the undervaluation of the social, sanative and instructional role of physical education and sport at educational institutions; the low level of the physical development and health of school graduates; the lack of interest, motives and need of students in the traditional classes in physical education; the lack of various means of physical education; the lack of the sanative and training tendency of the forms and means of physical education; the unsatisfactory conditions in classes at modern educational institutions that are characterized by increased studying load and low motion state of students; the students' lifestyle. It is discovered that the lower level of the motivation for physical training and sports students have, the worse the level of their physical qualities and working capacity is. The conducted research conditions the necessity of the implementation of the modern means, which will ensure the increased interest of students in physical training and sports, health and working capacity improvement and increased efficiency of future professional activity.

Prospects for further research in this direction. The level of the physical development and health of future doctors during studying at a higher medical educational institution is expected to be examined.

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The Effect of a Physical Fitness Program the Respiratory Cardio Fitness (VO2 Max) and Body Fat Percentage of Blind Male Students (16-Year Old)

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Abstract

The aims of this research to know how much impact the physical fitness program may have on the respiratory cardio fitness and body fat percentage of blind male students (16 years old). The experimental method was used on a sample of 25 blind male students at the Visually Impaired Center, in the town of Tlemcen. These students were chosen randomly.

We applied the one-mile running test, and we also measured skin folds in three different areas, i.e. chest, abdomen and mid-thigh.

The results obtained indicated that there are statistically significant differences between the pretests and posttests, in favor of the posttests for VO_2 max and body fat percentage.

It was found that it is highly recommended to pay great attention to the health of the blind and also to provide specialized professors in the field of motor activity in special centers for the visually impaired.

Keywords: Respiratory cardio fitness, Body fat percentage, Blind, Motor activity.

1.Introduction

The number of people with visual impairment in the world is estimated at 285 million; 39 million of them suffer from total blindness [31]. This means that a great number of people around the world suffer from visual impairment. This visual disability has a profound impact on the individual's life because the sight is considered as one of the most important channels of communication with the outside world. Weak vision leads to difficulty in movement [13]. and causes physical inactivity, which in turn makes it difficult for a person to be active, to find a specific direction and to go from one place to another. It has been reported that the physical activity level of visually impaired people is low compared to that of sighted people [26]. Undoubtedly, the decline in physical activity has serious consequences on health. One study found that the lack of opportunities for physical activity for visually impaired individuals certainly causes impaired physical fitness, which results in decreased capacity to perform daily tasks [24]. This is exactly what has been reported in one study which indicated that the level of physical fitness of the visually impaired people is low compared to that of people who can see [3–29–12]. This certainly affects the health of visually impaired individuals. In this regard, another study reported that low physical fitness would adversely affect cardiovascular health [15]. and body fat percentage [10]. By doing so, the vision impaired individual certainly helps to protect his health in the first place. The present study intends to suggest an integrated physical program for blind people in order to improve their health-related physical fitness level. This program is highly important because it helps to protect the individual by improving his physical fitness level now and making him physically more active in the old age. In fact, one study has shown that physically active young adults still remain active in the old age [5]. A study was conducted on a sample of 7794 males and females. Its main objective was to find out the relationship between participation in various sports in childhood and physical activity in adulthood. After the respondents answered the questions, the researchers concluded that there is a direct relationship (positive correlation) between participation in sports in childhood and physical activity in adulthood [40]. This implies that the participation of blind individuals in

a physical activity programs at that age is beneficial for the present and the future. This finding was also supported by a 25-year long follow-up study (from 1976 to 2001) that was conducted on a sample of 1525 individuals. The results obtained allowed concluding that an individual who practices sports and participates in physical activities in childhood continues to do so even in his adulthood [19].
Considering what has been described above, one may ask the following questions:

1- Are there any statistically significant differences between the pretests and posttests, in favor of the posttests, in the VO_2 max of blind male students?

2- Are there any statistically significant differences between the pretests and posttests, in favor of the posttests, in the body fat percentage of blind male students?

2. Method

Before we started the research, we obtained the approval from Directorate of Social Activity and Solidarity, and from the samples, because we are a certified research team, we belong to Laboratory of Physical activity of the child and adolescent, Oran, Algeria.

2.1. Participants

The research sample consisted of 25 blind students aged between 15 and 18; the arithmetic average of their ages was 16.38±0.72 (table 01) These students were randomly selected, and 10 students participated in the exploratory study.

Table 1. *Demographics of the study participants.*

sample	N	Age	Height	Weight
		Mean±SD	Mean±SD	Mean±SD
Blind	25	16.38±0.72	171.47±3.28	84.35±2.07

2.2. Materials

The experimental work was distributed over two days. On the first day, the weights and heights of the students were measured; the thickness of the skin folds was measured as well in three different areas of the body, i.e. chest, abdomen and mid-thigh. On the second day, the one-mile running test [43–37]. The visually impaired student was assisted by a member of the research team, with a 50 cm rope between them.
The scientific foundations of the tests:

The results obtained are summarized in Table 02; they indicate that the tests show high stability and reliability. The coefficients of stability range from 0.86 to 0.99 and are considered as high. The same applies for the reliability coefficients which are in the interval from 0.92 to 0.99; they are considered as very high.

Table 2. Coefficient of stability and accuracy of the tests.

Tests	Stability coefficient	Accuracy coefficient
VO_2 max	0.86	0.92
Body fat percentage	0.99	0.99

4. Results

The Statistical Package for Social Sciences (SPSS) version 22 was used to carry out a statistical analysis of the results obtained. Prior to applying the paired sample t-test, the Kolmogorov-Smirnov test had been used to calculate the normal distribution of the data.

4.1. Test of normality:

Table 03 shows that the P-value for VO_2 max was 0.071 which is greater than 0.05, this means that data are distributed naturally. The P-value for body fat percentage was 0.001 which They are smaller than 0.05, This means that the body fat percentage does not follow normal distribution.

After that, the paired sample t-test was applied to VO_2 max and for the measurement of the body fat percentage to which the wilcoxen test was applied.

Table 3. *The results of the normal distribution of data.*

tests	Test of Kolmogorov-Smirnov	
	number	sig
VO_2 max	25	0.071
Body fat percentage	25	0.001

α=0.05.

4.2. Research results:

From the results given in Table 04, we can note that the arithmetic mean±standard deviation of VO_2max in the pretest was 36.28±1.92. However, in the posttest, it was 41.37±1.54. The value of t was found equal to 9.11 and the probability value (P-value) was equal to 0.000, which is smaller than 0.01. Therefore, the null hypothesis is rejected and the alternative hypothesis is accepted, which indicates that there are statistically significant differences between the pretest scores and post-test scores, with a tendency towards the post-test scores of the maximum oxygen consumption.

Table 05 points out that the arithmetic mean±standard deviation in the pretest of the body fat percentage was 23.68±2.06, and in the post-test it was 20.87±1.82, the value of Z was 2.66 with a probability value of 0.008, which is less than 0.01. Therefore, the null hypothesis is rejected but the alternative hypothesis is accepted; there are statistically significant differences between the pre-test scores and post-test scores with a tendency towards the post-test scores of the body fat percentage.

Table 4. *Statistical results cardio respiratory fitness.*

Tests		**N**	**df**	**Mean±SD**	**t**	**Sig**
VO_2 max	pre-test	25	24	36.28±1.92	9.11	0.000
	post-test	25	24	41.37±1.54		

α=0.01.

Table 5. *Statistical results (Wilcoxen test) of body fat percentage for blind student.*

Test		**N**	**df**	**Mean±SD**	**Z**	**Sig**
Body fat percentage	pre-test	25	24	23.68±2.06	2.66	0.008
	post-test	25	24	20.87±1.82		

α=0.01.

4.3. Effect size:

From the results given in Table 06, we can note that η2 estimated 0.546, and the effect size estimated 2.19, this means that the effect size of physical fitness program is very big on the VO_2 max.

Table 07 shows that the r of body fat percentage estimated 0.88, this mean that the effect size of physical fitness program is very big on the body fat percentage.

Table 6. *Results of effect size of cardio respiratory fitness.*

Test	η^2	d	Effect size
VO_2 max	0.546	2.19	very big

Table 7. Results of effect size of body fat percentage.

Test	r	Effect size
Body fat percentage	0.88	very big

5. Discussion and Conclusion

The results obtained in this study show that blind people have improved their post-test fitness cardiorespiratory level. This improvement is attributed to their increased physical activity, because these people have been suffering from the lack of sufficient daily physical exercise due to their handicap, which imposed a certain lifestyle on them. Furthermore, the study found that visually impaired people have a low daily physical activity level [21–3].

There is no doubt that physical activity deficiency has a direct impact on the physical fitness components which are related to health in general and to the fitness cardiorespiratory system, in particular. Indeed, the results of several research studies suggested that the lack of physical activity in people with disabilities has an impact on their cardiorespiratory fitness, body composition and muscle strength and endurance [41–16- 7].

It is widely known that the visually impaired falls within the category of handicapped people. Several previously reported studies on blind people have indicated that the lack of physical activity reduces the cardio-respiratory fitness as well as the muscle and bone strength [6–38-29-18].

For this reason, it was decided to increase the amount of their physical activity which is supposed to affect positively their maximum oxygen consumption. If the effect of physical inactivity on VO_2max is negative, then logically the increased physical activity must have a positive impact on the person. This has been confirmed by various studies, which concluded that visually impaired people, who practice physical activities, see noticeable improvement in their physical fitness level [1–33]. Obviously, cardiorespiratory fitness is one of the components of physical fitness.

The above-mentioned improvement can certainly be attributed to the opportunity given to this category of people to participate in physical activities because they usually do not have the chance to practice sport for several reasons, i.e. parents fearing for their children's security or even psychological barriers. In fact, 58.9% of visually impaired people said that they generally are not given the opportunity to participate in physical education classes [32]. However, when they were allowed to participate in sport activities, their VO_2max was improved. Various studies found out that if visually impaired people are given the chance to participate in normal physical activity, then they will surely improve their physical fitness, which may become comparable to that of a sighted person [34–4-42]. One study indicated that visually impaired people should be offered more opportunities to participate in physical activities because they can improve their health and fitness effectively through physical activity [23].

Furthermore, the results obtained showed that the applied physical fitness program had a fundamental role in this improvement; this program involved various physical exercises and the students were given great flexibility in their actions. This has, undoubtedly, contributed to improve their VO_2max, as a great deal of research indicated that sports programs develop and enhance fitness components [28–22-39]. Moreover, many other works showed that the cardiovascular fitness level of individuals in the study sample to which the program was applied had remarkably improved [14–9-11].

It is clearly seen from tables 05 that body fat percentage (BFP) in the sample have decreased. This improvement is mainly due to the high level of physical activity of the visually impaired people. Many studies have reported that one of the main causes of obesity among the blind or visually impaired people is physical inactivity or its insufficient practice [20–17-44].

Therefore, if the lack of physical activity leads to the rise in obesity, then a greater amount of physical exercises would certainly cause a decline in the proportion of fat in the body, because in this case the individual consumes more energy than when he is inactive; this is exactly what has been recommended by several researchers who stressed on the need to increase the amount of physical activity in order to reduce the obesity levels [25–27].

Moreover, this improvement generally depends on the applied program. Indeed, one study confirmed the need to develop specific programs to control obesity [30]. Some other research studies suggested that members of the experimental sample succeeded in reducing their obesity level after application of the proposed program [35–9]. One other research work recommended additional aerobic activities for visually impaired people in order to reduce their obesity level [2]. In fact, this is exactly what was included in the program applied to the subjects of the study sample. The program consisted of several aerobic exercises. Romijin et al (1993) indicated that the cause of low-fat content in the sample subjects, after they underwent aerobic activity, was due to the increased oxidation of fatty acids.

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Culture-Specific Vocabulary in Teaching Children at Schools of Siberia, the North and the Far East of the RF

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Abstract

The paper deals with culture-specific vocabulary as an organic connection of the native language with the versatile lifestyle, traditions and culture of the Evenki ethnos. The use of culture-specific vocabulary in teaching the native (Evenki) language and culture to the children is described. Scientific works on culture-specific vocabulary were analyzed. The research of Evenki culture-specific words in school textbooks and study guides was conducted for the first time. The paper gives examples of using the culture-specific vocabulary in teaching children at schools of the North. The culture-specific words were selected from the study guide "Lessons from ancestors" ("Hopkil binitēn"). The pilot testing work with the use of the author's study guide "Lessons from ancestors" containing the culture-specific vocabulary was organized and performed. Proceeding from the research, the special importance of the culture-specific vocabulary functioning in maintaining the memory, thinking and self-expression of the ethnos, as a means for developing the native (Evenki) language and its role in intercultural contacts, has been found.

Keywords: Culture-Specific Vocabulary, The Native (Evenki) Language, Study Guide, Younger Schoolchildren, Reindeer Herding.

1.Introduction

In conditions of the upgrade of general and secondary education, the priority focus areas have been determined for the current time span to be the preservation of lifestyle (both nomadic and sedentary), traditional knowledge and the native language of the Evenki ethnos.

The nomadically living ethnoses have amassed the traditional knowledge of the native language, folklore, folk crafts, customs and traditions; in the contemporary world, however, the real danger of losing both the language and the traditional knowledge persists.

Where there is no traditional knowledge, the rising generation loses the binding thread to the centuries-old culture of their fathers, grandfathers and great-grandfathers.

The distinctive sign of the contemporary period is the Russian scientists' vast interest in the traditional knowledge. This is a convincing historical fact of longevity and relevance of the traditional knowledge of the ethnoses inhabiting the North, Siberia, and the Far East of the Russian Federation. This problem is discussed in the studies by O. A. Murashko (2005), K. B. Klokov et al. (2012), V. V. Podmaskin (1998), L. V. Khomich (1974), and G. P. Kharyuchi (2012) representing the traditional knowledge of the Nenets and Udege peoples associated with the nature and reverence of the environment, as well as the sacral aspects of the folk medicine, in a broad, scientific and valid way.

It is in the culture-specific vocabulary bearing the distinctions of the national and cultural views of the world that the connection between language and traditional knowledge manifests itself the most vividly. Each people has its ethnic view of the world of its own. In Evenki, just like in other peoples, the view of the world is absorbed by the children from the earliest age without any specially organized institutions. It can be stated that it is learned naturally, every time and everywhere, too, during the most diverse processes of adults and children's interaction. So one's own image of the world is created having a certain structure and functional interrelation of all parts. The view of the world is expressed through philosophy, literature, mythology (the contemporary one included), and ideology. It manifests itself via people's actions and explanation of one's actions and intentions (Nikitina, 2012, pp. 19-20) that are reflected in culture-specific words.

2. Literature Review

Culture-specific vocabulary is studied in the works of E. M. Vereshchagin, V. G. Kostomarov (1990), S. Vlakhov, S. F. Florin (1986), A. R. Valeeva (2016), M. Benson et al. (1990), et al. Their studies are presented as classifications of culture-specific words incorporated in the vocabulary.

"Words containing the sociocultural component are called culture-specific. They are the carrier of information about the world view and traditional knowledge of speakers of the language so they are of a high interest from the standpoint of linguoculturology as well as lexical semantics, contrastive linguistics and other branches of the science of language" (Yashina, 2009, pp. 192-199).

There are several classifications of culture-specific vocabulary: thematic, syntactic. The thematic classification includes such sections as geographic realia, ethnographic, social and political ones. The names of physical geography objects, names of animals and plants belong to the geographic subgroup. In the ethnographic group, there are words of the daily life sphere: names of foods, beverages, clothes, housing, furniture, daily use articles, and transport.

In the contemporary linguistics, they mean by culture-specific vocabulary the words denoting realia, objects and phenomena of only one culture and people not existing in other cultures, e.g. in Belorussian / English languages: andarak, pan – there are designation for these words in various cultures but the national background does not coincide precisely (Gladkova, 1997).

In conditions of the information world, upbringing and teaching children are aimed at enhancing their culture-bound knowledge.

In order to work with culture-specific vocabulary of any ethnos, the difficulties of understanding another culture, lifestyle, traditions and customs have to be borne in mind, as well as ones associated with the lack of background knowledge. So, for eliminating the difficulties, it is essential to perform some preliminary work with the unknown realia using an etymological dictionary, visual aids, translating the interpretation of words in one's mother tongue and contrasting it with other languages, because children of the North speak Evenki, Russian, and sometimes the Yakut language.

The importance of consistently including the culture-specific vocabulary into study guides is recognized. This is one of the important ways for shaping the national self-consciousness, character, for upbringing a linguistic identity. The author tried to select the culture-specific words reflecting the specific nature of traditional culture of the Evenki ethnos in textbooks for primary school, such as daily life, traditional clothes, food, and folk festivals. It should be emphasized that essentially, the native language textbooks have all of the above, although in a scattered way. The native language textbooks are designed for teaching the Evenki native language. The material of the textbooks is aimed at cultural and linguistic adaptation of the learners and allows organizing the work on the basic vocabulary.

When classifying the Evenki culture-specific vocabulary, the author adhered to V. S. Vinogradov's classification (1978, p. 1) that reflects the material culture of peoples. Based on this, the classification of culture-specific words of the Evenki ethnos into topics – dwelling, household buildings, property, clothes, food, names of deer according to age, names of harness items, holidays etc. – was opted for.

The culture-specific vocabulary of the Evenki language in primary school textbooks was studied. Examples:

1) dwelling: du – a dwelling, a house; ilumu – a chum (a cone-shaped tent) covered with reindeer skin etc.;

2) household buildings: iruka – poles for pitching the cone-shaped tent; nekun – granary and others;

3) clothes: oi – clothing; teti – outer garments (coat, kaftan, jacket); dudika – a long winter coat with fur outside (for men and women); muka – a women's coat with fur on both sides; hakui – a national men's winter coat; eŋēr – a hooded upper garment made of autumn reindeer fur without fastenings, and others. These words are realia naming items and objects that are characteristic for the life of the Evenki ethnos; being carriers of the national coloring, they have no exact correspondence in other languages.

The Evenki language is described by the authors of textbooks, scientists V. I. Tsintsius, T. K. Kopyrina (1989), K. A. Novikova (1960), V. D. Lebedev (1978), V. A. Robbek (2008), A. A. Burykin (2002), A. A. Petrov (2017), A. L. Malchukov (2008), and A. V. Krivoshapkin (2002; Krivoshapkin & Keimetinova, 1977).

The realia words are gradually updated and expanded in the textbooks of Evenki.

The textbook for grade 1 contains the following culture-specific words: 57 realias: du – the traditional dwelling of the Evenki, 7 cases repeated in the texts; oi – clothes – nelik (bib, apron), unta (footwear), avun (cap) – 14 realias (Burykin, 2002; Petrov, 2017). Attention is paid to communication, mastering the native speech, the development of speaking, reading and writing skills. For example: Nonan, herepčev avun, hairu, nelu, untav ičukenni (She showed an embroidered cap, gloves, apron and high fur boots). The Evenki national clothing is described which differs greatly in the material, sewing method, shapes and names of the clothes items from that of other peoples.

At grade 2, there is the highest quantity of realia words, 124. At this age, the understanding of the world and spiritual culture of the ethnos are passed on extensively. So the textbook features the most realia words on the topic du - the traditional dwelling of the Evenki (traditional buildings, names of places for sleeping) – 22 words; alik, nina, takaruk (kitchen utensils) – 11 words etc.

There are some exercises after reading the text: answering the questions on the content, explaining the meaning of words, for example, yavčidjak (night pasturing), yavčimŋa (a night herder), kōsčidjak (day pasturing) and so on. Such exercises motivate the students to use the culture-specific words (Robbek, 2008).

At grades 3 and 4, it is achieving the practical mastery of the language that is the aim. So the schoolchildren study out adjectives representing various types of attributes of objects in the exercises, work on verbs from the text, ask questions on the text, they learn to explain, analyze and make conclusions. The texts are oriented to studying the basic grammar and vocabulary topics of the Evenki language. E.g., Nelke njamičan tugedireken, yavčidjak ovattan (In spring, when the deer are fawning, night pasturing is organized) (Krivoshapkin, 2002; Nikitina, 2015c).

The initial stage of teaching the culture-specific vocabulary contains the most common culturological material tailored into topics which make up the basis of speech practice and determine the content of the textbooks.

3. Materials and Methods

Objective: studying the culture-specific vocabulary in teaching Evenki to children.

Tasks:

1) studying the scientific works on culture-specific vocabulary;
2) studying and analyzing the culture-specific vocabulary in textbooks of Evenki;
3) exploring and using the culture-specific words in teaching children at schools of the North;
4) selecting the culture-specific vocabulary from the "Lessons from ancestors" study guide;
5) organizing the pilot testing work with the use of the author's "Lessons from ancestors" study guide built with culture-specific words on reindeer herding.

At the teaching stage, the technique of using the study guides implementing the culture-specific words at the classes was studied in detail by means of observation, research and practical work in conditions of the nomad camp.

4. Results and Discussion

Since the 1990s, the Concept of updating and developing the national schools of the Republic of Sakha (Yakutia) has been there to play a positive part in the process of upbringing and educating the children of the North.

In these conditions, some positive change in the life activity of the small-numbered ethnoses had to be introduced for the natural and spiritual basic principles to continue in children and for their natural nomadic roots where they can outperform even the adults in their traditional knowledge and skills to never be lost. It is solving the language problem that has to rank first. Only in this case the spirituality and the cultural heritage will be preserved.

As Z. I. Kovaleva (1998), the leading editor of Saint-Petersburg Prosveshchenie publishers who has dedicated all her life to teaching the Evenki language, points out in her article, "For solving this problem we have to complete a number of tasks, the major of which is creating study guides to serve as a source of the children's knowledge about their ancestors, their centuries-old practices and spiritual culture" (pp. 237-239).

For resolving the language problem, studying Evenki by means of culture-specific words occupies an important place. Hence the Institute of national schools of the Republic of Sakha (Yakutia) conducted a research of the use of culture-specific vocabulary in teaching children at schools of the North. The toolkit of the research was the "Lessons from ancestors" ("Hopkil binitēn") study guide (Nikitina, 2015b).

The content of the "Lessons from ancestors" study guide is aimed at expanding the children's outlook, enhancing their interest in studying the Evenki language and traditional skills. The study guide consists of two parts. The first one contains a thematic selection of pictures with a plot and figural ones aimed at giving the children an idea about the specific nature of the hunting and economic pattern of life of their ancestors and their unique culture.

The study guide includes the most commonly used vocabulary reflecting the particularities of the traditional activity – reindeer herding.

The culture-specific words in the "Lessons from ancestors" study guide were selected. The culture-specific vocabulary is presented, with the minimum of culturological information to know for correctly perceiving and using the Evenki words included with the translation. It is clear from the examples that not all dictionaries explain the meanings of culture-specific words. While the culture-specific word "fur coat" (lit. shuba) is known to many readers and requires no additional clarification, in this case, "dudika", a culture-specific Evenki word, is difficult for understanding and requires a thorough translation for rendering the meaning: a long winter coat with fur outside (for men and women). Such dictionaries are created in order to satisfy the students' need of communicating with each other.

In Evenki, there are words and linguistic units that can reflect a particular cultural component on reindeer herding. For instance, the non-equivalent vocabulary rendering the particular cultural component on the topic "Work of reindeer herders": wilduke – deer caravan team, as for food: horča (smoked deer meat for long-term storage), kebel (thickened deer milk obtained by a folk method). These culture-bound words given in the native language textbooks and serving for expressing notions that are absent in other cultures are not translated. G. D. Tomakhin (1988) defines the culture-bound words as words serving for expressing the notions lacking in another culture and as a rule not translated with one word (p. 5).

Pilot testing work was conducted in three stages in grades 1-4.

In the 2015-2016 academic year, the first stage was completed: scientific literature was studied, the native Evenki language textbooks and study guides and a further reader on the research topic were analyzed.

In the academic year 2016-2017, summative stage was performed. The objective of this stage was to find out how study guides and textbooks containing the culture-specific words were used in the educational process. The "Lessons from ancestors" study guide for grades 1-4 was reissued that contains culture-specific vocabulary on the traditional economic activities of the indigenous small-numbered peoples of the North. At this stage of the research, the accessibility of using the culture-specific words at the lessons for the students was checked. Consulting sessions and individual talks with teachers were conducted for preparing and carrying out the third, teaching and control, stage of the research.

The formative and control stage of the research was completed in the 2017-2018 academic year. The objective of this research stage was to identify the efficiency of using for classes the "Lessons from ancestors" study guide that contains culture-specific vocabulary on reindeer herding.

So, at the control stage, the efficiency of using for classes the "Lessons from ancestors" study guide was checked and the validity was evaluated concerning the results obtained in mastering the words for shaping the culture-specific vocabulary.

Visiting the classes has allowed finding out that most teachers do use the culture-specific words when teaching the native language but regrettably the work is conducted in a fragmented way and the teachers have no clear program of work for achieving this goal.

At the summative stage, the Guidelines for the "Lessons from ancestors" study guide containing the culture-specific vocabulary on the topic "Summer nomad camp" Djugarap nulgedēk (Nikitina, 2015a, p. 32) was used:

– inuče - harnessed (transportation) one;
– kanka – a saddle for children (who can sit up independently);
– emgun – a saddle for riding a deer.

At this stage, it has been found out that the younger schoolchildren do not quite understand the essence of the content of culture-specific vocabulary on reindeer herding. This is due to the culture-specific words being used at the classes in an inconsistent manner.

Based on the summative experiment conducted, the following conclusions can be made:

– most students feature a low level of formation of culture-specific vocabulary on reindeer herding;

– on the part of teachers, the culture-specific vocabulary is included into the educational process without their knowing the key features at the necessary level.

The results of the summative stage show that students have encountered some difficulties when culture-specific vocabulary on the the traditional economic activities of the indigenous peoples of the North, reindeer herding, was used at the classes. Therefore, it is essential to teach them both independent and joint activity for the younger schoolchildren to form their culture-specific vocabulary on reindeer herding. For this, the author of the paper conducted the initial assessment of the formation level of the culture-specific vocabulary on reindeer herding using the "Lessons from ancestors" study guide.

The following culture-specific vocabulary formation levels were determined as a means for checking at the summative and teaching stages of this research:

Level I – the learners study the culture-specific words under the teacher's guidance and based on reproducing activity;

Level II – the learners perform practical and research works for studying the culture-specific vocabulary;

Level III – the learners explore the culture-specific vocabulary.

The results of diagnosing assessment at the summative stage have shown that the knowledge of culture-specific words is at a low level in the majority of students. Similarly, the diagnosing assessment results have allowed making a conclusion about the fact that at schools of the North 79% of teachers have an idea about the "culture-specific vocabulary" notion but most teachers do not use it to the full extent when teaching the "Native language" subject.

Analyzing the scientific literature and the data of the summative stage conducted have allowed developing the content and technique of the formative stage.

The objective of the teaching stage was to prepare conditions for implementing the "Lessons from ancestors" study guide for elementary grades of schools of the North.

At the teaching stage, it is important to teach the younger schoolchildren to study, watch, and explore the culture-specific vocabulary on reindeer herding, as it is "an opportunity to promote in fact the preservation and development of reindeer herding as an original culture of the indigenous small-numbered peoples of the North" (Fedorov, 2018).

Meanwhile, it is reindeer herding that is the object of studying. In this respect, the most important part is the joint activity of students and the teacher using the culture-specific vocabulary during the classes.

At grades 3-4, the schoolchildren directed by the teacher explore and use in practice the culture-specific words, while also learning the new during such work.

At the teaching stage, the technique of using study guides that implement culture-specific vocabulary at the classes has been described. One of the tools designed both for students and for the children is the guidelines for the "Lessons from ancestors" study guide that are built around culture-specific vocabulary. Here is an example of a class.

Class. Topic: Oralčimŋa gurgen (Work of reindeer herders), (Nikitina, 2015a, pp. 26-27).

Class objective: upbringing a respectful attitude to the reindeer herders' work by means of the culture-specific vocabulary.

Teacher's work methods and techniques: observation, description of objects, classification of deer according to age and color, pair discussion, group discussion, generalization, making conclusions.

It is suggested to the children to watch the reindeer herders' work, to describe the places where the herd of reindeer is pastured. Using the words oralčimŋa reindeer herders; oralčidai to pasture deer; kōsčimŋe a day herder; yavčimŋa a night herder, the children make up a story about one working day of a reindeer herder.

– Badikar amanni yavran? (What does father (brother) do in the morning?)

– Ineŋ yav nekkōtten? (What does he do during the day?)

– Hisečin-ke? (And at night?)
– Dolbaŋi kōsčetten orarbu? (Who takes care of the deer at night?)
– Dolba orarbu yavčimŋa yavčivattan. (At night the deer are cared for by the night herder.)
– Dolba yami yavčimŋa etutten? (Why does the reindeer herder keep a watch at night?)
– Oral djaluč bideten njan ometeldi edeten borgar gomi. (For the deer to eat well and not get away from the herd). Njan nēnčaktuk, koltekkenduk, nedemiduk dysutten. (Protecting them against wolves, wolverines and lynxes).

Practical work (Gurge)

The children take part in sorting the deer according to the age.

Hu yav tala ičes? (What did you see in the herd?)

Children: Tala hagdyl oral njanenkel. (There are deer and young deer)

Teacher: Hu tačin-da, hagdylbu oralbu njan honnačalbu hari odal. (So you can tell the deer by the age.)

Children: Ine (Yes).

Irročil oral bibette. (What deer are there according to the appearance?)

Children: yaldanja – black, bugdi – variegated …

At the end of the lesson they discuss and present the information to each other and the teacher about the work of reindeer herders and the culture-specific vocabulary.

The teaching stage confirms the children's gaining the culture-specific words on reindeer herding, the experience of observation, research, creative essays and judgments.

With students of grades 1-4, the final assessment was conducted using the culture-specific vocabulary on reindeer herding from the "Lessons from ancestors" study guide on the topics "Djugarap nulgedēk". "The summer nomad camp" (Nikitina, 2015b, pp. 84-85):

– doŋqa – a special saddle for carrying children aged 5-6;
– ōnēruk, ōnēsjak – a deer for carrying children tied to the saddle;
– hamŋidai – to kindle the smoky bonfire.

Tugerep nulgedēk. The winter nomad camp (p. 85):

– njogusut – the lead deer going in the same harness with the guide;
– toŋalra – a harness ring, straps;
– turki – a pulka, sleds.

Then, the validity and efficiency of results obtained at the summative and formative stages of the research was evaluated and the results of the stages were generalized and systemized.

As the results of testing out show, the use of culture-specific vocabulary on reindeer herding create the conditions for developing an ability to think creatively, to lead a dialogue and to provide grounds for one's viewpoint in the younger schoolchildren.

The control stage has confirmed that using the "Lessons from ancestors" study guide at the classes expands the functions of the native language and improves the students' level of development of the culture-specific vocabulary on reindeer herding.

5. Conclusion

Analyzing the culture-specific words is of a great interest and enables the children to plunge into their native language and cult ure more profoundly as well as to get acquianted with background knowledge of other cultures.

As the research has shown, culture-specific vocabulary conveys the priceless experience of a particular ethnos", "the experience gaining shape as a result of learning the external reality by the ethnos and reflecting the particularities and the originality of their interaction and communication" (Zykova, 2011), in this case, in shaping the culture-specific vocabulary of the Evenki ethnos.

Thus, culture-specific words act as a carrier of information, expand and enrich the linguistic knowledge.

Further ways for exploring the culture-specific vocabulary in the Evenki language course of mainstream school have been outlined.

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Museum Pedagogy as a Tool for Socialization and Development of Civil and Patriotic Position in Senior Schoolchildren

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Abstract

The paper is devoted to one of the most important aspects of the modern theory and practice of education – the development of the civic patriotic position of senior students, the most important means of which is the educational potential of museum pedagogy. The paper analyzes and gives theoretical generalization of the results of the longitudinal research aimed at identifying the existing educational opportunities and reserves of a museum in the process of socialization and shaping a civil patriotic position of an individual at the secondary school age. The results of experimental work organized on the basis of the Museum of the Victims of Fascism named after M. Kolbe of Petrozavodsk city, the Republic of Karelia in 2010-2017 allowed to identify a stage-by-stage nature of the involvement of schoolchildren in the project museum and educational activities of civil-patriotic orientation. Based on the results of the experimental work, a structured method of shaping the value-meaningful civil patriotic position among secondary school students was developed and tested.

Keywords: Museum Pedagogy, Civil Patriotic Position, Civil and Patriotic Education, Educational Potential, Museum Educational Environment.

1.Introduction

The relevance of the special study of the problem of socialization and development of civil patriotic position at the secondary school age is determined by a number of circumstances, and primarily:

- the recognition of patriotism as one of the highest moral values and the only unifying national idea in the Russian Federation by almost all sectors of the Russian society. Patriotism has been a unique combination of unity, spirituality and moral culture of Russian people and the Russian society for centuries. It is citizenship and patriotism that determine the uniqueness and originality of the Russian national mentality. "We do not and cannot have any other unifying idea except patriotism," the President of the Russian Federation said. "That is the national idea." It is not ideologized, it is not connected with the activity of any party or any stratum in society. And we will not come up with another idea, and we do not need to, it exists" (The transcript of the meeting of the President of the Russian Federation V.V. Putin with the members of the Leaders' Club, 2016);

- the increase of the extremely negative tendencies in the adolescent and youth environment connected with the establishment of material values over spiritual ones, the displacement of moral values of kindness, responsiveness, civil consciousness, patriotism, family values, collectivity, justice, social responsibility which are traditional for society, define human and cultural dimension of the surrounding reality and form a personal paradigm of moral culture of individual and society. The current degradation of traditional moral values is primarily the reflection of the consequences of the deepest socio-economic crisis of the 1990s - the largest humanitarian disaster of the end of the XX century, uncertainty and instability of the current socio-economic situation. In addition, the analysis we have carried out shows that the process of civil self-determination among modern schoolchildren is complicated by the lack of the established values and ideals of patriotism;

- the existence of the request of the state and society for developing the civil patriotic position of adolescents and youth which was formulated in the Strategy of Education Development in the Russian Federation for the period up to 2025 approved by the Government order of the Russian Federation of May 25, 2015 No. 996-p (2015), the Government Programme "Patriotic Education of the Citizens of the Russian Federation for 2016-2020" approved by the resolution of the Government of the Russian Federation of December 30, 2015 No. 1493 (2015). The Decree of the President of the Russian Federation of October 29, 2015 No. 536 "On the Establishment of the All-Russian Public-State Children and Youth Organization "The Russian Movement of Schoolchildren" (2015) is of paramount importance for the practical solution of the problems of civil and patriotic education of adolescents and youth.
- the existing traditions and experience of the organization of civil and patriotic education of adolescents and youth in the education system of the Russian Federation;
- the institutionalization of museum pedagogy as a branch of theory and practice of education, the fundamental development of psychological and pedagogical foundations of schoolchildren education by means of the educational potential of museum pedagogy (M. B. Gnedovskiy (1994), B. A. Stolyarov (2004, 2013), M. Yu. Yukhnevich (2001), Ye. A. Yakovleva (2015, 2017a, 2017b)).

This direction of scientific and pedagogical search is relevant due to the following **contradictions**:

- between the objectively increased need for the cardinal increase of the level of civil and patriotic position of schoolchildren in the conditions of the systemic social and cultural changes and transformations on the one hand and the insufficient use of resource and educational potential of modern museum pedagogics on the other;
- between the presence of the state and public request as well as the need of the society for shaping the value-meaningful orientation of the personality of schoolchildren, which develop the values of citizenship and patriotism, and the lack of development of pedagogical conditions ensuring the effectiveness of this process;
- between the development of museum pedagogy as a special direction of pedagogical theory and practice and the lack of development of software and methodological support for the use of the tools of museum pedagogy for shaping the civil and patriotic position of schoolchildren.

Thus, in the situation of instability and uncertainty determined by the modern systemic changes and transformations of political and socio-cultural conditions, the activities aimed at supporting and helping a schoolchild in solving vital problems, the most important of which is the civil and patriotic position of personality, are of particular importance.

Scientists note that "a change in the value orientations of schoolchildren in Russian education has led to the decrease of the spiritual and moral values; this resulted in a deficit of patriotic feelings among schoolchildren. These alarming tendencies of the current situation in the Russian society are reflected in the minds and actions of many schoolchildren, they are sustainable. And such negative phenomena as the low cultural level and the loss of a sense of responsibility and duty to the Fatherland are also of sustainable nature.

In this regard, the civil-patriotic education of schoolchildren needs radical modernization" (Gulevich, 2012).

2. Literature Review

Modern pedagogy relies on values as stable moral norms and ethical guidelines which form and develop the individual and social consciousness and behavior. Value orientations are the values at the individual level, conscious ideas of an individual about his own values, which have their own hierarchy contributing to the implementation of socially significant behavior. The concretization of value orientations performed by a man in the individual consciousness forms personal meanings.

Values, value orientations and their implementation in the value-meaningful activity are reflected in such a stable socially constructed characteristic of personality as position. The position of an individual is manifested in his social activity and is expressed in the value-meaningful activity aimed at a relevant object and posed by motives and needs. The role and importance of the value-meaningful activity determines the social and moral positions of an individual and is also one of the factors in shaping the value-meaningful civil patriotic position of an individual.

In our research, we understand the value-meaningful civil patriotic position of an individual as the system-building quality of the personality of a schoolchild, mediated by knowledge transforming into personal meanings of citizenship and patriotism implemented in human behavior and in his socially significant activities, which have civil and patriotic orientation.

The formation of the value-meaningful civil patriotic orientation of an individual is a step-by-step process of assigning the values of citizenship and patriotism, which is the unity and interrelation of the emotional-value, cognitive-activity-oriented, orientation and reflexive-assessment stages.

The works by S. L. Rubinstein (2012) and A. N. Leontyev (1977) which reveal the general psychological aspect of the problem were of particular importance for our research in terms of studying the mechanism of development of the value-meaningful civil patriotic position of a student.

The analysis of fundamental research and large monographic works aimed at the analysis of the problem of development of the civil and patriotic position among adolescents and young people has led to the conclusion that this aspect of the theory and practice of education has a long history.

Theoretical analysis of the research conducted by the domestic and foreign scientists points to the need to find the more effective and efficient ways to develop the humanistic values of patriotism. The works of these scholars convincingly show that the institutions of additional education of children have educational opportunities and means of increasing the level of patriotic consciousness and civil responsibility of schoolchildren, developing their value-meaningful orientation of a socially active personality. The results of the fundamental research proved that the formation of the value-meaningful orientation of the personality of a schoolchild can be achieved by means of museum pedagogy.

3. Research Methodological Framework

The objective of the research, the main results of which are presented in this paper, was to identify, analyze and characterize the educational opportunities and reserves of the museum as one of the tools of socialization and development of civil patriotic position of senior schoolchildren.

Research objectives:

1) to identify and to give theoretical justification for the interrelationship of the axiological and psychological aspects of the value-meaningful civil patriotic position of an individual as the purpose of education;

2) to describe the role of museum pedagogy in the organization and implementation of educational activities at the current development stage of general education;

3) to develop and test a structured method of developing the value-meaningful civil patriotic position of schoolchildren by means of project museum and educational activities.

Research methods – theoretical analysis of the scientific development level of the problem of socialization and development of the civil patriotic position of senior schoolchildren by means of museum pedagogy; analysis of pedagogical experience; interviewing; questioning; experimental work; reflection and interpretation of the results obtained in the experimental work.

The research was based on the Museum of the Victims of Fascism named after M. Kolbe of Petrozavodsk city of the Republic of Karelia, Moscow Pedagogical State University, Petrozavodsk State University, general education schools of Petrozavodsk city of the Republic of Karelia, the Karelian regional association of the former juvenile prisoners of extermination camps in Germany.

547 schoolchildren, 125 students and teachers of Petrozavodsk State University and Moscow Pedagogical State University, 47 volunteers of the Museum of the Victims of Fascism named after M. Kolbe, 15 teachers of history and 12 members of the methodical association of teachers of the German language of Petrozavodsk city, 30 representatives of the Karelian regional association of the former juvenile prisoners of extermination camps in Germany participated in the research.

4. Results and Discussion

Taking into account the point of view of S. A. Sorokin (2009) on the essence of civil and patriotic education, we consider citizenship and patriotism as specific value orientations of an individual, which include in their content aspects such as love for the Motherland, historical memory, cultural traditions, readiness to protect their Fatherland and the attitude of modern youth towards them.

We link the definition of the concept of "patriotism" with the active citizenship position of an individual, which is based on the activity-oriented self-realization of an individual.

Being an integral part of the moral development of an individual, the development of the values of citizenship and patriotism is a purposeful process of engaging students in various types of educational activities related in its content to the development of patriotism and stimulating the activity of students to develop these moral qualities (Konzhiev, 1988).

Given the structure and content of the concepts of "citizenship" and "patriotism", we define the process of their development as a purposefully organized educational process focused on enhancing civil and patriotic feelings and developing civil and patriotic beliefs and sustainable norms of civil and patriotic behavior.

Basing on the ideas of the activity-oriented approach to the problem of meaning proposed by the scientists, it is possible to formulate a number of pedagogically significant conclusions regarding the mechanism of development of the value-meaningful position. Since the genesis of the meaning occurs in the real relationship between the subject and reality, the capabilities of a schoolchild in the search for meaning can be developed by taking into account the main sources of the creation of meaning - the needs and motives of an individual. The meaning has the effect of efficiency, being the "core" of the position of an individual, it participates in the regulation of practical activities. It is also important to note that achieving personal knowledge, which forms the basis of personal meaning, is possible when a person establishes the connection of this knowledge with his experience and personal feelings and comprehends its meaning. Knowledge should be "born" in the consciousness of a schoolchild, then it will become part of the personal meaning, which forms the basis of the position of an individual (Fedorova & Yakovleva, 2014; Fedoryak & Fedorova, 2015).

One of the research objectives was to identify the educational potential of museum pedagogy which contributes to the effective development of the value-meaningful civil and patriotic position of schoolchildren.

The term "museum pedagogy" means a phenomenon that includes practical activities that are synthetic in nature and combine the efforts of a pedagogue and a museum worker. The subject of study of this scientific and methodological discipline is a phenomenon that has historical and cultural roots and has discovered itself by the end of the XX century, when museum communication has become the main focus of the museum activities, and the museum area can and should have been used for educational purposes.

The idea of a museum as an educational institution was actualized in the early XX century at the Mannheim conference by A. Lichtwark, the director of the Hamburg Art Gallery, who indicated in the report that "the XX century added a new higher educational institution to the universities, the appearance of which dates back to the middle ages, and to the academies that emerged in the era of absolutism – a museum. The museums that are open to everyone, have a goal to serve everyone and do not recognize any differences and divisions are the expression of the democratic mind" (Gutekunst, 2006).

H. Freudenthal (1931) first used the term "museum pedagogy" in his book "Museum – Education – School", paying much attention to the problems of interaction between museum and school in his works. He proposed the following method of work of the museum with schoolchildren, which included three stages - preparation for a visit to the museum, work in the museum and the embedding of knowledge and impressions at the lesson.

In the integration of pedagogy and museology, the most notable was the activity of the "Working Group of Museum Pedagogy" established in 1963 in the Ministry of Education of the GDR. One of the practical results of its activities was the regular publication of methodological materials "School and Museum in the Unitary Educational System of the GDR", where the methodical material and the results of practical work of museums and schools were published.

The museum and pedagogical centers of Germany have also included the new directions based on the theory of museum communication in the development of the term "museum pedagogy". Under the influence of the development of museum pedagogy, this theory considers it a priority to create comfortable conditions for interaction of visitors with the museum fund, to activate their perception of the museum exposition, to identify and actualize the personal inclinations and abilities of students (Fedorov, 1995).

During the discussion of the 1970s-1980s, the West German museum experts were engaged in defining the subject of museum pedagogy and its conceptual apparatus. The result of the discussion was the understanding of the connection of museum communication with the research, fund, exposition and exhibition areas of museum work, as well as defining museum pedagogy as an emerging scientific discipline.

In Russia, this definition appeared in the 1970s as a designation of the phenomena of social and educational activities and the scientific discipline. Scientists realized the need to develop museum pedagogy, which could provide a scientific approach to interpreting museum collections to a visitor using the methods of pedagogy and psychology. The theoretical understanding of the educational activity of museums has started in order to determine the basic principles and tendencies, as well as to improve its quality level, taking into account the development of museology, special disciplines, sociology, pedagogy, and psychology (Stolyarov, 2004).

Museum pedagogy has been widely developed in the museum sphere in Russia due to the thorough multidimensional development of the excursion method in the late XIX – the early XX centuries, which laid the original foundations of museum pedagogy.

The main research areas in the field of modern museum pedagogy are as follows:

• the development of the educational concept of the museum;

• the multidimensional study of the wide museum audience;

• the development of the long- and short-term educational programmes and projects for a specific museum audience;

• the creation of the new museum-pedagogical methods and techniques for a various museum audience;

• the establishment of cooperation with possible partners – educational, research, cultural, educational, industrial organizations and institutions as well as stakeholders (collectors, artists, veterans, etc.);

• the modernization of traditional forms and the introduction of the new forms of working with the audience (excursions, lectures, clubs, extracurriculars, membership, etc.);

• the study of the possibilities of using intangible heritage in various forms of educational museum activities (Stolyarov, 2004).

Thus, we define museum pedagogy as a scientific discipline that includes the components of museology, pedagogy and psychology, the subject of which is the cultural and educational aspects of museum activities.

The domestic philosopher N.F. Fedorov (1995) in his work "Museum, Its Meaning and Purpose" first published in 1913 and then republished in 1982 and 1995 called a museum "the highest institution of unity" and talked about its "soul-developing" purpose. For him, a museum is primarily an institution of social memory, a way of embodying the past in the present and, in this sense, the "justification" of the new century, which is characterized by detachment from the past. Keeping "the memory of the fathers," their things and actions and bringing the "anachronistic remains" back to life, the museum performs the function of educating a soul (Stolyarov, 2004).

Since the beginning of the 1990s, the Russian museologists began to actively use the concept of "cultural and educational activities" (Stolyarov, 2004, 2013; Yukhnevich, 2001), implying education in the museum area - "the purposeful information and educational flows organized by the cooperation of various museum specialists" developing the human mind and intellect, his mental and personal qualities and the value-meaningful attitude to the world.

The analysis of the previous research and scientific publications confirms the view that for the implementation of educational activities of a museum, as well as education by museum means, it is necessary to simulate the system of pedagogical interaction of the museum with educational institutions, i.e. the interaction of socio-cultural institutions on the basis of the principles of museum pedagogy. The education environment of the museum takes part in the formation and development of the emotional, cognitive and motivational spheres by the museum means.

The modern museum education environment uses a variety of channels of museum communication: expositions, exhibitions, printed publications, excursions, lectures, club forms of work, museum festivals, concerts, theatrical performances, etc. The concept of "communication" (connection, conversation) along with the search for successful interaction with the viewer is considered key to the educational activities of museums. In the psychological and pedagogical literature "communication" is considered through the meaningful aspect of social interaction, as any action of an individual is carried out in the conditions of direct or indirect relations with other individuals and therefore is always communicative.

Solving the problem of developing the value-meaningful civil patriotic position of the personality of schoolchildren, we have organized the work of the study class on education of patriotism and promotion of military and historical knowledge, which is carried out on a permanent basis with a variable composition of students with the support of the members of the Karelian regional organization of the former juvenile prisoners of the extermination camps in Germany, members of the Board of Trustees of the museum, teachers of Petrozavodsk State University, teachers of schools of Petrozavodsk and Karelia and other interested persons in the Museum of the Victims of Fascism Named After M. Kolbe (Petrozavodsk city).

Purposes and objectives of the class work: promotion of historical knowledge, ideas of patriotism, developing respect for the older generation, veterans and the Motherland. Forms and methods of individual and mass class work: visiting interactive excursions in the Museum of the Victims of Fascism, seminars in the classroom, meetings with the former prisoners of concentration camps, research work of students, creating personal and collective portfolios after attending seminars, establishing contacts and meetings with the parents of students.

Developing the educational concept of the study class in the museum, we saw our main goal in promoting moral principles and the development of the value-meaningful civil patriotic position of the personality of schoolchildren.

1. The activists of the Museum of the Victims of Fascism from among the students of Petrozavodsk State University were engaged in conducting excursions, organizing the work of the study class, its didactic and methodical equipping.

Basing on the analysis of long pedagogical experience of the Museum of the Victims of Fascism named after M. Kolbe, we have developed a structured method of developing the value-meaningful civil and patriotic position of schoolchildren (Fig. 1).

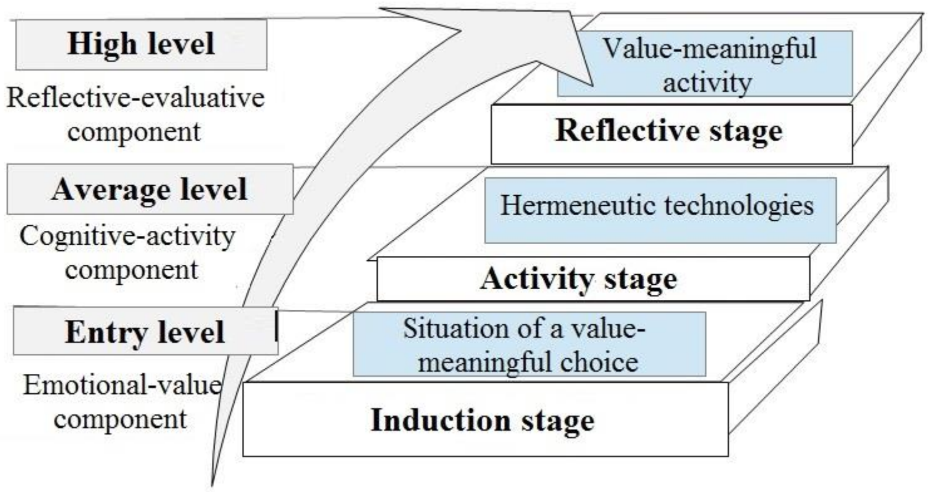

Figure 1. A structured method of developing the value-meaningful civil and patriotic position of the personality of a schoolchild. Source: Authors.

The implementation of this method was based on such means of civil and patriotic education as the organization and implementation of educational activity and its integration with the project museum and educational activities for the interests of schoolchildren. This process, as evidenced by the results of our experimental work, has a stage-by-stage nature including four stages:

1. "fixing the knowledge" - plunging into the topic or the problem under study, the accumulation of knowledge about it;
2. "assessment" - a stage where the skills of operating with the acquired knowledge, justifying one's point of view, assessing the act, phenomenon are being developed;
3. "action" - a stage involving the creation (modeling) of situations where it is necessary to act in accordance with the acquired knowledge;
4. "assignment", i.e. mastering the skill of independent decision-making in relation to a particular act (behavior).

The content of educational activities integrated into the museum and educational area, as confirmed by the results of experimental work, is a source of developing the value-meaningful civil patriotic position of schoolchildren, as the conceptual structure of the content is based on the value-meaningful activity of students, meaningful education of personality, the values of patriotism as the associated characteristics of the educational process in the context of the value-meaningful approach to education.

In order to check the level of development of the values of patriotism, we used the method of unfinished sentences at the initial stage of education (September 2014, September 2015, September 2016), and at the final stage (May 2015, May 2016, May 2017).

In a comparative analysis of the work before and after the education course (118 and 120 papers respectively), we can distinguish the following characteristics:

• the statements of respondents became more common in 80% of questionnaires;

• the emotionality of sentences is more pronounced, there was a 20% increase in the number of exclamation points, the schoolchildren used "emoticons" to express emotions;

• the range of concepts identified with the sense of patriotism expanded: love for the Motherland, devotion, pride for the country, sacrifice, active attitude to the Motherland, respect, knowledge of history, protection, faith, mutual respect.

Museum and educational activities were project-based. An example of one of the projects organized by the participants of the experimental work is the start-forum "Children and Youth in the City". The objective of the project participants was to collect the memories of the contemporaries of the Second World War about the history of their childhood and youth. More than 200 people took part in the project. After the implementation of the project the memories of the former prisoners of concentration camps and ghettos of Germany were published, the attendance of the museum increased. In the course of activities under the project, the exposition was used as a platform for research of schoolchildren and students. The schoolchildren and students of Petrozavodsk city were involved in volunteer activities in the museum.

A creative essay "Life Story" was added to the usual forms of work, which resulted in the creation of articles of schoolchildren and students about Russia, the war and the family in the museum.

The presentation of the creative works made them socially important, allowed the project participants to evaluate the results of their activities. Thus, the condition of using the value-meaningful activity as a factor of developing the value-meaningful civil patriotic position of an individual was embodied. The value-meaningful activity of schoolchildren in the socially significant projects has showed that a student can master the progress of the study only through living it, that is, through his own experience. He is given the opportunity to choose his own productive activities in the chosen field, where he is faced with the need to analyze the consequences of his own actions.

Basing on the theoretical analysis of psychological and pedagogical literature and special research, as well as on the results of experimental work, it was concluded that the museum funds can be used for effective development of the value-meaningful civil patriotic position of the personality of schoolchildren, if the basis of the educational process determines the value-meaningful activity of schoolchildren fixed on the reflexive perception of the content of education, situations of a value-meaningful choice and hermeneutic search for meaning.

The development of the value-meaningful civil patriotic position of the personality of schoolchildren is realized due to the special organization of the value-meaningful activity of students, in which they aim at the reflexive perception of the material that develops the skills of hermeneutic analysis, make a value-meaningful choice, find themselves in a situation of dialogic communication with each other, with a museum pedagogue and the museum exposition.

5. Conclusion

The scientific interest of the authors, in accordance with the purpose, objectives and logic of the research, was turned towards the theoretical justification of the possibilities of museum pedagogy as a factor in developing the value-meaningful orientation of the personality of a student.

The humanization of the educational process and its focus on the personality of a child leads to a change in the entire structure of education. There are such pedagogical phenomena as self-expression of students, self-determination, reflection, creation of meaning and others. Our appeal to the theoretical analysis of philosophical, psychological and pedagogical literature devoted to the problems of values and meaning, as well as fundamental research in the field of museum pedagogy have allowed us to deepen the understanding of the purpose, objectives and content of the modern process of develop in the value-meaningful civil patriotic position of an individual by means of museum pedagogy.

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Solving Professional Tasks in the Format of Methodical Workshop as a Means of Training a Mobile Teacher

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Abstract

The paper presents the methodological experience of the authors in training a teacher of the Russian language in a pedagogical university. The objective is the presentation of the methodical workshop as a technology and form of practical training on the subject "Methods of Teaching the Russian Language." The examples of models of professional tasks for studying the new topics of the course are presented. In conducting the research both theoretical (analysis of scientific literature, generalization and systematization of pedagogical experience, methodological modeling) and empirical (mutual and self-assessment, questionnaire, survey) methods were used. The possibilities of professional tasks as a tool for effective training of the teacher of the Russian language were revealed in the context of methodical workshops for the purpose of developing and enhancing pedagogical competences or their elements. The role of methodical workshops in the system of postgraduate education was defined. The theoretical significance of the research is to determine the didactic potential of professional tasks, their structural and substantive features for inclusion in the system of working at the methodical workshops. The practical significance of the research is due to the possibility of using its results in the process of developing pedagogical competencies in the course of university training of a mobile Russian teacher, as well as enhancing them in the system of system of advanced training.

Keywords: Methods of Teaching the Russian Language, Methodical Workshop, Professional Task, Training of a Mobile Teacher of the Russian Language.

1.Introduction

Today, the training of a teacher of the Russian language in a pedagogical university requires the analysis and adjustment of the content and procedural aspects, orientation to future professional activities at school. We are interested in the basic academic discipline "Methods of Teaching the Russian Language", the content of the lectures and practical classes of which currently includes sections yet previously missing in the list of the classical topics of the discipline. In particular, the sections "Implementation of the Integrative Approach at the Lessons of the Russian Language. Integrated Lesson, Its Specificity"; "Methods of Organizing Individual Projects of Students on the Russian language"; "Methods of Working on Speech Genres at the Lessons of Speech Development"; "Cultural Aspect of Teaching the Russian Language as a Means of Spiritual and Aesthetic Education. The Main Trends of the Implementation of the Cultural Approach at the Lessons of the Russian Language", etc. They are also new for practicing teachers, because they have not previously been the subject of study at university, and therefore they require understanding the theoretical component and immediate implementation in the practice of teaching schoolchildren. Based on this, the problem of effective training (including the ratio of the amount of new information and time for its assimilation and practical development of skills and abilities that underlie the necessary competencies) of students and teachers who improve their education in the framework of the advanced training courses becomes relevant.

The paper will deal with the training of students, but we should have in mind that the described methodological guidance can be organically used in advanced training courses for practicing teachers. The objective of the research is defining the possibilities of professional tasks as a tool for effective training of a teacher of the Russian language in the context of methodical workshops for developing and enhancing a range of pedagogical competences or their elements.

2. Literature Review

In modern scientific literature, considerable attention is paid to the problems of effective education at university. We absolutely agree with Yu. V. Vardanyan (2016), who asserts that from the first days of the student's education at university, it is necessary to orient the process of development of his professional competence towards the final result – graduation of a specialist who is ready to solve professional tasks theoretically and practically, is able to create, apply and adjust the system of professional activity.

Scientists are exploring the methods of enhancing the communicative competence of students in the innovative university, defining it as a social constant of personality (Belova & Kashkareva, 2015); suggest the use of interactive forms of education (Dudeney, 2000) and educational technology (Glendinning & Mcewan, 2002; Vishlenkova & Kostina, 2016) that ensure active assimilation of knowledge by students and the possibility of applying them in situations of professional activity both modeled in an academic environment and real; consider the more active use of computer technology (Chapelle, 2001) and even social networks such as Twitter (Sample, 2010) necessary in the education process; determine the possibilities of implementing the project activities (Khuziakhmetov et al., 2016), identify the ways of developing professional mobility of students (Kashkareva et al., 2018). In this context, some authors talk about a reasonable combination of theoretical and practical material in teaching (Korthagen, 2001), while others put the greater emphasis on a practice-oriented approach (Shukshina et al., 2016). The educational process is influenced by the multicultural composition of the participants of the educational space. The researchers pay attention to the specifics of teaching students in the multicultural educational space of the university (Yusupova et al., 2015), talk about the mutual study of languages and cultures (Safonova, 2014), reveal the didactic potential of bilingualism (Mosin et al., 2017), define pedagogical technologies of socialization of students (Zhindeeva et al., 2018), present the results of experimental studies of the ethno-cultural competence of students (Gorshenina & Yakunchev, 2014), describe the technologies of developing their language competence (Babushkina et al., 2017), consider the issues related to the development of ideas about the linguistic aesthetic ideal (Vodyasova, 2017), analyze the role of the English language in intercultural communication (Vetoshkin, 2015), etc.

Competence approach is one of the main approaches in the training of students. In its context, practice-oriented classes are widely used, which develop the readiness of the students for future professional activity, develop their specific skills and abilities (Kevbrina & Malyavina, 2017), the content and procedural support of step-by-step graded educational tasks designed to develop the educational and cognitive competence of students is introduced (Shukshina et al., 2018). In the process of training the students, educational and professional tasks are used, which take into account the subject and procedural aspects of training (Azizova, 2018). V. A. Adolph, N. F. Yakovleva (2015) believe that the task-oriented approach should be used as the basis of teacher training. Scientists justify the need to create a list of professional tasks that enable to implement the competence approach.

The research identifies the possibilities of professional tasks as a tool for effective training of a teacher of the Russian language in the context of methodological workshops. The researchers emphasize that the methodological workshop can be presented as a technology for the implementation of the concept of developmental education (Galysheva & Kirillova, 2014), as a form of organization of practical training of students (Ivanova et al., 2017), etc. In addition, the methodical workshop is one of the forms of organization of the educational process in the system of advanced training, as it implies a system of methodological measures for enhancing the motivation of teachers and exchanging successful best teaching practices. I. V. Gordienko and D. V. Khokhlova (2017) are sure that the methodical workshop is an innovative form of enhancing professional competence of a pedagogue.

The analysis of scientific works proves that university training and postgraduate professional development become more effective if students implement their acquired knowledge in practice, in solving and modeling professional tasks in situations simulating professional activity. This system of training allows professionals to adapt faster in real life conditions, and therefore be more mobile.

3. Research Methods

The research is based on the use of theoretical methods, in particular, the analysis of scientific literature on various aspects of teacher training, methods and means of effective higher education. We turned to the generalization and systematization of pedagogical experience (both of our own and of our colleagues). The methodical simulation became the leading method. As a form of organization of the education process of students, the methodical workshop models the educational space to simulate situations of professional activity. Technologically, the methodical workshop allows to consistently develop and enhance special competence of a future teacher of the Russian language in this modeled space. Thus, by a methodical workshop we mean not only the form, but also the technology of education. As a technology it includes the following components: the idea of the planned results of education, diagnosis of the initial and current knowledge and skills, and the developed competencies of students, the implementation of different methods and techniques in accordance with the optimal education model (Belova & Kashkareva, 2011). The following empirical methods were used: surveying students to determine the initial knowledge and ideas about the organization of the process of teaching the Russian language at school; questioning of students to identify their methodological interests and needs; mutual and self-assessment of students during the work at the methodical workshops, pursuing and discussing their professional tasks.

4. Results and Discussion

The researchers define the meaning of the term "professional task" by revealing the didactic capabilities of this component of the higher education system. L. A. Mitakovich (2009) understands a professional task as a structural element of education reflecting its nature as a logical chain of steps for achieving, which results in the teacher's realizing and overcoming of the controversy on the basis of objective laws and the consideration of certain circumstances. According to N. N. Kiseleva (2013), a professional task is characterized by the meaningful, procedural and contextual functions. The structure of the professional task includes such components as the generalized task statement; the key objective; the context of task solving; the tasks of a certain type, which will lead to a solution and will enable to fix the level of the shown competencies; the evaluation criteria.

From the point of view of the methodology of teaching the Russian language, we understand a professional task as a purpose, achieving which requires performing a number of certain actions corresponding to the conditions of professional activity of a teacher of Russian. Thus, solving professional tasks by students at the practical classes of the course "Methods of Teaching the Russian Language" is the imitation of the activities of a future teacher of the Russian language, the implementation of their knowledge in practice, in the conditions of professional activity modeled at the lessons at the methodical workshops.

Some models of professional tasks used by us at practical classes and reflecting the described structural elements adapted to the course of the methods of teaching the Russian language are listed below:

1. To develop the model of one of the following types of lessons: integrated lesson of the Russian language and literature on the basis of philological analysis of a literary text / integrated lesson of developing coherent speech on the basis of a sample text / integrated lesson of the Russian language with the inclusion of an interdisciplinary problem situation, duration 45 min, for the specified class of a basic / senior general education school / school with the advanced teaching of humanitarian disciplines.

The lesson model should contain:

- the topic of the lesson, its type;
- description of coordinated programmes and integrated topics;

- lesson objectives (developmental, and educational);
- methods and techniques of working at the lesson;
- forms of organization of educational activities (individual, collective, frontal, in pairs);
- educational means;
- didactic material;
- lesson plan (stages; objectives of each lesson phase; methods and techniques used at each phase; education tools used at a particular phase of the lesson; time allotted for each phase of the lesson).

A student should be ready to justify the methodological base of the lesson and comment on its progress according to the specified plan.

2. To develop the model of integrated lesson of the Russian language and literature / the Russian language and history on the basis of coordination of the programmes of these disciplines in the specified class (educational and methodical complexes of integrated disciplines and the subject of the lesson is chosen by the student).

The lesson model should contain:

- the topic of the lesson, its type;
- indication of the integration level (interdisciplinary connections, didactic synthesis, integrity level);
- lesson objectives taking into account the integration level (developmental, and educational);
- methods and techniques of working at the lesson;
- forms of organization of educational activities (individual, collective, frontal, in pairs);
- educational means;
- didactic material;
- lesson plan (stages; objectives of each lesson phase; methods and techniques used at each phase; education tools used at a particular phase of the lesson; time allotted for each phase of the lesson).

A student should be ready to justify the methodological base of the lesson and comment on its progress according to the specified plan.

3. To develop the fragments of the lesson model of developing coherent speech to teach students of the specified class to create one of the speech genres (essay, problematic essay, portrait essay, travel essay, letter, review): THE ANALYSIS OF A SAMPLE TEXT AND WORKING WITH THE "PORTRAIT" SPEECH GENRE.

A student should present and justify a plan for the analysis of a sample text and the sequence of working with the "portrait" of a speech genre chosen by him for the lesson model.

4. To develop the fragment of the lesson "SOLUTION OF THE RESEARCH OBJECTIVE/CREATING A PROBLEMATIC SITUATION / INCLUSION OF INTERDISCIPLINARY PROBLEM SITUATION" for the specified class of the basic / senior general education school / school with the advanced teaching of humanitarian disciplines.

The lesson fragment should contain:

- justification of the need for this element of the lesson in accordance with the topic and objectives of the lesson;
- the educational purpose of this element;
- the description of the element content;
- methods and techniques allowing to implement this element of the lesson;
- form of working with the class;
- educational means;
- didactic material for the implementation of this element.

5. It is necessary to imagine yourself being a curator of the educational project / educational research of the student of a certain age group and complete the task: propose a work plan to guide the project (research) activities of the student within the topic studied in this class of the basic / senior general education school / school with the advanced teaching of humanitarian disciplines.

The following components should be present in the plan:

- the topic of the educational project (research);
- educational problem addressed by the project (research);

- the structure of the educational project (research);
- the expected results of the project (research);
- methods of implementing the individual project (individual research) of the student;
- requirements for reporting and presenting the final results by the students;
- the criteria for the evaluation of the results;
- reflection means.

6. To describe the following specific (subject) methods of implementation of the educational project (research) of the student: descriptive, interpretative, comparative methods; semantic, contextual, linguistic analysis, philological analysis, rhetorical analysis; statistical material processing; linguistic experiment. To illustrate the specifics of the application of one of these methods.

Similar tasks are offered at the methodical workshops of the course "Methods of Teaching the Russian Language". In addition, students independently produce professional tasks by working in a group in order to select a joint solution and discuss its results. Thus, after receiving theoretical training at lectures, there is a significant increase of the amount of independent work of students in the course of solving professional tasks at the next stage - methodical workshops. They move from group work aimed at the research, analysis and discussion of various situations of professional activity of the teacher of the Russian language and the lesson notes presented by the teacher to completing individual tasks and their own modeling. Furthermore, the results of the independent work are also discussed in group in the "play" mode of various aspects of the teacher's work, which ensures the improvement of the actions being formed.

Most practicing teachers, having received higher education in previous years, have not received appropriate training in modeling and implementing professional tasks in teaching the Russian language to students. Therefore, these models can be used in advanced training courses. They will undoubtedly help to improve the professional competence of a teacher of the Russian language.

5. Conclusions

Modeling of professional tasks by students at methodical workshops provides optimization and intensification of their educational activities, which are confirmed in the course of writing tests and the defence of methodical models based on the solution of a professional task, mutual assessment and self-assessment of the results of the outcome of the decision in the process of group discussion. Working on professional tasks allows to prepare students for their future professional activities, as it gives the opportunity to develop and improve the necessary competencies involving the ability to use modern methods and technologies of training and diagnosis, to design educational programmes and individual educational routes of students, to lead the educational and research activities of students. It is appropriate to use the models of professional objectives used in practical classes in post-graduate education as part of the advanced training courses in order to enhance the professional skills of practicing teachers of the Russian language.

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Enhancing Intercultural Competence of the Russian Language Teacher of Multi-Ethnic School in the System of Further Education

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Abstract

The objective of the paper is the theoretical justification, development and implementation of an optimal methodological system for enhancing the intercultural competence of a teacher of the Russian language of a multicultural school in the framework of advanced training, providing him with an arsenal of methodological tools for the development and use of didactic material that contributes to the development of a dialogical multicultural environment. During the research, the methods of the theoretical level (analysis, systematization and expertise of scientific and methodological literature, comparison of provisions proposed in various sources, their generalization), as well as the methods of questioning and observation were used. As a result of the research, the necessity of enhancing the intercultural competence of a teacher of the Russian language who works with the contingent of students of different ethnic composition is justified, its difficulties and expectations are identified, the programme of advanced training aimed at supplementing the content of his professional competence on the basis of modern technological learning and methods of teaching the Russian language is proposed. The theoretical significance of the paper lies in the further development of the problems of intercultural communication, the practical significance is the possibility of applying its results in the practice of teaching the Russian language, in the development of prospects of ethno-cultural education. The research materials will be used in the system of training and advanced training of the teaching staff.

Keywords: Multicultural School, Teacher of the Russian Language, Intercultural Competence, Advanced Training, Advanced Training Courses.

1.Introduction

Currently, the internal and external migration is actively growing in the Russian Federation. One of the subjects of Russia – the Republic of Mordovia – is sufficiently attractive for immigrants. It is a multi-ethnic region with more than 100 nations living in it. The language picture of the territory includes various levels of components: state language and language of interethnic communication -Russian; state and regional languages of interethnic communication – Moksha – and Erzya-Mordovian languages; regional language of interethnic communication – Tatar. In everyday life a number of other languages are used. In educational institutions there are students who are representatives of different ethnic groups and some of them are only Russian-speaking, others are bilingual (Mordva, Tatars), and still others are foreign language speakers (Turkmens, Tajiks, Azerbaijanis etc.). In this regard, one of the principles of education is the principle of multiculturalism and the ability to engage in an intercultural dialogue becomes an important quality of a pedagogue.

Multicultural education is provided in the framework of all the subjects, but the most important role belongs to the lessons of the Russian language. The Russian language teacher works simultaneously with students for whom Russian is their native language and with students for whom Russian is not native / a second language. It is the teacher who bears the additional burden of professional responsibility not only for the language training of children, but also for creating comfortable conditions for their adaptation. Thus, the main objective of the lessons of the Russian language is developing communicative competence of students and their socialization. At the same time, intercultural communication is the only opportunity to educate the personality of a schoolchild in the spirit of tolerant understanding and acceptance of another culture and the development of positive attitudes to international contacts.

However, scientists have repeatedly noted that from a methodological point of view, a teacher of the foreign language is much better prepared to teach the native (Russian) language as a second language than a teacher of the Russian language, who often does not possess intercultural competence (or is not sufficiently interculturally competent) on a professional level. In the Republic of Mordovia, a teacher of the Russian language of a multicultural school can realize his gaps in knowledge, enhance his intercultural competence in the system of postgraduate education, primarily in the framework of advanced training courses. Programmes that provide an opportunity to improve the intercultural competence to the optimal level which is necessary for teaching the Russian language to a multi-national contingent of students are of paramount importance for a teacher.

The objective of the research is the theoretical justification, development and implementation of the methodological system for enhancing the intercultural competence of a teacher of the Russian language of a multicultural school in the framework of advanced training, providing him with an arsenal of methodological tools for the development and usage of didactic material contributing to the development of a dialogical multicultural environment. We used the results of the activities of teachers of the Mordovian State Pedagogical Institute named after M. E. Evseviev on the implementation of the additional professional training programme "Intercultural Communication of a Teacher of the Russian Language of a Multicultural School" allowing a school teacher to enhance the competence in the field of communicative processes ongoing in intercultural interaction, to deepen the understanding of the ethno-cultural and ethno-national specificity of the educational environment.

2. Literature Review

Our research required a thorough analysis of scientific literature on several related disciplines.

The works of authors who are engaged in the development of the theory of intercultural communication are of greatest interest for us. Thus, American linguist and anthropologist Edward Twitchell Hall Jr. (1959), the founder of intercultural communication, was absolutely sure that communication is culture and culture is communication. The ideas of E. Hall (1959) were further developed in works of other scientists. In their works they talk about the cultural identity of peoples (Collier & Thomas, 1988), about the conditions of intercultural communication (Martin & Nakayama, 2007), about the role of language in intercultural communication (Gass & Neu, 1996), etc. According to the researchers, the analysis of specific examples of intercultural communication results in the expansion of the intercultural competence (Wiseman, 2003) and the overcoming of difficulties in everyday communication with people from different culture (Maloof et al., 2006). The relations between culture and communication are analyzed in the theory of communicative action by Yu. Habermas (1981), cultural theory by D. McQuail (2005) etc. A great contribution to the development of the problems of intercultural communication was made by Russian researchers who develop the issues of history and theory of culture. In the works of M. M. Bakhtin (1986), V. S. Bibler (1996), Yu. M. Lotman (1994) etc., a dialogue is considered to be a stable factor of interaction between cultures above all. M. M. Bakhtin (1986) asserts that culture lives by means of a dialogue, in which there is its meaning and uniqueness.

E. Hall (1959) was one of the first to justify the idea of expanding the boundaries of intercultural communication by moving it to the classroom and giving it the features of the educational process. As a result, cross-cultural communication has become to be considered not only as a scientific direction, but also as an academic discipline, the linguistic and methodological aspects of which are studied in detail in the works by Yu. A. Sorokin (1991), S. G. Ter-Minasova (2000), V. P. Furmanova (1993). To the greatest extent, this problem is reflected in the practice of teaching foreign languages and Russian as a foreign language. The researchers analyze the place of intercultural communication in the multicultural educational environment of university (Yusupova et al., 2015), focus on its role in the training of bachelors and masters of pedagogical directions (Aniol, 2014), pay attention to the ways of enhancing the communicative competence of the individual as a social constant at innovative university (Belova & Kashkareva, 2015), characterize the technology of developing linguistic competence of students (Kadakin et al., 2017), point to the importance of project activities in the educational environment (Khuziakhmetov et al., 2016), identify the role of foreign languages in intercultural communication (Byram, 2011), monitor the professional adaptation of young teachers (Ryabova et al., 2016), etc. A group of works considering the questions of training on a bilingual basis are pointed out. The authors note that bilingualism is a powerful factor of language development for intercultural communication as it opens opportunities for a person to learn a third and subsequent language, thereby helping to realize their place in the process of interaction with bearers of other cultures (Mosin et al., 2017) and offer methods of teaching bilingualism in the conditions of intercultural communication (Legostaeva, 2014).

Due to the fact that the methodological aspect of intercultural communication is reflected primarily in the multicultural educational environment, we are particularly interested in the works, which deal with various issues of multicultural education. So, in the work by L. P. Karpushina (2015), the idea that one of the factors of successful socialization of representatives of multi-ethnic society is the ethno-cultural approach to learning is justified. The subject of the study of the authors is pedagogical technologies of socialization of migrant children (Zhindeeva et al., 2018), peculiarities of their ethno-cultural and language adaptation (Prokaeva et al., 2017), the creation of language aesthetic ideal (Vodyasova, 2017), the trajectory of the development of professional intercultural communicative competence of the teacher himself (Belova & Kashkareva, 2012), etc. Scientists claim that ethnic and cultural education acts as a factor in countering deviant behavior of students (Morova et al., 2016), and the joint study of languages and cultures is a factor in developing tolerance (Safonova, 2014).

The modern world is dynamic, the acquired knowledge becomes obsolete, so the success of professional activities is largely associated not only with studying at university, but also with the ability to learn throughout life. The idea of continuing education can be implemented in various forms. This can be getting additional education, professional retraining or advanced training. In the works of the researchers, the specificity of education at master's degree (Shukshina et al., 2016), postgraduate (Vodyasova et al., 2016) programmes as well as at professional retraining courses (Lebedeva, 2018) is presented. It was also important for us to study the extent to which the issue of advanced training of a teacher of the Russian language working in a multicultural educational space is covered in the scientific literature. In the works analysed by us the various aspects of scientific-methodical support of the system of postgraduate education are considered, the possible approaches to the definition, evaluation and selection of methods of teaching the Russian language and literature with a view to their use in the system of advanced training are being established (Matsyyaka et al., 2017), the experience of drawing up the programmes of retraining courses for teachers of Russian as a foreign language (Troshkina & Abdreeva, 2016) is presented.

3. Research Methods

Our research was carried out using the methods of theoretical level, the most important of which are the analysis, systematization and expertise of scientific and methodological literature devoted to the consideration of methodological aspects of intercultural communication in a multicultural educational space, the comparison of the provisions proposed in various sources, their generalization in order to identify priority areas of research. The basis of methodological aspects of intercultural communication is the theory of speech activity, linguistic-cultural theory of word, the provision about the role of language in the comprehensive development of personality and ethno-pedagogical concept of education. The identification of the needs of teachers of the Russian language of a multicultural school in additional education that enhances their intercultural competence was carried out as a result of the application of the method of questioning the potential students. The method of monitoring the process of organization and implementation of the educational process in the framework of the advanced training programme "Intercultural Communication of a Teacher of the Russian language of a Multicultural School" at the Mordovian State Pedagogical Institute named after M. E. Evseviev was also used.

4. Results and Discussion

We consider the improvement of intercultural competence as a purposeful development of it within the framework of multicultural education. The whole process is aimed at: a) developing the value and social readiness for intercultural communication, b) mastering the experience of professional intercultural communication, the skill of practical solving the problems of its enhancing; c) the development of tolerance, empathy, intellectual flexibility of a teacher.

Within the framework of the advanced training programme "Intercultural Communication of a Teacher of the Russian Language of a Multicultural School", we have identified several stages involving enhancing intercultural competence of a teacher of the Russian language of a multicultural school.

The first phase involved the initial diagnostics. Drawing up the content of the programme was preceded by the identification of the needs of potential students. The survey "The Introspection of Intercultural Communication Skills" was conducted with teachers of the Russian, native languages and literature of urban and rural schools, which included one-word and detailed answers (a total of more than 1500 responses were processed). Its results allowed to identify the methodological difficulties of pedagogues, to determine the strategy of the programme, to adjust the content of its software and methodological support and to select the appropriate materials.

The second stage is conducting classes under the programme, the normative labour input of education of which is 108 hours, of which: lecture course - 18 hours, practical classes - 36 hours, independent work - 52 hours, final examination - 2 hours. The programme is designed in such a way that conducting classes is possible in different variants – in face-to-face and distance forms (in the MOODLE system).

All the course content is divided into three modules. The first module "Normative-Methodological Basis and Specificity of Modern Language Education" includes topics that reflect the content of the language legislation of the Russian Federation and its subjects and the concept of modern language education. As part of the module, the knowledge of students about the peculiarities of children's rights in a multi-ethnic environment, the specificity of operation of the Russian language in intercultural communication is systematized and deepened. The second module "Intercultural Communication in a Multi-Ethnic Environment" reveals various aspects of the development of linguistic personality. It contains topics involving the deepening of the knowledge about language and culture in the context of country and regional studies, language support of professional communication, etc. The third module "Specifics of Teaching the Russian Language in the Conditions of a Multinational Class Contingent" considers topics involving the deepening of knowledge of students about the status, state, tendencies, paradigms and directions of modern linguistics, technologies of creation and perception of texts, etc. Much attention is paid to innovative methods of teaching the Russian language including working with the distance system Moodle, which allows intensifying education through interactive interaction between the participants of the educational process. Enhancing the intercultural competence of a teacher is associated with the reflection on his professional activities, so at the practical classes much attention is paid to such activities as modeling professional and pedagogical communication in specific situations and its analysis, solving situational problems of the educational process, the detection of errors, shortcomings and constrains in the activity of a teacher of the Russian language. In addition, advanced training includes not only lecture and practical material, but also involves visiting the lessons of Russian teachers in educational institutions and analyzing them.

The defense of the portfolio serves as a form of final examination. The maximum number of points that a student can get is 100 (all criteria are presented). Credit is given if the sum of points is not less than 60.

For the duration of the advanced training courses, each student is engaged in various types of professional activities (master classes, organizational and activity games, trainings, designing models for developing the competencies of students, etc.). All content of the course is aimed at updating and expanding the knowledge of students in the field of methods of teaching the Russian language in a multicultural environment.

The third stage is the stage of self-education. We have identified it conditionally, as the process of self-education permeates all the stages, and a teacher needs it as a basis for enhancing all his professional competence, including intercultural one.

The structure of the proposed course has methodological support in the form of control-didactic unit, indicators and criteria for its assessment, a list of literature based on the works of the leading modern methodologists.

The leitmotif of the whole programme is the idea that the process of teaching the Russian language to a multinational contingent of students is based on the specificity of the multicultural educational environment. The programme creates prerequisites for the development of the modern technologies and teaching methods, offers scientific and methodological support to teachers of the Russian language in the process of advanced training and in subsequent professional activities. Students should clearly understand that the principle of education in the context of intercultural dialogue is one of the leading principles in modern language education, as it helps to shape a culturally tolerant personality which is ready to understand and accept the values of not only its own, but also of a foreign culture.

5. Conclusions

Based on the above, it can be argued that the methodological and content aspects of enhancing the intercultural competence of a teacher of the Russian language of a multicultural school are determined by the tendencies of the development of modern educational space. The multi-ethnic structure of society determines the diversity of types of educational institutions that differ in the language of education, ethnic composition of students, objectives and content of humanitarian, especially language, education. A teacher of the Russian language of a multicultural school bears a great burden of professional responsibility for the language training of children of different nationalities and for the creation of comfortable conditions for their adaptation. In this regard, the ability to engage in an intercultural dialogue becomes a very important quality of a teacher. The programme of advanced training "Intercultural Communication of a Teacher of the Russian Language of a Multicultural School" gives the chance to a teacher of the Russian language to enhance his professional competence in the field of the communicative processes ongoing in the intercultural interaction and, respectively, to be a professionally competent and mobile specialist.

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"The Package of Distance Services and Options in the Russian Language for a Mobile Teacher" as a Mechanism of the Qualification Enhancement System at the Pedagogical University

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Abstract

The paper describes the results of the research conducted within the framework of the project "The Package of Distance Services and Options for the Russian Language for a Mobile Teacher". The objective of the authors is the presentation of the results of the development, testing and implementation of the courses of open education in the Russian language (advanced training programmes) for teachers of the Russian language and other academic subjects who conduct classes in the Russian language at Russian and foreign schools on the basis of a new mechanism "The Package of Distance Services and Options for the Russian Language" within the framework of the distance educational system MOODLE. During the research, theoretical (analysis of scientific and methodological literature, generalization and systematization of pedagogical experience) and empirical (questionnaire, survey, observation) methods were used. As a result of the conducted research, the mechanism "The Package of Distance Services and Options for the Russian Language" was developed, tested and implemented in the advanced training system of Mordovian State Pedagogical Institute named after M.E. Evseviev as an innovative way of education based on providing consumers with the possibility of forming educational services by themselves through a set of options (educational topics of modules), taking into account their own needs in the field of the Russian language as a subject of study and as a means of training, which includes a set of special electronic educational methodological resources.

Keywords: Distance Educational Services and Options, Mobile Teacher, Advanced Training System for Teachers of the Russian Language and Other Academic Subjects.

1.Introduction

The research is relevant due to the strategic objectives of the modernization of modern education associated with the development of the need for self-education, self-improvement and the metasubject role of the Russian language as a subject of study and as a means of education, which is increasing in this process.

The existing system of advanced training of teachers does not fully meet the individual needs of the course participants, does not fully take into account the requests for some flexibility, mobility of the package of educational services, their content in view of the requirements of the modern education. The conceptual idea of the research is to provide an opportunity for a teacher to form a package of distance educational services and options in order to improve professional qualification on the basis of meeting their own requirements in the field of the Russian language as a subject of study and as a means of education.

The implemented project contributes to the formation of professional mobility of teachers, improving the quality of their professional training and the overall level of education of students through the provision of electronic educational-methodological and scientific-methodological educational resources developed by taking into account the possibility of an individual package of distance services and options.

The scientific and pedagogical significance of the research lies in providing a teacher with conditions that optimize the process of updating professional knowledge, abilities and skills in the field of the Russian language as a subject of study and as a means of education: in the development of the conceptual, content and procedural justification of the courses of open education in the Russian language and in the specifics of their organization on the basis of the new mechanism "The Package of Distance Services and Options for the Russian Language" within the framework of the distance educational system MOODLE, which is the key to successful learning of the Russian language and other subjects studied in the Russian Language by schoolchildren.

2. Literature Review

Various aspects of the problem of the most effective ways of improving the qualification of teachers are the focus of attention of the modern researchers. Thus, the works of modern authors are devoted to the identification of the role of advanced training courses in the system of teacher training: identification of the tendencies in the development of postgraduate pedagogical education on the example of the system of advanced training of a teacher of the Russian language and literature of the multi-ethnic school (Mikheeva, 2014), diagnosis of the readiness for further and additional professional education in conditions of continuous education (Ignatovich, 2015), the definition of the market of educational services as the most important factor in the formation of the direction of professional mobility of a teacher (Kadakin & Zeynalov, 2016), identification of the problems of professional adaptation of young teachers as the basis for determining the effective model of education of students (Ryabova et al., 2016), identification of pedagogical conditions and presentation of the experience of the implementation of professional training of future teachers in the system of further education at the pedagogical university (Belova & Kirdyanova, 2018), identification of the potential of philological education for developing the professional mobility of bachelors of the pedagogical university (Kashkareva & Presnukhina, 2018).

Modern researchers are interested in both the requirements for the content of professional training of teachers and the specifics of the organization of its technological side, including its organization through the system of additional education: improving the professional and speech culture of a teacher in the system of advanced training (Luneva, 2004), taking into account the socio-cultural trends in the continuous development of the professional competencies of teachers (Klyushkin & Mischenko, 2013), using the results of the diagnostics of ethno-cultural competence of future teachers to improve the efficiency of its development (Yakunchev & Gorshenina, 2013), defining the ways of shaping the personality of a music teacher (Kobozeva et al. 2014), searching for ways to enhance the communicative competence of an individual as a social constant at the innovative university (Belova & Kashkareva, 2015), identifying the most optimal ways of using the intellectual and creative potential of pedagogical education (Chekushkina & Rodina, 2015), defining the innovative approaches in the practice-oriented teacher training (Shukshina et al., 2016a), developing the models of the pedagogical master's programme (Shukshina et al., 2016b), reflecting on the role and potential of the discipline of stylistics in the process of developing an aesthetic ideal of the future teachers of the Russian language and literature (Vodyasova, 2017), the specifics of the developing and enhancing the linguistic competence of students at the pedagogical institute (Kadakin et al., 2017a) and the cognitive component of the professional competence of bachelors of pedagogical education (Kadakin et al., 2017b), designing and implementing the teacher retraining programmes (Lebedeva, 2018).

The researchers are interested in ways of training teachers for managing the project and research activity of students (Khuziakhmetov et al., 2016), the variants of adaptation of subject concepts of general education to the content of additional professional programmes (Kuznetsova et al., 2017), identification of the possible approaches to the definition, assessmant and selection of methods of teaching the Russian language and literature with the purpose of using them in educational activities and in the system of advanced training of teachers (Matsyyaka et al., 2017), ways of updating of the content of philological and artistic further education (Matsyyaka, 2017) and the peculiarities of using the ethno-cultural orientation of training of a bachelor of pedagogical education for the implementation of further education (Militsina, 2017).

A lot of works state the advantages of the forms of distance education in the system of advanced training of teachers: consideration of the specifics of the distance form of education in the system of advanced training of teachers of the Russian language and literature (Rylova, 2011), description of the results of the implementation of the advanced training programme "Modern Educational Technologies in Teaching Russian as a Second Language" with the help of the distance form of education (Ashkinova, 2014), presentation of the experience of conducting the advanced training courses for teachers of the Russian language in Washington State called "The Russian Language Class" consisting of face-to-face and online components (Abramova, 2015).

3. Research Methods

The use of the appropriate theoretical methods (analysis, systematization and examination of scientific and methodological literature, generalization and systematization of pedagogical experience in identifying and analyzing the existing mechanisms used in the development of educational programmes) contributed to the implementation of the main objective of the research. The monitoring of the requests of teachers for additional educational services with the possibility of forming the content of education by themselves taking into account the requirements of the modern education was carried out through the methods of questioning and interviewing the potential course participants. We used a method of monitoring the process of organization and implementation of the distance courses of advanced training of teachers of the Russian language and teachers-non-philologists at Mordovian State Pedagogical Institute named after M. E. Evseviev.

4. Results and Discussion

Search for the ways of realization of priority directions of development of education and science in the field of open education in the Russian language and teaching the Russian language, identifying the opportunities of improving the quality of the educational services provided in the field of teaching the Russian language as an academic subject and the quality of teaching other subjects in the Russian language are the actual problems of language policy at the present stage of social development.

Using the new mechanism "The Package of Distance Services and Options for the Russian Language" in the development, testing and implementing the open education courses in the Russian language within the distance educational system MOODLE contributed to the solution of these problems to some extent.

The objective of the research was developing a mechanism that would ensure the development, testing and implementation of the courses of open education in the Russian language in the framework of the distance educational system MOODLE in the professional development of teachers of the Russian language and other academic subjects, leading classes in the Russian language at Russian and foreign schools.

In the first preparatory stage of research, the analysis of the existing mechanisms used in the development, testing and implementation of the courses of open education in the Russian language was carried out, and the requests of teachers for educational services with the possibility of individual formation of the content of education and analysis of the needs of teachers for the mobility of the package of educational services were being monitored. It was found that the need for additional professional training of teachers of the Russian language is directly related to the search for the effective ways of preparing students for the most popular types of educational activities: Olympiads and competitions, project and research activity, the Major State Examination and the Unified State Examination in the Russian language taking into account the innovations in their content. In addition, the teachers noted the need for additional training in the field of building effective professional speech and text activity, insufficient training in the field of building public speech which is relevant to various educational and pedagogical situations, etc.

The announcement of the package of distance services and options for the Russian language for a mobile teacher was carried out during the educational methodological seminars on the presentation of distance courses.

During the implementation of the main stage of the research, the mechanism "The Package of Distance Services and Options for the Russian Language" was developed as an innovative way of education based on providing consumers with the opportunity of forming the educational services by themselves through the adoption of invariant options (compulsory educational topics in the content of a programme) and the choice of variable options (variable educational topics). This package also includes a set of special electronic scientific methodological resources in the system of distance education MOODLE. The development of this mechanism included the following: a) identifying a set of distance education services (advanced training programmes); b) identifying a set of options within each distance education service (the list of invariant and variable educational topics in the content); c) identifying the methodical navigation in communication and individual forming of a package of distance education services and options: the specifics of mastering the course content, initial, current and final control, independent work, etc.

The next step was using the new mechanism in the development of open education courses in the Russian language as part of improving the qualification of the two categories of consumers of educational services. Thus, in order to improve the qualification of teachers of the Russian language at Russian and foreign schools, the department of the Russian language and methods of teaching the Russian language of Mordovian State Pedagogical Institute named after M. E. Evseviev, the following educational distance courses were developed:

- "The Innovative Technology of Preparation for the Major State Examination in the Russian Language";
- "The Innovative Technology of Preparation for the Unified State Examination in the Russian Language";
- "The Innovative Technology of the Communicative Practical Text Activity of a Teacher of the Russian Language";
- "The Innovative Technology of Preparation for the Olympiads and Competitions in the Russian Language";
- "The Innovative Technology of Preparation for the Project and Research Activity in the Russian Language at the Modern School";
- "Innovative Educational Technologies in Teaching the Russian Language at Foreign Schools".

For teachers-non-philologists who conduct classes in the Russian language at Russian and foreign schools, the following educational distance courses were developed:

- "Innovative Technologies of Communicative Practical Text Activity of Teachers-Non-Philologists at Russian and Foreign Schools";
- "The Innovative Technology of Speech Activity of a Teacher-Non-Philologist at Russian and Foreign Schools";
- "The Innovative Technology of Improving the Speech Culture of a Teacher-Non-Philologist";
- "The Innovative Technology of Effective Public Speaking of a Teacher-Non-Philologist".

Further, the package of educational materials was converted into electronic educational methodological resources in the distance learning system MOODLE on the basis of this mechanism.

Let us show the conceptual, content and procedural specifics of the developed educational courses. Thus, the development of the module "Innovations and Traditions in the Preparation of Schoolchildren for Solving Olympiad Linguistic Tasks of Historical and Etymological Nature" of the course "The Innovative Technology of Preparation for the Olympiads and Competitions in the Russian Language" included the following:

- creation of the concept of the module of distance education course as a set of individual options (educational topics) as part of the educational service formed by the participant himself;
- identifying the content specificity of education taking into account the principles of activity and competence-based approaches, modern educational standards, principles of the WorldSkills movement, the logic and specifics of the distance programme;
- identifying the procedural specifics of education: selection and combination of innovative educational methods and techniques that develop the competences of students (monitoring, information processing of text, linguistic modeling and forecasting, historical commenting, communication games "I am an Expert", "I am a Developer of Olympiad Tasks", professional tasks, etc.);
- developing the algorithms for mastering the options (educational topics) of the module taking into

account the possibilities of the distance form of education.

The following electronic educational and methodological manuals for the courses of open education were developed in the Russian language: "The Innovative Technology of Preparation for the Final Interview in the Russian Language", "The Innovative Technology of the Text Activity of a Teacher of the Russian Language", "The Technology of the Project and Research Activity of Schoolchildren: the Innovation of the Introduction into the Subject Area "Philology""; "The Innovative Technology of Public Speaking of a Teacher".

The use of the specified mechanism was carried out during the testing and implementation of five programmes of further education within the framework of the system of distance education MOODLE: 1) "The Innovative Technology of Preparation for the Unified State Examination in the Russian Language", 2) "The Innovative Technology of Preparation for the Olympiads and Competitions in the Russian Language", 3) "The Innovative Technology of Preparation for the Project and Research Activity in the Russian Language"; 4) "The Innovative Educational Technologies in Teaching the Russian Language at Foreign Schools, 5) "The Innovative Technology of Improving the Speech Culture of a Teacher-Non-Philologist".

The two databases of assessment tools for teachers of the Russian language were developed as special electronic educational resources in order to prepare schoolchildren for conducting the project and research activity and the professional text activity.

The scientific and methodological foundations of the developed distance educational courses are presented in the collective monograph "The Professional Field of a Mobile Teacher in the Context of the Integrative Educational Processes".

The dissemination of the experience of the implementation of the product of the project "The Package of Distance Services and Options for the Russian Language for a Mobile Teacher" was carried out through the publication of a number of papers in periodicals that are included in the Russian Science Citation Index and Scopus/Web of Science.

5. Conclusion

The study corresponded to the objectives of the main event "Development of Open Education in the Russian Language and Teaching the Russian Language" of the direction (subprogramme) "Development and Dissemination of the Russian Language as a Basis of Civil Self-Identity and the Language of International Dialogue ("The Russian Language")" of the government programme of the Russian Federation "Development of Education".

The new mechanism "The Package of Distance Services and Options for the Russian Language" was defined and applied for the development, testing and implementation of the courses of open education in the Russian language.

The content of the activities carried out during the implementation of the project corresponded to the main objective of the event: the distance programmes of further education in improving qualifications of the teachers of the Russian language and teachers-non-philologists were developed, tested and implemented on the basis of the new mechanism. The products of the project were, firstly, scientific and methodological articles and a monograph, which are the scientific and methodological basis for the design of the content of education in the framework of the developed courses, and, secondly, the electronic educational resources including electronic educational courses in the distance educational system MOODLE, electronic educational methodological manuals and databases of assessment tools.

The implementation of the project as a whole contributed to the increase of the involvement of teachers in the development of open education in the Russian language and teaching the Russian language (teachers of urban schools – 230 people, teachers of rural schools – 50 people), which implies positive changes in the field of support and promotion of the Russian language in the modern society.

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The research was conducted under the project "The Package of Distance Learning Services and Options for the Russian Language for a Mobile Teacher" within the framework of the event "Subsidies for the Implementation of Measures Aimed at the Full Operationalization and Development of the Russian

Language" of the main event "Development of Open Education in the Russian Language and Teaching the Russian Language" and individual events of the main event "Holding Major Socially Significant Events Aimed at the Popularization of the Russian Language "of the direction (subprogramme) "Development and Dissemination of the Russian Language as a Basis of Civil Self-Identity and the Language of International Dialogue ("The Russian Language")" of the government programme of the Russian Federation "Development of Education".

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Individualization of School Education as a Study Object at the Distance Courses of Teacher`s Qualification Enhancement

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Abstract

Educational continuity is one of the significant efficiency indicators in the activity of an educational organization. The most attention should be paid to the continuity of the first and the second education levels, provision of which creates the conditions for children's adaptation to the learning environment in the long run. Scientists consider both educational and upbringing continuity. The transition stage between junior and middle school is usually described only from the point of view of learning success and the problem of upbringing continuity between junior and middle school, its criteria and mechanisms are not studied enough. The paper is devoted to this problem. The purpose of the article is to disclose the mechanisms of educational continuity provision between junior and middle school basing on the application of means of sport and physical culture. The main methods of the research are pedagocical observation, questionnaire survey, testing pupils of the fourth form, their parents and teachers, and also expert assessment of the pupils' psychological types. The result of the research is distinguishing the mechanisms and conditions for educational continuity provision for the fourth-form pupils and their adaptation to studying in middle school basing on their project psychological types. Repetition of psychological types among pupils of the fourth form in Nizhny Novgorod region and physical culture teachers' and the school psychologist's actions aimed at prevention of emotional burn-out of future fifth-form pupils while the transition to the new educational stage are detected.Evseviev, Saransk, Russia.

Keywords: Philological Education, Individualization, Educational Resource, Distance Advanced Training Courses Professional Mobility, Development of the Competencies of a Schoolchild.

1.Introduction

The introduction of individualization as a basis of school education is one of the purposeful steps that provide new relationship between a student and a teacher, during which a fundamentally different scheme of their cooperation is built, involving not only the acquisition of knowledge, but also the ability to extract, assimilate and use it in future. In this regard, special attention is paid to providing the educational services directly to each student by taking into account his personal potential and focusing on his capabilities, preferences and abilities.

Like any pedagogical task, individualization of the educational process requires the introduction of new educational technologies, special training of teachers and the readiness of a student and his parents for such kind of activity.

Part of the problem of training a modern teacher to implement an individual approach to education can be solved by introducing a system of distance technologies in the framework of advanced training of teachers and the creation of special electronic resources that will allow you to select a set of the necessary options (study modules) by themselves, taking into account their needs and interests. In this regard, as part of the development of the system of using special distance technologies in advanced training of teachers of the Russian language and other academic subjects, who conduct classes in the Russian language in Russian and foreign schools, we offer the tested developments relating to the introduction of an individual educational route in school philological education.

2. Literature Review

The problem determined by us has already become partially the object of attention of a number of scientists. Despite the fact that the interest in the introduction of an individual educational route in school education in general and in language, in particular, has been observed for quite a long time, until today, a unifying concept of drafting up a document, its compulsory / optional character, the correlation with the codifier of Federal Institute for Educational Measurement (FIEM) is yet to be developed. In addition, the significant discrepancies that exist today in the methodological literature in understanding both the individualization in the study of the Russian language, literature, foreign languages and its structure, content, tasks and objectives, the interaction of its types and parts, the specifics of the use of techniques, etc. allow us to build a system of developing the language competence of students based on the example of the introduction of an individual educational route to school education.

While developing the topic, we paid attention to the modern pedagogical experience (Kadakin & Zeynalov, 2016; Kobozeva et al., 2014; Shukshina et al., 2016; Zhindeeva et al., 2018b; et al.), contributing to the development of a common opinion on the issue of our interest, but until today it has still been discussed. The authors talk about the necessity of introducing the design technology (Khuziakhmetov et al., 2016) propose educational technologies to develop the skills of independent work of students (Vishlenkova & Kostina, 2016), determine the means of enhancing the communication (Belova & Kashkareva, 2015) and language (Kadakin et al., 2017; Vodyasova, 2017) competencies, identify the ways of developing the professional mobility of the future professionals (Kashkareva et al., 2018) and consider it necessary to take into account the ethno-cultural approach to education (Gorshenina & Yakunchev, 2014; Zhindeeva et al., 2018a). The works characterizing the essence and direction of the implementation of individual educational trajectory (Vdovina & Kungurova, 2013) describing the technology of designing individual educational routes (Isayeva, 2015), developing the individual educational programmes for schoolchildren (Lebedintsev & Zapyataya, 2010) and students (Labunskaya, 2002) are of particular interest to us.

We can distinguish two opposite points of view that allow us to systematize all the reasoning on the individualization of the educational process. One of them was formulated by I. M. Osmolovskaya (1998), who considers individualization "a form of differentiation of education, in which the educational process is based taking into account the characteristics of not the groups, but of each individual student" (p. 5). A. A. Kirsanov (1980) maintains another verification equating the individualization of the educational process with the tools, the corresponding set of techniques and methods that "provide educational activity of a student at the level of potential opportunities" (p. 2). The revealed contradictions have become one of the reasons for the formation of a package of distance services and options for the Russian language, created by the teachers of Mordovian State Pedagogical Institute named After M. E. Evseviev and based on providing consumers with the opportunity of independent formation of educational service through accepting invariant options (compulsory modules in the content of the programme) and the choice of variable options (variable modules in the content of the programme). The package includes a set of special electronic educational and methodical resources made in the system of distance learning MOODLE.

The works concerning the development and functioning of the individual educational route of schoolchildren (Bayborodova, 1980) and students (Vardanyan et al., 2015; Knyazkova, 2010) became core elements for understanding the essence of individualization of the modern educational space in general and served as a basis of our system in particular. The researchers propose alternative educational routes of students and their psychological support (Galatskova, 2009) as well as the models of developing the readiness of a schoolchild to design an individual educational route (Ignatovich, 2012) et al. When developing the topics of the lessons for the advanced training distance courses for a teacher, we were guided by the experience described in the works of a number of researchers (Labunskaya, 2002; Tryapitsyna, 2013; et al.).

Taking into account a relatively contradictory opinion that exists today in the pedagogical science on the individualization of the educational space in the modern school, the general idea of the essence of the individual educational route, the ways of its formation and implementation in the process of education, we relied on a number of fundamental studies in our work. These fundamental studies allowed us to create our own system and determine the ways of modeling educational routes by teachers who had graduated from the distance training courses. Thus, some scientists understand an individual educational route as a differentiated educational programme, which is designed purposefully (Tryapitsyna, 2013; Utepov & Ryndak, 2003), while others consider it as a programme of activity (Markova, 2011). S. A. Vdovina and I. M. Kungurova (2013) point to the differentiating factors on which the understanding of an individual route as being different from the general programmatic content, on the one hand, and adhering to the general compulsory basic part of the study of the subject, on the other, should be based. Creating the classification of the individual educational route, I. A. Galatskova (2009) creates a gradation based on the subject of education, distinguishing children with an increased pace of development; gifted students with special abilities; students with low educational motivation and difficulties in education; children with poor health. A. S. Gayazov (2003) differentiates the routes. He relies on the compliance with the lines of knowledge, growth and professional self-determination and identifies the following types of individual educational route: " developing direction (development of abilities, opportunities, creative potential); adaptive type (preparation for the modern cultural and socio-economic situation); creative direction (use of personal opportunities and peculiarities for self-improvement and development)" (Gayazov, 2003, p. 59).

3. Research Methods

During the research we used theoretical (general analysis of scientific literature on the stated problem, analysis of methodological materials and documents, basic concepts necessary for the research) and empirical (forecasting methods, data collection and accumulation, in particular, observation, questioning, conversation, analysis of documents and experience of teachers) methods. The activity-oriented, personal and systematic approaches were used as their methodological justification. The personal groundwork of the authors of the paper in the field of methods of teaching the Russian language and literature, including those in the framework of retraining and advanced training of school teachers, became the material for the research.

4. Results and Discussion

To a large extent, today the increased interest in distance education is associated with its characteristics such as accessibility, cost-effectiveness, openness, flexibility and individualization. This method becomes universal due to being unlimited by the spatial and temporal factors, especially if we are talking about professional retraining or advanced training. Reliance on a modular system and treating the course participants as colleagues and associates gives significant results. Thus, the actualization of the individualization of the educational process and the introduction of the federal state educational standard required the inclusion of various activities in the curriculum, as well as subjects with a wide educational and life context. A competence-based approach to education is focused on the independent participation of a student in the cognitive and educational process. All this generally requires special training from the teacher and creates certain prerequisites for his professional growth.

Relying on the package of documents, special developments in the methodology and methods of teaching philological disciplines and in accordance with the results of monitoring the requests of teachers, we propose the distance training courses with the possibility of individual formation of the educational content based on the individual needs of students. The practice of their implementation shows that the topic of individualization of school philological education, in particular, the development, specifics of the use and the results expected from the introduction of the individual educational route of a schoolchild arise the greatest interest.

Since the new standards require the ability of a child to freely use knowledge, independently extract them, improve and apply them in life, the individual educational route in this case is able to perform the practice-oriented functions, and its tasks allow to develop all the necessary competencies.

Documents on the modernization of education in Russia reflect the idea that it is necessary to change the orientation of education and move to developing the universal abilities of an individual. Achieving this objective is directly connected to individual educational routes. Therefore, an individual educational route is indispensable in the modern school as a specific method of individual education that helps both to master the programme material in advance and to eliminate gaps in the abilities, knowledge and skills of students, to carry out psychological and pedagogical support of a child, to master the key educational technologies, therefore, to increase the level of educational motivation. It is determined by the needs of the educational system, the existing standards of educational content, individual capabilities and abilities of the student and the level of readiness for mastering the programme. The introduction of individual educational routes in the educational process is an attempt to solve the problems of personal development, allows to see the educational process from the position of a student.

Another peculiarity of the modern school is specialized training. Advanced learning of the Russian language as an academic subject is included in the humanitarian specialization, while in other specializations the Russian language is basic. Therefore, the level of the subject learning should be taken into account in building and implementing the educational route. The level can be basic or advanced.

The identity of the student is the reference point in the development of the individual educational route, however, during the diagnosis, students with similar indicators of the level of development of skills, mental functions, knowledge and abilities can be identified. It is useful to unite such children in groups, differentiating the necessary psychological and pedagogical assistance in the process of education. Consequently, a contradiction arises: an individual route designed for one individual can potentially become a group route. To a large extent, this contradiction can be removed by a number of additional monitoring activities, including personal conversation, questioning and testing.

When developing the content of the modules of distance learning courses for teachers, we were guided by the possibility of identifying three main types of variable individual educational routes (hereinafter referred as IER).

1. IER for students with difficulties in learning and the low level of educational motivation (it is implemented through the integration of extracurricular and educational activities, the organization of project-group activities and differentiated tasks). IER of this direction allow to develop the metasubject universal educational actions and increase the level of educational motivation.

2. IER for students with poor health (it is implemented through independent selection of the topic of creative work, the lesson plan, the content of their home lesson from those proposed by the teacher. The preservation of individuality and the development of uniqueness remains the fundamental objective).

3. IER for students with advanced pace of development and a high level of educational motivation (it is implemented through project and educational research activities). This direction makes it possible to expand the horizons of a child, to make the process of education more interesting, to stimulate educational and intellectual activities and to develop the scientific thinking of a student. This type of route is also recommended for preparing students for Olympiads and contests.

Analyzing individual educational routes modeled by the course participants, we can state the fact of the preference for the concentric structure of individual educational routes, when several smaller programmes make up a single individual training programme. A student goes through the first round of training, and then he masters the second one, the third one, etc. Practical work with the participants of the courses showed the unreadiness and unwillingness of the majority of the teachers to build the trajectories of the educational route of a child for a variety of reasons. The monotony and predictability of tasks take the central place among the reasons, because the same activity of the student practiced repeatedly with multiple repetitions and increasing complication is purposefully repeated.

The process of developing an individual educational route has no algorithms: the method of its building has a prolonged character, that is, it characterizes the peculiarities of education and development of a student for a certain period of time. The purpose of its building is to create a comprehensive technology of individual child support as a special assistance in solving the problems of education, development and socialization of a student, the culture of pedagogical and psychological support. The main objective of the route is not only the prediction the results, but also their possible correction.

According to the course participants, the following objectives were the most popular ones among the objectives of the individual educational route: 1) systematic monitoring of the dynamics of mental and personal development of a student in the process of education, his psychological and pedagogical status; 2) creation of socio-psychological conditions for the successful solution of the objectives of education, development and socialization of a student; 3) prevention of the problems arising in the personal and mental development of a student.

Among the results of the implementation of the individual educational route, we identify the following ones: 1) creation of a comprehensive technology of support of the educational process; 2) improving the quality of education of students; 3) creation of monitoring support of the educational process; 4) increasing the number of parents included in the educational process; 5) reducing the number of students who have not decided on the specialization of education.

5. Conclusions

As a result of reflection on the theoretical provisions on the specifics of creating an individual educational route, which is formed by taking into account the conclusions of the students made on their own in the process of the specially organized work of the teacher, the students of the module of the distance advanced training programme form a perception of the laws of implementation, the norms of formation and the specifics of functioning of the individual educational routes in the philological direction of school education. The participants of the courses mastered the skills to create individual educational routes and to make their primary expertise. It is obvious that the introduction of the technology of individual educational route has a positive impact on the educational process and the development of personality of a student. Educational routes are aimed at the formation of an educated, active, creative personality capable of independent search for knowledge and ready for further self-education.

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Process Approaches to Personal and Professional Becoming of Students Based on Developing Their Information Competency

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Abstract

The relevance of the research is associated with requirements for creating the contemporary methodological systems of learning oriented to developing the learners' intellectual potential and shaping their abilities to gain knowledge independently, to perform information activity and information interaction of educational purpose in order to develop qualities they need in their future professional activity. With regard to this, the paper is aimed at describing the necessary for it interpretations of such notions as "personal and professional becoming of students" and "information competency of students" that rely on considering the process approaches describing the opportunities of fulfilling the relations between them. The leading methods for studying this problem are those of system and structural modeling. They allow finding out the essential relation between the elements of personal and professional becoming of students and their information competency. In the paper, the essence and particularities of students' personal and professional becoming in conditions of development of the information society are defined. The contemporary requirements to developing students' information competency in order to ensure the effect on their personal and professional becoming are identified, and the process foundations for fulfilling the relations of students' personal and professional becoming and information competency are described. The materials of the paper are of practical value for master's degree students, postgraduate students, teachers of higher education institutions and other educational institutions conducting research in this area who set themselves the objectives of constructing the forecast models of students' personal and professional becoming.

1.Introduction

The practical way the contemporary society develops along points to the considerable impact the process of IT penetration into all spheres of the human activity has on it. Research shows it is not only rethinking of the main essences in various spheres of the human activity that takes place but also the emergence of new notions. Given that new meanings coexist with the traditional ones, the necessity arises to study their relations, mutual influence and any new effects generated in it. In higher education, these effects and processes unfold against the background of transiting from requirements posed for graduates' professional knowledge, abilities and skills to their personal and professional development.

with regard to this, the interest can be noted in training highly educated and competent professionals having the capacity for independent and active efforts, making efficient decisions, and adapting flexibly to continuous change of the life conditions. From the specific nature of properties of this society, the information basis has to be singled out naturally within the competence of these professionals, both in the activity and in the ability to practically solve any life and occupational problems emerging.

This research considers an option of describing the notions "students' personal and professional becoming", "information competency of students" and the main prerequisites, mutual influences and relations thereof. The process approaches to students' personal and professional becoming based on the development of information competency are singled out, too.

2. Literature Review

In studies, the essence of students' personal and professional becoming is detailed proceeding from different approaches. Its various aspects were studied by N. Yu. Butko (2007), I. V. Bukhalova (2008), and O. V. Gusevskaya (2005). According to their research works, learners' personal and professional becoming is a complicated versatile formation affected by various factors.

The factors having an impact on personal and professional becoming are identified and formed within the following lines in the contemporary research: acmeological approach (Ananyev, 1997; Derkach, 2004), psychology of the professional activity (Zeer & Symanyuk, 2017), becoming of one as an active subject transforming both the world and oneself (Leontyev, 1975; Rubinshtein, 1958), pedagogy of self-development (Kulikova, 1997).

Let the approach of A. V. Nikitenko (2014) and A. E. Polichka and colleagues (2017) to interpreting the notion "students' personal and professional becoming" be noted. They highlight the liveliness of students' personal and professional becoming and view it as a process aimed at progressively changing their personalities under the influence of the professional fitness requirements, consideration of the external conditions created by the teacher, and their own initiative in learning all elements they need for mastering their profession.

Within this approach, they single out some lines of shaping of the professional competencies dedicated to training for the professional activity according to the invariant part of education system requirements and the competencies determined by the variable part of the main educational program. In particular, according to investigation into the experience of educational organizations of higher education, the following competencies can be referred here: the wish to work in a profession associated with the educational program selected; the capacity for self-development and self-education; subjective control over various life situations; social and communicative abilities etc.

In this research, let these areas of professional training be correlated to the phenomenon of "information competency of students".

The essence of an individual's information competency is described in various approaches by many scientists from the standpoint of the anthropological (Tabachuk, 2009), the phenomenological (Tabachuk, 2016), the activity-based (Kosorukova, 2015), and the competency-based approach (Tabachuk, 2017; McClelland, 1973; Boyatzis & Sala, 2004; Boyatzis, 2008).

In conditions of development of the information society, students' personal and professional becoming is associated with the process of cultivating an individual's information competency.

Let creating the necessary contemporary methodological learning systems aimed at shaping the abilities to perform information activity and information interaction of educational purpose for developing the qualities that are required for the future professional activity be considered the process basis for this.

3. Research Methods

The objects of the research are the process approaches to personal and professional becoming of students on the basis of information competency development.

The objective of the research consists in revealing the essential meanings of the phenomena making up the process approaches to students' personal and professional becoming on the basis of information competency development via relations and mutual influences of the students' personal and professional becoming and their information competency.

According to the object and the objective of the research, the following tasks were completed.

1. Identifying the essence, particularities and link to the competency-based approach to students' personal and professional becoming in conditions of development of the information society.
2. Analyzing the approaches to understanding students' personal and professional becoming.
3. Detailing the contemporary requirements for the development of students' information competency that influence their personal and professional becoming.
4. Detailing the process approaches to students' personal and professional becoming on the basis of information competency development.

In order to achieve the research objective and complete the set tasks, a complex of mutually supplementing methods of system and structural modeling was used. The methods employed were relevant to the tasks set, which has allowed registering the results in the analysis of the research object.

4. Results and Discussion

4.1. The essence and particularities of students' personal and professional becoming under development of the information society: the link to the competency-based approach

This research relies on considering the essence of the notions "becoming", "professional becoming", "personal and professional becoming", "information competency" that are associated with personal and professional becoming.

The phenomena of becoming and professional becoming have been studied from various standpoints: by A. F. Losev (1988) when comparing the notions "development" and "becoming"; by S. L. Rubinshtein (1957) as becoming of an individual on the "self-movement" side; by L. I. Bozhovich (1997) in line of an individual's gaining freedom; and by V. I. Slobodchikov (2005) as an external action on the process of becoming.

The process of becoming is interpreted by these scholars as a constituent of the development process.

Another group of scientists correlates the notion "professional becoming" with learning on the activity basis and the information competence (Zeer & Symanyuk, 2017), with an ongoing process aimed at improvement of its constituents (Adolf & Stepanova, 2017).

The studies by V. A. Adolf (Adolf & Stepanova, 2017) and E. F. Zeer (Zeer & Symanyuk, 2017) allow describing the professional becoming as a continuous process aimed at improvement of such constituents as professionally important qualities of an individual under the influence of external actions; professional activity; one's own efforts. Among shaping the socially and professionally important qualities of an individual, E. F. Zeer (Zeer & Symanyuk, 2017) pointed out information competence through the interrelation and interaction of personal and professional development.

He worked out four components of the professionally conditioned personality structure: focus; professional competence; professionally important qualities; professionally significant mental and physiological properties. In the context V. A. Adolf (Adolf & Stepanova, 2017) research, the phenomenon of "professional competence" is considered as a number of professional knowledge sets and professional activity performance ways that include information competency.

The analysis of the above approaches to defining the notions "becoming", "professional becoming" leads to shaping an understanding of the phenomenon of students' personal and professional becoming.

So, as understood by the authors, **students' personal and professional becoming** is a dynamic focused process of an individual's progressively changing under the influence of conditions of the information society development associated with the individual's professional fitness and aimed at shaping the professional competence which includes the information competence and on this basis being prepared for continuous professional growth of the students (Nikitenko, 2014).

Let the particularities of students' personal and professional becoming in conditions of development of the information society be further considered on the basis of shaping the professional competencies that include components aimed at developing the information competency.

4.2. The contemporary requirements to the development of students' information competence in order to ensure the effect on their personal and professional becoming

According to the research conducted earlier (Tabachuk et al., 2018a, 2018b, 2018c), the necessity of viewing information competency of an individual as the subject of activity and its impact on students' personal and professional becoming can be noted.

Following A. V. Khutorskoy (2017), the authors are going to consider the information competence as a constituent of the professional competence while interpreting it as an integral quality of an individual that includes a set of special components. He builds the structure of components of the information competence: the objective component (professional and information one); the subjective component (the personal one).

Let the requirements posed by the society for graduates' professional activity be referred to the objective component of the information competence. The subjective component of the information competence deals with personal qualities of a graduate showing the graduate's capacity for successfully performing the professional activity.

According to N. V. Gherova (2014), students' information competence is represented as possessing the information competencies which are dedicated to ensuring the fulfillment of value-related and motivational components during performance of the future professional activity. In this path, the authors support the necessity of viewing the phenomenon of information competency. In line with the approach of N. V. Gherova (2014), they are going to consider the notion "information competency" as a constituent element of the information competence. The multiplicity of characteristics of the information competence is associated with "the skills of acting in relation to information" (Khutorskoy, 2017); "the total of knowledge, abilities and experience in the domain of computer science" (Gherova, 2014); "the key metasubject competency" (Tabachuk, 2017).

It was A. V. Khutorskoy (2017) who singled out the information competencies group among the key competencies adopted in the Russian education and included in it:

- the activities in searching, analyzing, selecting, transforming, keeping and transferring the required information;
- the set of skills for this activity in relation to the information in academic subjects, educational areas and the world around one;
- mastery of the contemporary information technologies in this activity.

Viewing the information competency as one of the constituent elements of the information competence, N. V. Gherova (2014) characterizes it as a total containing knowledge; abilities; and experience in the domain of computer science while fulfilling the opportunities of information and communication technologies (ICT) in such activities as the future professional one, educational one in conditions of the information interaction, and the information one – between the educational process subjects.

Based on the analysis of the above studies, let it be defined that **students' information competence** has such a facet to its consideration as the learners' mastering and possessing the relevant information competencies; these include the learners' personal attitudes both to the said competencies and to such activity subject as information processing, with the information competencies being viewed as alienated and set social requirements and standards for the learners' results of training that are necessary for the efficiency of the future professional activity based on information technologies and means thereof.

Therefore, the contemporary requirements for developing the students' information competence that have an impact on their personal and professional becoming rely on the trend of differentiation and structuring the constituents of the notion "information competency" and "information competence".

4.3. Process foundations of fulfilling the relations of students' personal and professional becoming and information competency

Using the results of the research conducted into the multiplicity of interpretations of the notions "personal and professional becoming" and "information competency of students" has led to singling out an entire range of process foundations for identifying and fulfilling the relations between students' personal and professional becoming and their information competency.

The variant of the process approach to fulfilling the relations of personal and professional becoming and students' information competency suggested by the authors is represented by the following organizational and didactic formula. First, the process approaches in elaborating the main educational program model based on the purpose approach are used; the model will determine the set of course units, subject fields and special practices. The process approaches are built on the total of selected methods, ways and techniques of the required activity at a particular educational organization and are aimed at shaping the students' information competency. In its turn, the latter has to ensure the planned personal and professional becoming of learners.

Let the options of implementing the process approaches to students' personal and professional becoming on the basis of developing their information competency be considered.

For such an activity, the design procedure stages are problematization; development of debut ideas and possible variants of change; forecast of social consequences; selecting the option, with resources and estimated consequences borne in mind, relies on the state educational standards.

The design drawing-up stage is aimed at developing pedagogical systems of the said levels: the educational program and course unit.

The stage of development of organizational forms for implementing such projects deals with organizing the teacher's activity on the basis of fulfilling the relations between learners' personal and professional becoming and their information competency (Polichka, 2017; Polichka, 2018).

Let the organizational and didactic formula of the process approaches be expressed through the main constituents of pedagogical systems.

In this research, let the organization of teacher's activity on the basis of fulfilling the relations between students' personal and professional becoming and their information competency be described as pedagogical support of the process of implementing the pedagogical system. Then, let the pedagogical support of the pedagogical system implementation process be represented as the activities in:

- managerial action and the development of goal-setting elements systems,
- identifying the content-related composition and ways for fulfilling them at various stages of the system considered while also optimizing the use of particular conditions of the training in question;
- justifying the choice from the options of mutual relations, mutual conditions and mutual actualizations of both material and human resources.

This approach can be used in the activity of a pedagogical worker of higher education when developing the main educational programs and methodological systems of teaching course units as an important means for fulfilling these programs.

5. Conclusion

In conclusion, it has to be noted that the understanding of the phenomenon "personal and professional becoming of students" has been singled out proceeding from determining the essence and particularities of the notions "becoming" and "professional becoming" in conditions of development of the information society. Based on analyzing the approaches to defining the notions "information competency" and "information competence", the essence of the phenomenon "students' information competence" has been identified.

The process approaches to students' personal and professional becoming have been detailed proceeding from developing the information competency based on pedagogical support of the pedagogical system fulfillment process.

The options of process approaches described in the paper have been carried out by the authors. As for research into building efficient forecast models of students' personal and professional becoming, this can be continued.

Finally, it is worth mentioning that care must be taken in generalization of the research results. In addition, there was a time limitation regarding translating the sentences while thinking aloud, number of sentences to be translated, number of sessions, and presenting the sentences of each structure. Therefore, modifications regarding generalizability are suggested for further research: doing the study with more students with randomization and more sentences for translation. In addition, increasing the time of translation, increasing the

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Integrative Interaction of Universities in the Field of Prevention of Deviant Behavior Among Young People

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Abstract

The topic of this paper is relevant due to, first of all, a whole complex of the most acute problems of the modern Russian society which are associated with a whole range of deviant behavior of the younger generation, including juveniles – from street hooliganism to participation in international terrorist structures. The scientific significance of solving the problem lies in the possibility of practical use of the results of our research in the development of economic and social (anti-corruption, anti-terrorist, educational, law enforcement) policy of the state, in the patriotic and spiritual education of citizens of modern Russia, and finally, in the activities of the interested public and scientific organizations. The aim of the research is a comprehensive analysis of the integrative processes in the sphere of higher education aimed at preventing deviant behavior of students. The characterization of the variants of integrative interaction of universities, different forms and methods of prevention of deviant behavior are identified as the research objectives on the example of the Federal State Budgetary Educational Institution "Mordovian State Pedagogical Institute named after M.E. Evseviev" (Saransk city). Special attention is paid to the need for the integration of universities also in the sphere of professional self-determination of students. The research is based on the principle of historicism, the basic characteristic of which is the approach to reality as something changing in the course of time. In accordance with this principle, the problem of prevention of deviant behavior in the educational environment is considered by the authors of this paper in the dynamics, development in the course of time, in the context of the development of the modern Russian education system in the period 1990s-2010s. The paper analyzes the various forms of work that allow to combine efforts in solving two major problems – the prevention of deviant behavior and the professional self-determination of students on the organizational platform of the pedagogical university. Scientific research laboratories, which have become the important segments of network interaction between universities and scientific centers working on this issue, are a promising form of such activity which has a high potential. The research concludes that the prevention of deviant behavior of young people in a modern university is a complex multi-level objective. It involves the constant systematic interaction between university and school at different levels – in the framework of the scientific research cooperation, pedagogical practice, and implementation of joint grant projects, educational work and the activity of pedagogical teams.

Keywords: Prevention, Deviant Behavior, Professional Self-Determination, Pedagogical University, Educational Results.

1.Introduction

One of the important priority areas of activity of the modern university, especially the pedagogical university, is the development of scientific and theoretical foundations of organizational and methodological support for the prevention of deviant behavior, as well as extremism and xenophobia as its varieties among young people at different levels. On the one hand, such preventive measures are necessary in the context of achieving high educational results in the framework of higher education. On the other hand, it is generally recognized that higher education carries out a special mission related to the prevention of deviant behavior in general education, since it is aimed at training the specialists capable of performing such functions and, moreover, it is inextricably linked with educational institutions through a variety of formats of joint work (research, monitoring, educational, etc.).

The topic of this paper is relevant due to, first of all, a whole complex of the most acute problems of the modern Russian society which are associated with a whole range of deviant behavior of the younger generation, including juveniles – from street hooliganism to participation in international terrorist structures. The terrible social evil of alcoholism and drug addiction should also be included here. All kinds of deviant behavior cause significant economic damage to the state, and the global challenge of international terrorism today is one of the main threats to the national security system of Russia (Martynenko & Nadkin).

The study of the problem of deviant behavior is actually initially characterized by an interdisciplinary nature, since it involves not only psychologists and pedagogues, but also lawyers, historians and doctors. Representatives of the traditional Russian confessions – the Russian Orthodox Church and the Muslim Ummah – also try to make their voices heard. As for the educational environment of the university (in our case – the pedagogical university), here the prevention of deviant behavior of young people is inextricably linked with the effectiveness of the process of professional self-determination of students. Alcoholism and drug addiction, prostitution and crime, extremism and terrorism are not compatible with an adequate choice of future profession, successful socialization and service to their country. On the other hand, the interaction between school and pedagogical university in the process of joint scientific research, educational work and pedagogical practice allows demonstrating the models of behavior in society which are in demand to schoolchildren and organize professional self-determination.

The scientific significance of solving the problem lies in the possibility of practical use of the results of our research in the development of economic and social (anti-corruption, anti-terrorist, educational, law enforcement) policy of the state, in the patriotic and spiritual education of citizens of modern Russia, and finally, in the activities of the interested public and scientific organizations. The development of a system of preventive measures aimed at preventing negative deviant behavior among young people will enable to create new elective courses in pedagogy, psychology, sociology and law. The results of the research can be used in the educational work of educational organizations and in the process of organization of professional self-determination.

2. Literature Review

As mentioned above, deviant behavior is studied by experts in various fields of humanitarian knowledge due to the complex, multi-level and multidimensional nature of this phenomenon.

Thus, even a special branch appeared at the junction of psychology and pedagogy, which is called deviantology and is represented by the works of E. V. Volchenkova (2010), E. V. Zmanovskaya (2004), V. D. Mendelevich (2004), E. V. Tsareva (2011).

If we talk about the legal determinants of deviance, it should be noted that this phenomenon is studied mainly in criminology, for example, in the works of Yu. M. Antonyan (2010), Ya. I. Gilinskiy (2007). The legal mechanisms of prevention of negative deviance are reflected in the works of Paulova Yu. E. (2017), Potapova L. A. (2010).

As for extremism being one of the most dangerous manifestations of deviance, the corps of works on this social evil is so extensive that the format of the paper does not allow presenting its deep and comprehensive analysis. Nevertheless, we will note that among having such "ocean" of scientific publications, the works of foreign and domestic experts on the so-called "radical Islam" (the conditional nature of this term will be discussed below), such as N. DeLong-Bas (2010), G. Kepel (2004), V. V. Naumkin (2005), M. Bonner (2006), Youssef Choueiri (1990), D. Hiro (2002) should be highlighted. In addition, special attention should be given to the research on the leftist or ultra-right wing youth extremism made by such authors as S. V. Belikov (2012) and V. A. Shnirelman (2007).

Works of A. N. Vyrschikov (2007), A. V. Kuznetsova (2005), V. I. Lutovinov (2004), N. A. Mileshina

(2010) are devoted to the patriotic, civil and spiritual education, problems of developing tolerance among young people as the means of the prevention of deviance.

In general, a sufficiently high degree of knowledge of the essence, determinants, and specific manifestations of social deviance in the youth environment should be noted. However, there has been insufficient research on the prevention of deviant behavior, especially at the level of pedagogical university and in the context of professional self-determination of young people. This paper is intended to fill a part of this gap.

3. Materials and Methods

The research is based on the principle of historicism, the basic characteristic of which is the approach to reality as something changing in time. In accordance with this principle, the problem of prevention of deviant behavior in the educational environment is considered by the authors of this paper in the dynamics, development in the course of time, in the context of the development of the modern Russian education system in the period 1990s-2010s. In solving research objectives, the general methodological methods of comparison, analysis and synthesis were used.

4. Results and Discussion

At Mordovian State Pedagogical Institute named after M. E. Evseviev (MSPI), various forms of work are applied, which allow to combine efforts in solving two major objectives of the university – the prevention of deviant behavior and professional self-determination of students.

First, it is the objective of forming the scientific communities of researchers in the form of continuously operating laboratories for studying the problems of destructive behavior. Work with young people is organized by updating and activating the social youth movements, programmes, competitions, Olympiads, discussion clubs, volunteer movements, projects, etc.

The scientific research laboratory "Scientific and Methodological Support for the Prevention of Extremism and Xenophobia in the System of Russian Education" that has been operating as an innovative structural unit of the institute from 2009 to the present time represents a unique experience in this regard. The head of the Scientific Research Laboratory is a doctor of Historical Sciences, Professor A. V. Martynenko (one of the authors of this paper), and this scientific research community in itself unites specialists in various fields of humanitarian knowledge, first of all – in history, law and psychology. In this regard, the laboratory is distinguished by a multi-level approach to the study of the problem of the destructive state of young people (historical, legal, psychological, etc.) and testing the results at educational organizations and at the regional, national and international conferences that were held in Saransk, Kazan, Saint Petersburg, Tyumen, Saratov and Khanty-Mansiysk. In addition, the results of work of the Scientific Research Laboratory were highlighted abroad: at conferences in Hungary (N. F. Belyaeva (2007)), in Armenia (L. A. Potapova (2010), N. A. Mileshina(2010)), Egypt, Turkey, Israel, Switzerland, Germany, Italy, Spain, Malta and Cyprus (A. V. Martynenko (2006)).

One of the most important consequences of the work of the Scientific Research Laboratory was building a whole system of partner organizations engaged in network interaction in the field of the problems analyzed in the paper. The "geography" of this network interaction is sufficiently broad and includes universities and scientific centers of Moscow, Penza, Nizhniy Novgorod, Saratov, Ufa, Kazan, Grozny, Makhachkala and other cities. Thus, Bauman Moscow State Technical University (BMSTU) became one of the leading partners of the Scientific Research Laboratory: in particular, the result of their cooperation was the information and educational portal "Youth for Clean Internet" (http://www.truenet.info/).

At the platform of the laboratory, the methodological recommendations for implementing preventive activities which were developed by the researchers with constant monitoring of students of educational organizations on the degree of reinforcement of destructive ideas in the youth environment were tested. Scientific-methodological and educational recommendations are outlined in training manuals (Martynenko, 2017), in the programme of the course on choosing higher educational organizations for students, in the programme of additional education for students on the organization of the child summer camps and in the programme of advanced training courses. Scientific and educational work among the young students was carried out with the broad involvement of public organizations (the international forum "World without Extremism" annual since 2009, thematic sessions at the children's health camp "Golden Ear" of Krasnoslobodsky municipal district of the Republic of Mordovia).

The forum "World without Extremism", which is held annually at the Moscow State Pedagogical Institute named after M. E. Evseviev, includes the participation of not only teachers, postgraduate students and students, but also schoolchildren. Unexpectedly for the organizers, the forum has also become a place of professional self-determination of future applicants. According to the statistics, 12% of students of the faculty of history and law have decided on their future profession by taking part in the forum. At the same time, a significant impact on their choice was made by the social activity of students of the named faculty, their project activities, the results of which were presented at the forum. Inter-university cooperation, which ensures the presence of interesting discussion platforms at the forum, discussion of innovative ideas, and exchange of experience in the field of countering extremism and xenophobia also had influence. In this regard, the project of the Bauman Moscow State Technical University on the creation of the Internet community aimed at preventing extremism, drug addiction, alcoholism and other deviant manifestations among young people is indicative. The website "Youth and Clean Internet" developed by the project participants was designed to achieve the objective.

The second important objective is the activity of student pedagogical teams of the institute, which successfully operate in the conditions of recreational activities of children, participate in professional orientation, and organize charitable assistance to orphanages, veterans of the Great Patriotic War and nursing homes. As part of this work, students of the faculty of history and law repeatedly had to deal with adolescents with deviant behavior. Therefore, an idea of development of the special programme of preparation of counselors and educators for working with such audience of children emerged at the faculty. The next step was the development of the complex of legal documents and scientific methodological support for the organization of work of camp counselors with children of deviant behavior on the basis of children's health camps by the department of legal disciplines.

The testing of such sessions started in 2014 on the basis of children's health camps of the Republic of Mordovia and it immediately showed high results. By providing comprehensive occupation of schoolchildren during the holiday period, the participants of pedagogical teams not only fulfilled their main function, but also gained a unique experience in working with children characterized by deviant behavior. At the same time, this pedagogical practice has become an important component in the professional self-determination of students. 67 % of those who doubted their professional choice finally decided to become pedagogues.

The third objective is the joint scientific research activity of schoolchildren and students. In 2014-2016, students of the faculty of history and law implemented a joint scientific research project "Everyday Life in History" in the framework of teaching practice and extracurricular work with students. The project was aimed at collecting and systematizing historical sources about the daily life of Russian society in the XIX century. Since 2017, the implementation of the new project "Back to USSR" for the period of 2017-2018 aimed at the systematization and publication of the memories of eyewitnesses about the Soviet era has started. Such projects allow not only to feel the history, to explore it through personal feelings, emotions, experiences, events of life, but also to successfully solve the problems of prevention of deviant behavior among young people. The project involves communication with the relatives – the witnesses of the Soviet era, a long and detailed work on the collection and systematization of memories, the creation of a website where anyone willing can leave his evidences. Maximum occupation, several levels of interaction (class–school–university–interuniversity cooperation), regular organizational meetings of the project participants just do not leave time for other things. In addition, such projects allow to identify talented students who show a high level of erudition, organizational, leadership qualities, pedagogical abilities and to help them make their professional choices.

The fourth objective is the educational work of students at school. In this respect, the project "Patriotic Team" developed at the faculty of history and law by the Associate Professor S. S. Eremina and postgraduate student A. P. Chernyshov is indicative. The project is aimed at patriotic education of schoolchildren precisely by the student community. The participants of "Patriotic Team" develop and carry out the "Lessons of Courage", concerts of patriotic songs, quests aimed at the expansion and deepening of historical knowledge, formation of citizenship, patriotism and tolerance at schools. In addition, "tourist tracks" for traveling to historical sites, actions for repairing monuments and cleaning the surrounding areas, meetings with war veterans and their families, working with the pedigrees of the students in the archives are organized. At the same time, the project participants are given complete freedom of choice – they independently choose the direction that they are most interested in.

The project "Patriotic Team", on the one hand, enhances the professional competence of future pedagogues, on the other hand – it has a huge educational impact on both schoolchildren and students. In addition, as practice shows, the project "Patriotic Team" presents the faculty of history and law in educational institutions of the Republic of Mordovia. As a result, there is an increase of the proportion of graduates employed in schools immediately after graduation, as well as the influx of applicants to the faculty.

The fifth objective is to hold scientific and practical conferences, symposia, seminars, round tables on the relevant topics. In particular, on the basis of the department of legal disciplines, a seminar "Legal Mechanisms for Preventing Deviance in Modern Russia" is held annually with the participation of law enforcement agencies. "Round tables" on the problems of professional self-determination of young people are held. At such events, interaction with law enforcement agencies, youth, scientific, patriotic and other public organizations is carried out in order to test and actualize the results of the research on the identified problems.

The sixth objective is to introduce new academic disciplines and advanced training courses on relevant topics into the educational process. In particular, A. V. Martynenko (2006) prepared a number of educational publications and elective courses on Russian and foreign Islam and the Christian-Islamic dialogue in Russia, including the first author's school textbook "Fundamentals of Islamic Culture" in the Russian Federation. N. A. Mileshina and A. Yu. Kupriyanov, S. S. Eremina developed and introduced the elective courses into the educational process of the university, respectively, "Patriotic Education in Modern Russia and Its Role in the Formation of Tolerance of the Modern Society" and "Orthodox Culture in the Context of the Formation of Tolerance".

If elective courses are aimed at the prevention of deviant behavior among young students, additional educational programmes are aimed at the formation of competencies provided by the Professional Standard "Pedagogue". T. D. Nadkin, A. V. Martynenko and L. A. Potapova developed an additional educational programme "The Prevention of Xenophobia and Extremism at Educational Institutions" which is being implemented since 2009.

The seventh objective is the implementation of projects within the framework of the inter-network interaction. In this regard, cooperation not only with universities, but also with law enforcement agencies is of interest. Thus, within the framework of the implementation of the state program of the Republic of Mordovia "Combating Drug Abuse and Their Illicit Trafficking for 2014-2020", the project of MSPI "The Formation of Anti-Drug Competence of Students in the Educational Environment" is being implemented together with the Administration for Drug Trafficking Control of the Ministry of Internal Affairs of the Republic of Mordovia and the State Committee of the Republic of Mordovia on Youth Affairs. The objective of this project is to form a negative attitude to the use of narcotic drugs among young people. To achieve this goal, the following objectives were solved: development of the anti-drug student movement on a permanent basis; integration of the student anti-drug team into the activities of structural units of MSPI - Junior School Academy and the Academy of Success; creation of the specialized pedagogical teams focused on the formation of a negative attitude of young people to the use of drug and psychoactive substances; promotion of healthy lifestyles, conscious attitude to their health.

5. Conclusion

In general, prevention of deviant behavior of young people in a modern pedagogical university is a complex multi-level objective. It involves the constant systematic interaction between university and school at different levels – in the framework of scientific research cooperation, pedagogical practice, implementation of joint grant projects, educational work and the activity of pedagogical teams. At the same time, the professional self-determination of future applicants can and should be an important component of this process. The effectiveness of the implementation of such a two-pronged objective is ensured by the creation and systematic interaction of scientific communities, the implementation of the obtained results in the educational process of universities, the actualization of the problem at various symposia, scientific practical conferences and other discussion platforms.

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On the Issue of the Russian Peasantry Traditional Worldview Transformation in 1920s-1930s

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Abstract

This paper is devoted to the analysis of the changes that had taken place in the traditional culture of the Russian peasantry from the establishment of Soviet power until the legal abolition of the institution of community. In this regard, home alcohol distilling and alcohol consumption were chosen as a criterion illustrating the process of transformation of the peasant worldview. The study was conducted on the example of the Mordovian peasantry, which still had strong community traditions in the first half of the XX century. The source database consists of the documents taken from the Central State Archive of the Republic of Mordovia: the materials of the Ardatovskiy uezd committee of the All-Union Communist Party (b) and the Mokshaleyskiy, Tengushevskiy, Torbeevskiy volost committees of the All-Union Communist Party (b) represented by the protocols of village meetings, resolutions, instructions, reports of the party and Soviet authorities and law enforcement reports. The folkloric and ethnographic data were used in order to recreate the traditional community customs of the Mordovians.

Keywords: PEASANTRY, The Mordovians, Transformation of the Traditional Worldview, Home Alcohol Distilling, Alcohol Consumption,Soviet Power.

1.Introduction

In everyday life, the community acted as the guardian of moral principles. According to the unwritten "worldly" rules, each community member had to adhere to the "moral code": to respect the elders, to raise children, to work hard, to perform public work diligently, to pay taxes on time, etc. Therefore, the society struggled against extravagance, idleness, stealing, laziness, a neglectful attitude to work of individual family members. Drunkenness was under the special control of this code, because it sometimes was the root of the above given evils.

The ratio of the Mordovian ethnos to this vice is quite clearly and succinctly showed in the folklore: "Wine (vodka) leads a man down and brings him to prison"; "A drunkard is a man among pigs and a pig among men"; "Drink beer and you are half in trouble, drink vodka and you are gone" etc. (Mordovian Proverbs and Sayings, 1986).

The alcohol abuse of the head of the household was especially dangerous for the family. In this case, the Mordovian community preserved the right to intervene: it could obtain custody of the houshold and flog the offender. The drunkenness of the elected village administration brought even more evil and danger to the society (Oral-Poetic Creativity of the Mordovian People. The Mordovian Folk Songs of Zauralie and Siberia, 1982). In these circumstances, the village society used a protective mechanism: it withdrew such elected authority before the end of the term and confirmed the appointment of a more decent villager. We shall note that the Mordovians condemned rampant drunkenness, but not drinking alcoholic beverages in general. In its traditional culture drinking "hot drinks" (posa, pure) was allowed in case of family celebrations, religious events and mutual support. However, in the beginning of the XX century national beverages containing alcohol started to be replaced by vodka.

Getting to a worldly meeting for the first time, domestic transactions, "opivanie" of a guilty man, buying off the worldly positions by vodka, etc., not to mention family celebrations and funerals started to be accompanied by drinking dozens of buckets of vodka. Often the discussion of important public affairs and the meeting itself never went without alcohol (Oral-Poetic Creativity of the Mordovian People. Folk Songs of the Mordovians of the Penza Region, 1987).

Peasant communities tried to combat this social scourge with varying degrees of success. When it came to morality, society could subject violators to such measures of punishment as a monetary fine to the worldly treasury or public punishment, "separate" them from participation in community celebrations and even get them out of the village.

The change of the regime in the country and the subsequent modernization of the economy, social sphere and spiritual life proved to be a great challenge for the traditional way of life of the Russian peasantry in general and the Mordovians in particular.

2. Literature Review

Although the study of the processes of transformation of the worldview of the population through the prism of alcohol consumption and the study of the influence of alcohol policy of the state on the psychology of the residents are not a unique phenomenon in historiography, these issues are traditionally among the most actual problems. Thus, V. Treml (1975) analyzed the financial aspect of alcohol consumption in the USSR noting the benefits of the sale of alcoholic beverages for the state budget. H.D. Holder and G. Edwards (1995) focused on the consideration of alcohol state policy, noting the conflict of interests: replenishing the national budget or preserving the health of the nation. Investigating the history of the alcohol problem in Russia, I. Takala (2002) pays special attention to the 1900s-1930s, noting the distortions in the perception of alcohol consumption. The author pays special attention to the reasons why Russia found itself in the "alcohol belt" of vodka. A. V. Nemtsov (2005) considers the problem of alcohol consumption in Russia in historical retrospect. Analyzing the dynamics of this phenomenon, he identifies a decrease in alcohol consumption in Russia in the early XX century.

Various aspects of the process of transformation of the traditional worldview of the Mordovian peasantry are reflected in the works of V. K. Abramov (1996), V. A. Balashov (1992), T. V. Eferina (2003), N. F. Belyaeva (2004) and V. V. Miroshkin (2013, 2014, 2015, 2017). In these works, the authors focused mainly on the changes associated with the religious and ritual sphere, labour activity and social values. The methodological basis of the study of the community archetype and the psychology of the Mordovian peasantry was developed by O. A. Sukhova (2007). At the same time, the problem has not been appropriately reflected in historiography from the proposed perspective.

3. Research Methodological Framework

The methodological basis of the research is the principles of dialectical knowledge of society based on the consideration of phenomena in their development and inextricable connection with other phenomena, as well as the traditional principles of historical research – historicism, science and objectivity. Among the general scientific methods used in writing this paper, it is necessary to highlight the analysis, synthesis and comparison. For a more in-depth study, such methods as comparative historical and problem-chronological were used. The first one allows to identify the patterns of a phenomenon and the second one makes it possible to reveal the nature, properties and changes in the studied reality in chronological order, to present the factual material identified during the research more succinctly and comprehensively. Also the statistical methods were used. Moreover, the principle of combining the macro- and micro-level approaches that contribute to the study of specific communities with typical development was observed. The hermeneutic method – the method of interpretation of text sources was also actively used in the research. An important role was played by the methods of ethnological and ethnographic sciences, the collection of field material in particular.

4. Findings and Discussion

In the first years after October Revolution, home alcohol distilling became widespread in the Mordovian village, as well in the Russia as a whole. This problem becomes particularly acute in the period of "military communism", when it was easier for a peasant to make distilled alcohol from corn than to hand the corn to the state according to the food rationing system. The famine of 1921s-1922s brought down the volume of home alcohol distilling, but after this there was an increase in alcohol production by artisanal method.

According to the archive materials, in the 20s of the XX century there was no decrease in the volume of home alcohol distilling among the Mordvians despite the measures taken by the authorities. Thus, in the protocol of the meeting of the village commission under the Ardatovskiy uezd committee of March 6, 1925, it was stated that "although in 1924 the number of closed home alcohol distilling cases, discovered equipment and hot spots has almost doubled since 1923, however, the amount of the distilled vodka has not diminished" (Central State Archive of the Republic of Mordovia. Fund 1-P. Inventory 1. Case 533. Sheet 25, 1917-1928).

Success in the fight against private alcohol distillation was reported mainly in towns, although the authorities had to legalize a part of alcohol-containing beverages in order to achieve this result. This measure has not changed the situation in the Mordovian village. According to the village commission of Ardatovskiy uezd committee, "this legalization of alcohol-containing drinks did not give real results in the village because of the high cost and inaccessibility for peasantry" (Sukhova, 2007).

The effect of the introduction of the state wine monopoly in October 1925 seems to have calmed the authorities: in 1926 the preparation of distilled alcohol "for own use" moves from the category of punishable acts into the category of administrative cases. In 1927 there were no prohibitions imposed by the state on this type of "folk art".

Only in 1928 a new round of repressive measures was initiated against alcohol distillers.

Information reports on the progress of grain collection campaigns and other campaigns give some idea of both the extent of the spread of home alcohol distilling in the Mordovian and Russian villages on the territory of the Mordovian region and the effectiveness of the actions taken by the authorities. Thus, on the 20th of January, 1928 the Romodanovskiy volost executive committee decided on 58 administrative cases regarding distillation and storage of home distilled alcohol at the meeting. During the period from 22 to 28 January 1928, a fine of 110 rubles was imposed on alcohol distillers and the previously imposed fine of 912 rubles was collected in the same volost. In Mokshaleyskaya volost of the Saranskiy uezd, the authorities prepared 24 protocols on alcohol distillers, 850 buckets of distillery dregs were poured out, a fine of 487 was recovered and a 370 rubles fine was imposed during the period 22-28 January 1928.

The fines were "strenuously" recovered also in Kochkurovskaya volost. In general, 45 protocols were written in Saranskiy uezd during the period from 22 to 28 January and a fine in the amount of 1316 rubles was imposed (Central State Archive of the Republic of Mordovia. Fund 1-P. Inventory 1. Case 533. Sheet 25, 1917-1928).

This fact had little effect on the desire of the population to stop producing home distilled alcohol. For the next seven days (from January 29 to February 4, 1928) Kochkurovskaya volost had again been the leader according to the numbers identified: 14 protocols were made, a fine of 210 rubles was imposed, 4 distilleries were withdrawn, 1058 litres of distillery dregs and 234 liters of distilled alcohol were poured out. In the specified time period, B. Viyasskaya volost also showed good results in recovering fines from alcohol distillers. There the amount of 287 rubles 64 kopecks was recovered and 288 rubles were imposed again. In total, from January 29 to February 4, 71 protocols were written, fines in the amount of 691 rubles were imposed and fines in the amount of 646 rubles 64 kopecks were recovered, 17 distilleries were confiscated, 2804 litres of distillery dregs were poured out and 524,5 litres of home distilled alcohol were withdrawn in Saranskiy uezd (Central State Archive of the Republic of Mordovia. Fund 557-P. Inventory 1. Case. 5. Sheets 25-26, 1917-1928).

As can be seen from the above mentioned data, the Mordovian peasantry continued producing alcohol with remarkable persistence despite the prohibitions. While discussing the laws adopted by the authorities on struggling against home alcohol distilling, the peasantry did not always understand the reasons of the prosecution of private distilleries by the state. Therefore, at village meetings, the peasants were asking the following questions: "Why are they struggling with home alcohol distilling?" (Central State Archive of the Republic of Mordovia. Fund 557-P. Inventory 1. Case. 5. Sheet 37, 1917-1928). Agitators persistently told to "unconscious" peasants about the dangers of alcohol, and heard in reply: "Why do doctors drink distilled alcohol knowing that it is harmful?", "Why is purified wine produced, knowing that it is harmful?", "If we stop distilling, will the purified wine stop?", "Why are the prices for purified wine not reducing?" (Central State Archive of the Republic of Mordovia. Fund 1-P. Inventory 1. Case 533. Sheet 27, 1917-1928).

The Mordovian community considered the fact that the state continues to trade alcohol while struggling with home alcohol distilling to be strange. As an alternative to home alcohol distilling, various measures were proposed: from reducing the price of vodka to the abolition of the state trade in alcoholic beverages. At the same time, the peasants themselves realized the futility of such proposals, rightly believing that the state would not refuse from earning revenues from the sale of vodka (Central State Archive of the Republic of Mordovia. Fund 563-P. Inventory 1. Case 66. Sheet 4, 1917-1928).

The peasants were well aware of the perniciousness of the alcohol addiction, condemned the immeasurable use of it, struggled against it, but at the same time sought to defend "their own", "peasant" interest. Thus, in protocol No. 2 of the meeting of the Starye Picheury village, the following resolution is recorded: "...Consider the announcement of the "Shockworker on the Struggle Against Home Alcohol Distilling" to be absolutely correct, because home alcohol distilling is progressing at a rapid pace which results in massive disasters, the enormous amount of wasted bread, the increased number of murders, thefts, robberies, vandalism, and many other disasters. All present here should pay serious attention to the struggle against home alcohol distilling and do everything possible to assist the police and the village council in clarifying the laws on home alcohol distilling and in identifying the alcohol distillers. In case of inactivity of the village council, bring to the attention of the authorities for bringing to justice. And at the same time the council also makes a wish to terminate the production of the purified wine in the near future" (Central State Archive of the Republic of Mordovia. Fund 563-P. Inventory 1. Case 66. Sheet 4 back side, 1917-1928).

Traditionally, the decision made at the village meeting had the force of the unwritten law among the Mordovians. It would seem that it was the end of home alcohol distilling in the village. But at the next general meeting of citizens the "rumors that some citizens did not stop producing distilled alcohol" were noted. The village meeting issued the following order: "...all citizens should lead the final fight against the production of distilled alcohol and identify all the distillers and bring them to justice" (Central State Archive of the Republic of Mordovia. Fund 563-P. Inventory 1. Case 66. Sheet 7, 1917-1928). However, the private production of alcohol still persisted. The protocol No. 10 of April 26, 1928 allows to ensure that. There it is recorded that in response to the assurances of the Chairman of the village council Gudkov about the elimination of distilled alcohol and about the extremely small numbers of drunkenness in the village, the remark "So far the distillation of alcohol is not noticed, the village council does not take any preventive measures" followed (Central State Archive of the Republic of Mordovia. Fund 1-P. Inventory 1, Case 533, Sheet 37 back side, 1917-1928). In our opinion, it is appropriate to talk about the collapse of the Mordovian community foundations and the loss of authority of the community institute, rather than about the fact that Mordovian peasants often took the decisions on the complete eradication of home alcohol distilling in order to "clear conscience" and to report to the party and Soviet workers. The example of the Starye Picheury village shows that the Mordovians, though openly advocating for the ending of home alcohol distilling, in fact, were not going to deny themselves this right.

The reasons for this were very different. Among the Mordovians, alcohol is traditionally associated with celebration, important life events, ritual actions. It was always used at weddings, christenings, funerals, memorial services, church celebrations, national ceremonies, in affording assistance, etc.

Carrying out violent withdrawal of grain, buying bread from the population for next to nothing by the Soviet power created a new impetus of the Mordovians to produce distilled alcohol. Especially since distilled alcohol had great "convertibility" and could be sold or exchanged for goods necessary in the household.

In conditions of instability, precarious life situation, in the presence of a constant threat of economic independence from the new authorities in the life of the Mordovian peasantry, there arose a new factor provoking the consumption of "potion". It is embodied in the principle: "blast it all!". On the one hand, the reaction of this type can be considered as a protective mechanism that allows escaping from the harsh reality, to forget by losing the sense of reality of the hostile world. On the other hand, the desire to "drink away everything earned by hard work, so that no one could get it" was a kind of the peasant protest against the "atrocities" of the new authorities.

The temptation of becoming alcohol addicted increased, especially in a situation in which the local authorities which were obliged to take care of the welfare of people were binge drinking, when the chaos was erupting everywhere, and the society did not have sufficient influence to restore order. At that time the wave of alcohol consumption was able to overwhelm the village. Unfortunately, we have to note such cases in some villages. For example, according to the report of the agitator Shilov on the work of the Nekludovskaya mobile school, there was a "mass drinking bout" in the Erzyan Parakino village in January 1927. After carrying out explanatory work on struggling against alcoholism among the population, it was noted that "listeners supported this struggle and now it can be noted that alcoholism has decreased by 50%" (Central State Archive of the Republic of Mordovia. Fund 1-P. Inventory 1, Case 306. Sheet 3 back side, 1917-1928). Apparently, not only persuasive discussions, but also restoring order at Parakinskiy village council and taking control of drinking of the local authorities had their influence. Probably, the reporter "thickened the plot" a little bit in his picture of the rural revelry. But questions like: "How do we destroy distilled alcohol?" (Central State Archive of the Republic of Mordovia. Fund 485-P. Inventory 1. Case 52. Sheet 3, 1917-1928) stimulate the thinking about the existence of the problem of excessive alcohol consumption, at least in some Mordovian villages.

5. Conclusion

The dominance of community consciousness among the majority of the Mordovians oriented the population towards following the traditional order and norms not only in production, but also in public relations. The traditions of peasant solidarity and the authority of public opinion remained the key behavior regulator and the central organizing principle of interpersonal relations in the village. At the same time, the establishment of Soviet power brought changes in the social sphere of life of the Mordovian ethnic group. A new way of life started to be actively introduced in the minds of the masses, a new style of thinking started to be shaped. Under the influence of the pressure of the state and party machine in the depths of the community institute, the processes of transformation of traditional consciousness and foundations take place, in particular, there is a bias in the perception of alcohol consumption, and so far the community is no longer always able to resist this evil with the former efficiency. However, the Mordovian peasantry still had a powerful counterweight restraining the alcoholization of the village population: conservatism, strong influence of community traditions and public opinion, which do not allow the majority of peasants to put distilled alcohol above the interests of their own houshold and to neglect the rules and interests of the "world". The labour ethic of the Mordovians made sobriety the norm of everyday life. Mass alcohol drinking was possible only on holidays.

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Leader and LeadershipTraining Programme

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Abstract

The paper presents the description of the programme of developing the leadership qualities of students of the pedagogical institute of Pacific National University in the process of implementation of the module "Fundamentals of the Activity of Camp Counselors" in the framework of the operation the Regional Coordination Centre for Training and Support for Camp Counselor Personnel in the Far East Federal District of the Russian Federation. The authors justify the idea that in the process of training the camp counselors, the emphasis should be placed on the development of the leadership skills of students. The results obtained at the end of the experiment show that specially organized work contributed to the development of the worldview of the students, their emotional and social intelligence, independence, creativity, personal growth, developing of an active and responsible approach to life, the optimization of the Self-concept.

Keywords: Leader, Leadership Training Programme, Students.

1.Introduction

The problem of leadership is currently being actively discussed in various scientific circles. The development of the leadership qualities of the individual occurs throughout life, but the starting point is the young age. It is in this age period, when the active life position of a young man is being formed as well as his Self-concept, the awareness of different aspects of life and the specifics of his personality. Youth is a period of emotional, intellectual, moral and volitional changes, the age of contradictions, intense intrapersonal and interpersonal conflicts.

Young people are characterized by aspiration to the future, which is beneficial to the development of personality only when there is satisfaction with the present. This is a period of a certain stabilization of personality. At this time, the stable views of the world and the desire to find their place in it are being built. The central formation element of this age period is personal and professional self-determination, when a person makes a choice and decides who to be and how to be in his life.

By having studied the experience of domestic pedagogues in collective creative education and having created psychological and pedagogical conditions, it is possible to reveal the makings of a leader in the senior classes of the general education school. Diverse activities of educational institutions include educational, cultural and leisure activities that permeate the entire educational process.

In student communities, special attention is given to the problem of leadership education. After all, the success of the activity of children associations depends on the activity of students-leaders. In this regard, programmes for training counselors are of great help. It their essence, these are the programmes of self-development of the individual, which solve three main objectives:

– to develop individual leadership skills necessary for better adaptation of the student in society, his socialization and personal development;

– to organize the practice of communication of young people on a democratic basis and to help them in creating their own small society;

– to form a willingness to become a leader in the chosen sphere of life.

The development of the leadership qualities of students of the pedagogical institute should be given attention due to the fact that their future activities are of psychological and pedagogical nature. The development of personal qualities of the students of the pedagogical institute of Pacific National University was given special attention in the process of implementation of the programme "Fundamentals of the Activity of Camp Counselors" in the context of the work of the Regional Coordination Centre for Training and Support for Camp Counselor Personnel in the Far East Federal District of the Russian Federation.

2. Literature Review

Leadership as a psychological and pedagogical problem was and is now quite an attractive aspect of the research activities of many representatives of different sciences: sociology, psychology, pedagogy, etc.

A great contribution to the development of ideas about a leader, leadership, leadership training, values and ethical aspects of leadership and leadership development in groups and organizations including the system of education was made by different researchers (Buyanova, 2011; Evtikhov, 2007a, 2007b; Krichevskiy, 2007; Popov & Kruglov, 2012; Kudashov, 2009; Kudryashova, 1996, 2001; Kuznetsova, 2001; Kulikov, 2003; Mukhametzyanova, 2007; Parygin, 2010; Petrovskiy, 1982, 2007; McClelland, 1973; Bensimon & Neuman, 1993; Birnbaum, 1988; Raven, 1977; Stogdill, 1974; Bartol & Martin, 1991; Bass, 1990; International comparisons in human resource management, 1991; Fink et al., 1983; Loeckenhoff, 1994; Nahavandi & Malekzaden, 1993).

The question on the personal features of a leader, the development of which is important to focus attention on in the process of leadership training, is relevant for many researchers.

In the research of M. I. Rozhkov (1987, 1989) the author highlights the basic qualities of the leader-organizer, among which the special place is occupied by the following:

– the expressed ability to manage himself, to use his time and energy resources effectively,

– the ability to cope with the difficulties, to overcome various stressful situations effectively;

– the existence of clear, distinct goals, understanding the reality of the goals and the assessment of achieving them;

– the ability to solve various life problems, identify the primary and the secondary;

– to assess and analyze options, predict impacts, to assess and allocate resources;

– the creative approach to solving management tasks, the ability to generate ideas, the readiness for innovations;

– knowledge of the management and organizational activities, the ability to manage people, to motivate them and stimulate to work, the ability to work with a group, etc.

Describing the characteristics of the leader, A. L. Umanskiy (2004) highlights the general and specific qualities of a leader.

The general qualities of a leader are understood as such qualities that different people can have, including non-leaders, but those which contribute to the effectiveness of the leader.

A. L. Umanskiy (2004) identifies the following specific qualities of the leader:

– organizational perspicacity (subtle mental selectivity, the ability to understand another person, to penetrate, to plunge into his inner world, to find a place for each person depending on their individual characteristics);

– the skill of active psychological impact (a variety of means of influencing people by taking into account their individual characteristics and according to the situation current at the given point of time and space of life situation);

– the aptitude for organizational work;

– the need to take responsibility.

It should be noted that according to the sources available at the universities and colleges of the USA, a variety of leadership training programmes are being implemented (Higher Education at Universities and Colleges of the USA, 2019). In these programmes much attention is paid to the development of the leadership skills of students. First of all, in the process of the specially organized activities, students develop an active life position, morality and the desire to show productive social activity (the desire to serve society), which is expressed through the willingness to volunteer.

A leader is assessed as a person who shows the ability to manage and the ability to obey, has developed empathic tendencies, is ready to engage in communication, to show sensitivity and attention towards different people.

In some concepts of leadership, an important place is taken by such quality as success. According to the research conducted by the scientists of Gallup Institute (USA) (Gallup Institute (USA) "The Formula of Success", 2013), a person can achieve success having competencies such as:

– possession of common sense, which is manifested through the ability to learn from the mistakes of people and his own mistakes and failures and is expressed in specific judgments in everyday life circumstances;

– the knowledge of his business and striving for self-education and self-improvement at the same time;

– readiness and ability to perform self-realization based on professional knowledge;

– self-confidence, which is manifested in activity, determination, courage, valour;

– endurance in achieving goals, willpower, the ability to withstand difficult life circumstances, to show I-effort;

– high overall level of development confirmed by the manifestation of the ability and willingness to learn new things, to move forward;

– the ability to follow through (diligence, perseverance);

– organizational skills;

– the ability to establish and maintain the rhythm of intense, hard work;

– the ability to manage, that is, to be an organizer of other people's activities, to inspire others, to lead them;

– possession of creative potential, creativity that help in achieving goals;

– communicability in the relations with colleagues, the desire to understand and support others;

– self-control in different situations;

– sufficient self-confidence;

– responsibility;

– luckiness.

The presented list, of course, does not mean that a successful leader must possess all of the above mentioned qualities. But it should be noted that:

– firstly, many of these qualities can be mastered as a result of purposeful educational work aimed at optimizing the self-realization of the individual in the process of his own life activity;

– secondly, these qualities provide a guidance for young people who seek to become leaders.

3. Research Methodology

The objective of the research is to identify and describe the specifics of psychological and pedagogical support of the development of leadership qualities of students in the process of the implementation of the programme "Fundamentals of the Activity of Camp Counselors".

Research objectives:

– to select diagnostic tools for conducting empirical research;

– to develop a programme "Fundamentals of the Activity of Camp Counselors" for university students;

– to perform the testing of the developed programme and to identify its effectiveness.

Methods of empirical research: observation, oral and written questioning.

The empirical research was conducted on the basis of Pacific National University. 630 students who are the future camp counselors participated in the research.

The research, in the framework of which the programme "Fundamentals of the Activity of Camp Counselors" was tested, was conducted during 2018.

The empirical research was conducted in stages.

At the first (ascertaining) stage of empirical research, the level of development of the leadership qualities of students studying at the pedagogical institute of Pacific National University was revealed. The results of the ascertaining experiment showed a significantly low result. In this regard, there was a need to develop and implement a programme focused on the development of leadership skills of students – future counselors.

At the second (developmental) stage of empirical research, a leadership training programme for university students – future counselors – was developed and tested.

At the third (control) stage of the empirical study, a comparative analysis of the results obtained before and after the experimental work was carried out.

4. Findings and Discussion

The conducted study confirmed the idea that the main psychological and pedagogical conditions affecting the development of the personality of a leader are:

– the peculiarities of the sphere of motivation and the needs of the personality of a leader,

– the organization of emotional and creative situations that contribute not only to the development, but also to the implementation of the leadership qualities in the educational space of children and youth associations,

– the use of the methods of collective creative education in the space of the leadership training.

In the leadership training programme "Fundamentals of the Activity of Camp Counselors", various objectives were implemented, including the detection and development of creative abilities of students.

The strategy of this programme was aimed at creating conditions not only for the most active part of the university youth, but also for all the others who do not seem to be interested in the conducted activity because of a certain natural modesty, we are talking about pronounced introverts. The program of leadership training contributed to the confidence of the participants, their getting rid of complexes, optimization of self-esteem, Self-concept, the acquisition of psycho-emotional stability, reflexivity, the definition of life prospects.

The leadership training programme has two forms of existence:

1) working during the school year in schools as the assistants to the head teachers;

2) summer camp with the immersion in the educational environment.

These forms complemented each other and allowed to contribute to the development of the leadership qualities of the students through the "immersion" of students in different life circumstances.

The above mentioned allows us to consider the "Fundamentals of the Activity of Camp Counselors" to be a movement that creates conditions for the development of the personality of a leader.

The programme "Fundamentals of the Activity of Camp Counselors" was developed and presented in dynamics, adapted to the small society – the informal social association of students and can serve as a basis for activities in various children communities: class groups, social groups, school self-government bodies and core groups of children communities.

The conceptual bases of the programme "Fundamentals of the Activity of Camp Counselors":

– the idea of development and self-development of personality by means of informal association, the implementation of which involves the creation of the conditions for self-development of a student as a subject of activity, as a person and as an individual;

– collective activity is the key to success, because it is collective activity where the relations of mutual responsibility and mutual assistance of the group members develop;

– orientation of students towards the eternal and absolute truths at the level of ordinary consciousness and towards the values of a higher level (Man, Family, Fatherland, Labour, Knowledge, Culture, World, Land). In general, they cover the main aspects of life activity and development of personality, forming a specific basis of education;

– the ideal of the person capable of making decisions in situations of difficult moral choice and of being responsible for these decisions to himself, the reference group, the group.

The basis of the methodology of the programme includes certain provisions of the humanistic pedagogy (pedagogy of personality self-development). The ascent takes place by means of satisfaction of two interconnected needs of the developing personality:

– accumulation of a wide range of knowledge, skills, abilities, emotional impressions, independent judgments, ways of living different life situations and finding quick solutions, finding common grounds with people, working in a group and with the group;

– self-realization in the activity which has personal and social value.

The programme is a system of psychological and pedagogical leadership training. We have identified the following four modules:

1. "The Psychotechniques of Communication". This is a communication training with the inclusion of diagnosis. The purpose of its implementation is to teach the students to perform the active forms of interaction, analysis of different situations, to help the awareness and selection of their own style of communication. An additional goal is to diagnose the leadership potential of the programme participants.

During the training sessions, students who are most capable of leadership activities are identified.

2. Intergroup (intra-group) module. This is teaching a leader to interact with the group. The goal is to prepare leaders to work in a group, to form a team and its psychological climate. The knowledge and skills acquired in the process of interaction with the group are implemented in the practice of public informal associations, collectives and student councils.

3. Organizational and activity module. The purpose of this module is the acquisition of knowledge and skills in organizational activities and the rules of organizational work.

4. Intergroup (cross-group) module. Its main direction is to ensure the implementation of the "representative" functions of the leader, the ability to represent the interests of the group in the "external environment", "promotion" of the leader in the activity. It is promoted by the personal growth training, self-presentation, creation of self-image, organizational and activity games, meetings of the core group of student associations, leadership marathons, friend meetings, etc.

In the implementation of the programme, the techniques that are understandable to a wide range of practitioners who do not have special training and to students were used. They are sufficiently universal, so that they can be used in different age groups and they allow to determine the efforts of children associations in the training of leaders, to conduct a joint search for the most effective forms of this work.

Let us pay attention to the sections of the programme "Fundamentals of the Activity of Camp Counselors":

1. Organizational Technique.

It is a form of organization of behavior of the leader. It includes:

– the ability to control yourself;

– the ability to cooperate with the group and each its participant in the process of solving organizational tasks.

Organizational technique is not a goal in itself, but an important means of successful activity of the leader, a set of ways to achieve the goal.

2. Leader's Suitcase.

It is a complex of role exercises on speech technique, gestures, facial expression, visual memory, the development of observation, thinking, attention, reaction which are the important qualities of a leader. Exercises on psychotechnics of communication, public speaking, etiquette, self-regulation of psycho-emotional state. What are these exercises for? They are for being in different roles, training, regulating one's inner state and learning how to manage it. Attention and imagination will help to create internal "piggy banks" of intonations, movements, gestures, ways of showing feelings and demonstration of thoughts which are so necessary for the leader in the process of his influencing people.

3. Know Yourself.

In order to know others, you should know yourself first. One can know himself through the system of testing, keeping a creative diary (What do you know and what do not you know about yourself and others?). Test methods can help everyone to understand himself (the features of his character, temperament, cognitive and emotional sphere) at least in general, to find the abilities, talent in himself, to think, to reflect on some aspects of his own personality and his own life activity, to become more attentive to himself.

4. Game Technique.

Here the technology of various game activities is revealed, the methods of collective creative activity, group and individual forms of activity, leisure activity are implemented in practice. These are role-playing, intellectual and creative games, preparation and holding common association affairs, participation in various programmes of children and youth creativity, centers of extracurricular work of districts of Khabarovsk and Khabarovsk Kray.

The programme of leadership training is a process of development of the socially active personality, involving the study of its specific social activities, communication with it, the impact on it. The change of social position in the activity of the student which results in his facing the choice in the situation of taking a new role is the object of studying his personality, predicting its development.

The leadership programme gives a young person the knowledge and skills necessary to achieve good contact, resolution of conflict and problem situations. Its participants train the skills of leadership of one person or a group, the technique of conversation, discussion, the ability to streamline points of view, reach agreement and find solutions to complex problems in the group. The programme participant receives support and respect from peers, has the opportunity to broaden their horizons and to organize the practice of public life.

In addition, it has an impact on the formation of character, worldview, independence, creativity of students, promotes personal growth, self-development, the development of the skills of civilized communication, as well as an active and responsible approach to life.

The reflection which is revealed in questionnaires, self-reports and oral statements of participants of the programme, practical works, creative diaries, practical activity and the changed behavior of students allowed to assess the results of the implemented leadership training programme. During the stocktaking, the participants of the programme expressed general satisfaction with the work carried out, noted the need for the introduction of the leadership training programme, the diversity of its content, tools, methods and techniques used in the process of the specially organized training of future camp counselors.

5. Conclusion

The leadership training programme helps each participant to realize himself as a unique person ("Who am I in the world of peer society?"), to know and understand himself ("Who am I in all the diversity of human relationships?"), to expand the sphere of communication with peers, helps to find friends, to get rid of complexes, creates a situation of success and spiritual comfort and also gives its participants the opportunity to adapt to a new social environment, to make their own life choices, to know themselves and their place in society.

Successful implementation of the programme is possible under the following conditions:

– close interaction of the pedagogue with each participant of the programme on the basis of cooperation, co-creation, co-management;

– transformation of the space of various types of activities into the reflective and evaluative educational space;

– obligatory completion of the programme of organizational (leadership) practice in the reference group and a small society by each participant;

– creating a dialogue mode for self-knowledge, amateur activities, self-organization, self-government;

– material equipment: availability of a room for classes, methodical and special literature, materials on the practice of the acquisition of such programmes, visual aids, cards with group and individual tasks, questionnaires, stationery, prize fund, audio and video equipment for classes, music, slides, computer equipment.

The results obtained at the end of the experiment show that specially organized work contributed to the development of the worldview of future camp counselors, their emotional and social intelligence, independence, creativity, personal growth, developing of an active and responsible approach to life.

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Prospects of information systems of self-control of engine activity in the morrid age

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Abstract

The urgent social task of modern society is the improvement of the population, the intensification of preventive measures to prevent diseases, most of the factors determining the state of health of a modern person are related to the way of life.

Keywords: motor activity, health, life expectancy, physical exercises.

Introduction

Educational levels are based on the principle of consistency and systematic character as the common didactic principle, it implies combinability and non-contradiction of educational and learning effects on the personality of a child as a systematic integral education (Nikandrov, 1998; Hodanovich, 2003; Vagizova, 2011; Skatkin, 1987). Educational continuity is the process and the result of successive inclusion of a person into the activity basing on the forms he has already mastered (according to continuity). Besides, the continuity is oriented to acquiring new activity types, i.e. expansion of the activity range orienting to the area of actual development and formation of new knowledge and competence including the area of the nearest development (Rozhkov & Bayborodov, 2000; Anisimov, 1991; Klarina, 2001; Vinogradova & Pervin, 1977). In this case we mean three processes:

- activity expansion through new methods, new approaches, new tasks;
- change of the qualitative composition of the activity, essential characteristics of the activity;
- extension of the activity, i.e. learning its internal essential bases.

Many researchers claim that pupils of the third and fourth classes implement these processes on the basis of educational activity at school, but their implementation is more effective if there's integration between the systems of basic education and of supplemental education (Bayborodova, 2003; Kirdyanova, 2015).

Let us consider mechanisms of provision of educational coninuity in education levels by means of physical culture. Physical culture is inherent to any educational process as a part of personal culture. It creates the foundation of health, balance of a person's proactive attitude when he is involved in any activity types, including educational activity.

Thus the purpose of the research was to establish the potential of physical culture as a socially approved sphere in the process of educational continuity for junior pupils.

Theoretical Framework

The subject of the research is a pupil of the fourth class who is on the border between junior school age and teenage years, and it means that the leading activity type of his is changing from learning to communicative (Vygotsky, 2005; Vygotsky, 1984; Zhukova, 2010). In this period educational influence of parents and teachers stop being effective enough to define the development of the child's personality. At this stage words of peers and common activities educate personal qualities of a junior pupil more than individual activities under the supervision of a teacher or parents. Thus physical and sport activity as a collective, spectator activity, including competition and cooperation is a good basis to develop socially approved educational pathway of a child (Nosov, 2014; Blinov & Tyutyusova; 2018, Kalashnik; 2015). Besides, by the age of nine-ten years the majority of junior pupils under the supervision of adults realize their needs and preferences and are integrated in pphysical and sport environment. Physical and sport activity has two major directions:

– sport activity when a child begins traning in a sport section where he receives and feels support of his trainer and spectators, help from his friends in the team, competition inside himself, in the team, outside competition;

– physical and health improving activity that is based on values of helthy lifestyle and does not suppose conflicts and competitive sport environment.

Each of the mentioned types of activity has its potential for development necessary qualities for comfortable educational adaptation of junior pupils to the conditions of learning and education on a new educational level (Dzusova, 2018; Pomnikova, 2019; Gray-haired, 2019).

Findings

On the basis of the main test project psychological types of children were distinguished with the application of psycho-geometrical test in order to define organizational pedagogical conditions for the physical activities providing educational continuity between junior and middle school. 634 pupils of fourth classes from schools of Nizhny Novgorod and Nizhny Novgorod region took part in the research. The results are presented in Figure 1.

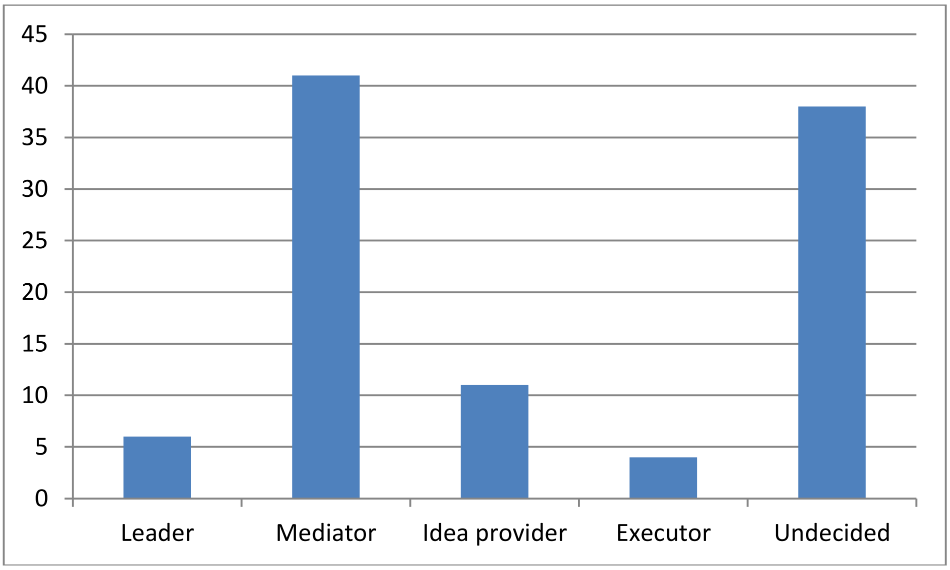

Figure 1. Distribution of project psychological types of fourth-grade pupils

Following from the presented data it is obvious that a large number of children may be directed according to their preferences to sport sections and groups of various sports, as well as it is possible to initiate their participation in sporting mass and physical and fitness projects of different types. For example, leaders that may demonstrate destructive behaviour in teenage years should be directed to the sphere of supplementary educatiuon where they can reveal their insistence, assertiveness, competition for peaceful purposes. Those children were recommended to choose from the presented list of sport section the one that they like more. As the research showed, more than a half of the leaders preferred sections of combat sport, not only boys but girls as well. The other half chose team sports (football, basketball) where exist an image with leader qualities (captain of the team).

The second group – mediators or harmonizers do not tend to competition and such children are more likely to do physical and sports activities that are mostly based on the values of health, knowledge and beauty. They expand the range of motion actions with pleasure, try different levels of motion activity, happily apply them in life and in leisure time. Such children are advocates of healthy lifestyle, as a rule they grow up healthy people with orientation to sport activity, but participating in it as, for example, fans and spectators. Besides they are glad to take part in sport festivals, concerts, both at the preaparation stage, easily making contacts with all team members, and at the realization stage. Fitness, cycle sport types and active games are recommended to them.

The third group of children — idea generators who are attracted to art, heuristics, have inspiration. They are not comfortable in the executive form of a sportsman, they choose interactive types of motion activity, for example, choreography, that does not demand serious physical training in the beginning, is improvisational and connected to music and other arts. Such children choose cheerleading sections, synchronized swimming, competitive ballroom dancing studios, figure skating.

The next group of children – undecided in their preferences, they feel defficiency in movements and basing on their emotions from a big range choose those that are subjectively enjoyable for them. Such children may be potentially inclined to physical culture, art, health improving but cannot choose the desirable activity yet because of motivational competition and disagreement between inclinations and capabilites. That is why one cannot hurry the directing of those children into a specific sports section, but one should give them a possibility to find their way in the world of physical culture and sport basing on trial method and guide them on this way with the help of pedagogical assessment, reflection and consulting. And in the environment of middle school it is necessary to direct such children not to the activities that are in fashion or wanted by parents but to the activities that show talents of those children.

The fifth group of children – executors and sportsmen properly, their sport talents may vary greatly and in each case the decision is made individually. Such children have a high level of executive cultire, but in future it is necessary to spend time raising the level of their initiativity and independence and retaining the activity.

At the next stage of the experiment when children in each of the presented group started doing physical culture and sport according to the course selected for them, their teachers and parents were interviewed, in order to find out which positive personal qualities of the children are being formed and how these qualities are reflected in everyday life and learning activity of the pupils. The results of the survey are presented in Table 1.

Table 1. Expression of personal qualities of fourth-grade pupils in everyday life and learning activity

Psychological type		Leader	Mediator	Idea provider	Executor	Undecided
Parents	+	high performance self-discipline precision	precision punctuality curiosity	curiosity optimism high performance	purposefulness assertiveness responsibility	high-endurance creativity sociability
	-	persistence indepednence fall of parents' authority	passivity non-punctuality petulance	petulance fall of parents' authority ostentation	fatigability conflict fall of parents' authority	petulance impulsivity non-punctuality
Teachers	+	hard working assertiveness high performance	responsibility cooperation agreeableness	creativity curiosity activity	assertiveness high performance responsibility	responsibility cooperation high-endurance
	–	persistence sport priority conflict	passivity self-restraint mood swings	ostentation non-discipline selectiveness	ostentation selectiveness emotional passivity	low activity retention petulance conflict
R – Spearman's correlation coefficient		0,65 - average-positive	0,15 - weak	0,835 – high-positive	0,81 – high-positive	0,67 – average-positive

As it appears from the given data, fourth-grade pupils working within the frames of experimental patronage program of educational continuity based on physical culture and sport, during the recommended motion acitivities developed qualities that according to many scientists (Timoshina, Bogatova & Cheyran, 2016; Prokudin, 1998; Akulova & Akulova, 2017; Pole, Kopylov & Malykhina, 1998), represent the basis of a successful continuity of educational level and successful involvement of a child into new organizational pedagogical conditions of the educational process and comfortable transition from junior school age to teenage years.

As it was demonstrated, only with mediator children with the biggest part of them being introverts , socially significant qualities developed within the physical and sport activity are not demonstrated enough in the educational process, for others more or less the correlation of of personal new formations that were developed with the help of physical culture and sport are revealed in the educational process and everyday life providing thus comfortable educational transitioning.

Thereby distinguishing of project psychological types and following them in the organization of educational activity facilitates the process of educational continuity between junior and middle school.

Discussions

The presented results of the experiment may enable integration of general and supplemental education systems of junior pupils, particularly in physical culture. Defficiency in such activity may lead to intensification of negative personal manifestations stated in the table and to the appearance of consistent behaviour deviations that imposes risk of possible school disadaptation and deprivation in the group.

Let us consider some cases of prevention of school deprivation basing on the integration of school and family physical education as well as supplemental education in physical culture. Integration principles are the following:

1. Possibility of sport manoeuvre, that exactly happened to the captain of national team Evgeniya Ivanova, double Olympic bronze medallist. In the beginning her father, a swimming coach, identified her preference of water sports, but very soon at the age of 9 she expressed the desire to be engaged in sport games and went to school basketball section. Constant interaction between the girl's father, her swimming coach, and physical training teacher (a coach of school volleyball section) resulted in direct indentification of a sport that complies with her capabilities and pereferences – water polo.

2. Principle of a second attempt. Very often physical training teachers together with parents correctly identify capabilities and preferences of a child but this activity is not successful. It is important to find out the disagreement with cognitive expectation of a child, that may be noted by school teachers and also by sport trainers. Then with the parents' consent the child needs to be passed to another trainer. By comparison the second choice might be more fortunate but there may be comeback as well. At a distance a child will consider work methods of his first trainer in a different way and may come back. That is what happened to the Olympic champion in sports gymnastics that is recorded in Guinnes book of world records as the youngest absolute champion in sports gymnastics. He began training with M.G. Leikin who was training a masters group at that time. At the age of eight he got into the group of young sportsmen who were trained by by a coach of the national team but he came back to M.G. Leikin at the new level of his skill to the masters group, and that brought great sport success.

3. Principle of leading in turn. In case a child especially having the psychological type of a leader or an idea generator becomes the captain, leader of his team and assistant for his trainer, he starts transferring his leading function to his family and classmates, to other activities where he is not that successful and a leader. At that moment the integration of teachers, trainers and parents is important to bring to him the executive and not only leading culture.

4. Principle of combinability of intellectual and physical load. Both at school and in a sport section non-observance of this principle by either of the parties that provide educational process of a junior pupil may result in imbalance in daily routine, over fatigue and probably emotional burn-out. It is necessary to set correct limits and ways of physical motion activity that are recommended to him at school. The load in the sports section should be planned according to this, so that it does not lead to undertraining or overtraining for a child that is at the moment of choosing his motion activity. Using the teacher's recommendations

children should track their condition, their attitude to sport, their motivation for this activity. As a rule such child studies scrupulously and accurately does tasks at the lessons, carry out physical activity according to the correct technique and biomechanics. At a sports section he learns to demonstrate his creative talents basing on his responsibility anв discipline. Thus he has a full physical preparation and motion activity.

5. Principle of health improving sport for children. It means physical and fitness activity in a family. Three-step interaction of famly, school and sports section is organized. It is necessary to remember that provision of educational continuity is aimed at development of intellectial, creative, sport and social and personal potential of a child, with the necessity to keep and improve his health. In this case it is important to carry out infornational work with families so that parents trying to develop their child's talents in sport and motivate him to achieve high sport results are not the hostages of one of the frequent situations. The first of them is desire of parents who have not realized their childhool dreams in sport to realize the dreams by their child, and the professional help is to inform on actualization the capabilities and preferences of a child himself in physical culture. The second situation arises when a child has a plateau and for a while his sport results do not improve. Then parents begin to interrupt the structure of the sports cycle harshly and load the child during his rest. In this case interaction with the family and cooperation are necessary in provision of sensible cycle of motion activity. The third situation arises when a child has quite high results and high motivation to do sport, but his family can not afford further attending the sports section for financial and other reasons. Then the task of the educational organization is the search of substituting activity and helping family to organizy sports activity for the child. Another barrier on the way to form the health of a juniot pupil may be negative effect on his parents caused by little educated and morally inconsistent sports bloggers who as a rule offer private methods of health improving of children without sufficient scientific and practical grounds. To disprove the unreliable information is the task of specialists. However without trust between teachers, sport trainers and parents of junior pupils this process is impossible to realize.

Conclusion

Basing on the conducted research the following conclusions were made: educational continuity should be oriented to the formationa of necessary personal qualities, i.e. to educational results. Indicators of successful continuity are development of socially significant personal qualities of involvement junior pupils in socially approved activities and rise in their level of physical, psychological and social health. A high level of potentiial possibilities for provision of educational coninuity between junior and middle school can be found in cultural, creative activities, social creative areas where the important place takes physical culture. In this area various forms of activities are possible, reflecting abilities and skills and representatives of different psychological types.

In the research representatives of all project psychological types of fourth-grade pupils were examined, among them the least number is represented by leaders (6%), mediators (11%), idea providers (4%). The biggest number of fourth-grade pupils of Nizhny Novgorod and Nizhny Novgorod region belong to executors, which is quite logical because during junior school period the leading activity is learning, strictly regulated activity carried out under the supervision of a teacher and a trainer. Besides, quite a large group of children (38%) was distinguished who have not decided about their abilities and preferences. This group, unlike the previous ones, is recommended to use trial method for choosing sport or physical activity.

Program of selective work and pedagogical patronage of children of different psychological types developed by the authors resulted in increase of comfort level of adaptation of junior pupils to the conditions of physical and health activity and development socially significant personal qualities that being formed in the sphere of physical culture and sport realize in educational process and everyday life of pupils.

During the research there were identified barrier qualities of a person that may prevent successful passing of fourth-grade pupils to the middle segment. Duly distinguishing of such qualities allowed to carry out preventive and corrective work on their elimination. The activity aimed at provision of successful continuity between junior and middle school should include integration of general and supplemental education in sport and system of family upbringing.

Principles of integration of school and family physical education as well as supplemental education in physical culture are the following: possibility of sport manoeuvre; principle of the second attempt; principle of leading in turn; principle of combinability of intellectual and physical load; principle of health improving children's sport. These principles enable more effective continuity between the stages of education.

Recommendations

The paper will be useful for the organization of preemptive activity by classroom managers, physical traning teachers, sport trainers and school psychologists in preparation of junior pupils for comfortable transition to the new level of education and leading them into new directions of the upbringing process. The article will also be useful for junior puplis' parents to define the direction of physical and sport activity of the child, a junior pupil.

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Overcoming of Level of Alarm and Tension at Young Athletes-Shooters with Use of the Diary of the Athlete

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Abstract

Theoretical basics of alarm and tension in sport and also overcomings of level of alarm and excessive tension in educational and training and competitive process are covered. influence of various stress factors negatively affecting on competitive results of the young athletes are studied. In this research R. Lazarus's techniques "Way of Coping Behaviour (WCB)", a scale of Ch.D. Spilberger-Yu.L Khanin for definition of personal and situational uneasiness at young shooters are used. In the developing work on overcoming and self-checking of level of alarm techniques of the psychoregulating training (PRT) are carried out and "The diary of the athlete: The science to win!" is used by young athletes also for systematization of sports preparation

Keywords: young shooters athletes, psychological support, anxiety, stressful situations, stressed state, the athlete's diary.

1. Introduction

Psychological tension in sports activity directly has negative and positive effect on results. In sport there are enough examples when mental strain was the cause of decrease in working capacity and sleep disorder of the athlete, or growth of his sports skill providing success of his performance at competitions. Tension in a training is connected with activity process, with need to carry out more and more increasing physical and psychological activity. In competitive conditions, tension is complemented with alarm, with the purpose to achieve a certain result. Therefore psychological tension in a training is called procedural, and in competitive – productive.

Psychological tension in sport is a positive factor, reflecting activation of all functions and the systems of an organism and providing considerable efficiency of activity. It must be kept in mind that at adverse factors (high and long tension, fear of loading, bad relationship with people around, insufficient motivation, indecision, etc.) psychological tension can cause disharmony of functions, excessive and inexpedient expenditure of energy. Weak degree of psychological tension does not leave consequences and vanishes in several days [3].

Use of the diary of the athlete is important for the purpose of control of a mental state, process of fundamental sports training of young athletes. The diary of the athlete – a way to success in sports career which helps to monitor effectively training process, the state of health and dynamics of physical development, will allow you to systematize and reduce to a common denominator all your put resources [5].

On the other hand in modern conditions many young athletes daily have feeling of alarm as emotional state, appearing in situations of the uncertain danger and arising in waiting for unsuccessful succession of events, as a rule, connected with expectation of failures in sports activity. Often in practice uneasiness is caused withnot sensibleness of a danger source. Functionally uneasiness not only warns about possible danger, but also induces to search and a specification of this danger, to an active research of reality with the purpose to define the menacing subject.

In achievement of the highest results and records, it is impossible without psychological factors even at excellent coordination and good physical readiness of the shooter. Beyond simple force and technicians there is something that will not allow the athlete to achieve good result. Because further improvement goes not from physical and technical abilities but namely psychological. R. May said to that the alarm is reaction to a situation when there is value under the threat which according to the person is vital for him [2].

In our case the purpose of psychological training of the young shooter is education of a steady psychoemotional state, that is not assumption of emotional flash in a critical situation of a competition, and the athlete's mobilizovannost on the best solution of tasks at favorable situations. In this case emotions can have a direct impact on sports activity and cause a condition of internal rise, energy of mobilization of forces, confidence in the actions. However there can be also a condition of shyness, breakdown, uncertainty, timidity. In the general basis emotions will mobilize the athlete's organism for fight, promote sports activity [1]. The task of psychological work is to teach the athlete to control the emotions and to send to the expedient course. Work demands system and gradual approach which we used in landmark psychological escorts of teams.

Researches in the area in psychological training of athletes show, not only huge variety of manifestations of the psychological functions and states playing an important role in achievement of the highest skill but also specific features of manifestation of the same functions or qualities of the personality in connection with requirements imposed to mentality of the person. Here psychological training of shooters has the increasing impact on reliability of their performance, i.e. on the probability of realization of sports opportunities of shooters in difficult conditions of responsible competitions [6].

2. Literature Review

It is well-known that in competitive activity athletes have various emotional states. Psychologists call the most typical of them: start fever, readiness for fight, starting apathy. We are interested in an optimum fighting state (A.Ts. Puni), systematic work with the athlete with use of various psychotechniques and exercises in practice for creation of sober confidence in the forces, the aspiration to fight very much and up to the end, acquisition of optimum level of emotional excitement, high degree of noise stability, ability to operate randomly the thoughts and feelings brings to it [4].

3. Method

3.1. Participants

A research objective is studying of overcoming level of alarm and excessive tension at young athletes-shooters. At introduction of the diary of the athlete to educational and training process, improvement of discipline and increase in results of young athletes is supposed. Researches were conducted on the basis of "sports school No. 2" in Yakutsk in which 15 young athletes-shooters took part. Methods of observation and testing by the Scale technique of Ch.D. Spilberger-Yu.L. Khanin were used for definition of personal and situational uneasiness and according to the questionnaire "Ways of coping behavior" of R. Lazurus.

The research of a condition of alarm and ways of overcoming difficulties in various spheres of mental activity, the coping-strategy of shooters with a rifle, will give the chance more effectively to pick up techniques of trainings and to improve competitive result. Following the results of researches in psychological support of educational and training process the adapted methods of the psycho-regulating training (PRT) and the autogenic relaxing training are used. PTR represents option of the autogenic training adapted to conditions of sports activities. It is directed to possession of a relaxation of muscles, and to assignment of great attention to formation of coordination of movements. In this regard in PRT the formulas causing feeling of weight in extremities are not applied. Sometimes, on the contrary, formulas of overcoming of this feeling join (if it after all arises). The main task of PRT is management of the level of mental tension [5].

3.2. Materials

Before this project of training of young athletes in psycho-techniques of self-control with use of the diary of the athlete, the practical training conversations with trainers, a task of which is use of the diary, systematic control and monitoring of the set skills is are organized.

3.3. Procedure

Researches were conducted in the course of the educational training camps at different times. At the first stage (October-November, 2016) we held testings for studying of a condition of alarm and ways of overcoming of difficulties in various spheres of mental activity, the coping-strategy of young shooters with a rifle. In the second stage (December, 2016 – March, 2017) after control cuts the technique of the psycho-regulating training (A.V. Alekseev's PRT) adapted by us with use of phrases installations is carried out, the main task of which is to achieve that the athlete really felt what to be told in each installation about. All work was registered by the young athlete in "Science to win the Diary of the athlete!". At the third stage (April-May, 2017 the second control cut for comparison of level of alarm and ways of overcoming of difficulties in various spheres of psychological activity at young athletes-shooters was carried out.

Results at the third investigation phase, after the developing work are presented in charts 1 and 2. The developing work represents training of young athletes in skills of independent work on control of the psycho-emotional state with use of PRT and auto-trainings in educational training camps. And also to skills of an ideomotorny training for improvement of quality of technical training. Practical work was filled by young athletes in diaries.

4. Results

From chart 1 it is visible that after carrying out an experiment the level of the following types of a coping grew: positive revaluation, planning of a solution. Also the expressed decrease in tension of the following types of a coping is noted: flight avoiding, confrontational coping.

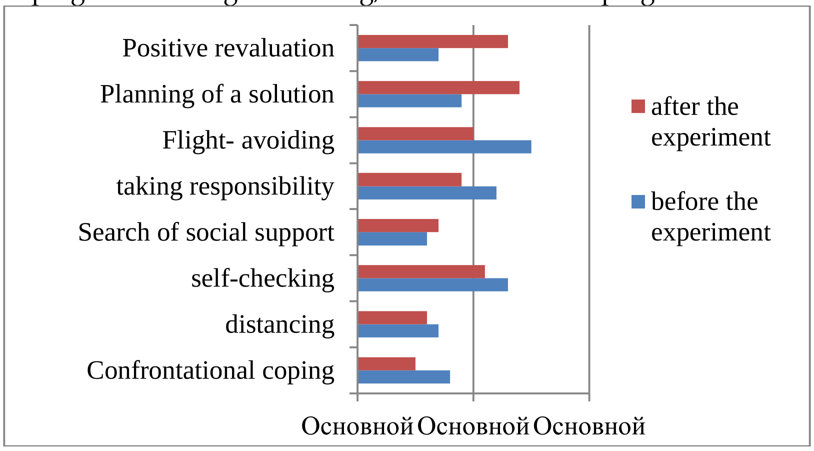

Diagramma 1. Results of a technique "Ways of coping behavior" of R. Lazarus

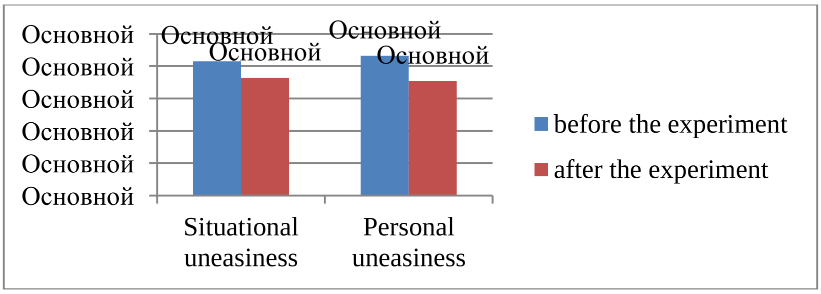

Diagramma 2. Scale of assessment of Situational and personal alarm of Spilberger-Khanin

From chart 2 it is visible that situational uneasiness prior to an experiment makes 41.5%, about 36.4% decreased later. At the same time the personal alarm prior to an experiment - 43.2%, decreased later up to 35.4

Before and after carrying out an experiment situational and personal uneasiness are at the average level, however prior to an experiment the level of uneasiness was higher. It is possible to claim that the held psycho-regulating trainings somewhat helped to reduce uneasiness level, young shooters began to control the psycho-emotional state.

Comparison and the analysis of results of a research were made in the Statistical Package for Social Science program (SPSS). We used Student's t-criterion for assessment of the statistical importance of distinctions before and after an experiment. After carrying out an experiment we noted statistically reliable (p -0.05) decrease of level of situational and personal uneasiness.

5. Discussion and Conclusion

The carried-out techniques say that athletes after carrying out an experiment began to overcome problems due to purposeful introspection of possible options of behavior and a situation, develop strategies of solution of the problem together with the trainer or with participation of the psychologist. Plan own actions taking into account the available resources, past experience and objective conditions and also due to consideration of failure as incentive for the personal growth, positive reconsideration. Besides, decrease in level of situational and personal uneasiness is noted. Thus, after the experiment results considerably improved. During comparative analysis significant distinctions, between indicators of alarm and tension before and after an experiment are revealed, results of ways of mastering of behavior improved.

Excessive personal uneasiness badly influences the athlete in the competitive period as in a disturbing state the athlete is inclined to perceive all situations as menacing. Situational uneasiness shows a state at present, the excessive level of situational uneasiness is shown by tension, concern, decrease in working capacity, decrease in attention and fast exhaustion. As practice showed at the beginning of the experiment and also substantially and later at all, levels personal uneasiness are higher than situational. During the educational training camps young athletes began to keep the diary for stabilization of excessive alarm. The diary at the athlete always was nearby, they in due time filled out all necessary data and notes. Thanks to the diary, we see progress not only physical qualities, but also a psycho-emotional state, especially in situations of competitive character. In educational and training process the level of alarm and tension was on optimum, however at a precompetitive stage alarm level considerably increased, proceeding from it we began to hold the psycho-regulating trainings (PRT) more often. Increase in the psycho-regulating trainings (PRT) helped to lower considerably alarm level, it allowed athletes to enter an optimum fighting state at a competitive stage.

Literature Review

The results received during the research showed that at constant use of the psycho-regulating training it is possible to reduce considerably the level of uneasiness and tension of athletes in a precompetitive and competitive stage. Having studied uneasiness of young shooters, we came to a conclusion that the psycho-regulating trainings discipline sports training of the athlete and in probable degree help to reduce the level of alarm and tension and also to improve ways of coping behavior.

On the basis of the data obtained in a research it is possible to recommend the psycho-regulating trainings allowing to reduce considerably the tension level and alarms at young athletes-shooters before competitions. The trainer needs in due time to begin to hold the psycho-regulating trainings for achievement by athletes most of good results.

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The Effects of the Angiotensin-Converting Enzyme (ACE) Genotype on 3000 m Running (VO2max) Performance & Body Composition in Turkish Army Soldiers: Longitudinal Study

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Authors' Contribution: A – Study design; B – Data collection; C – Statistical analysis; D–Manuscript Preparation; E – Funds Collection.

Abstract

Purpose: The main objectives of this study is to determine the effect of ACE gene polymorphism on the parameters tested in the follow-up study, which has been carried out for many years and to find out whether the differences in ACE gene's metabolism due to the influence of parameters such as environmental factors, lifestyle and training, have a role in the development of sportive performance or not.
Methods: The study group consisted of 59 male army officers. The male subjects participating in the research study did not regularly deal with any sports activities as professionally. All subjects were measured for certain body mass and body composition variables before the accomplishment of the 3000m running test.
Results: ACE gene polymorphisms were examined by PCR method. The dispersion of genotypes in the entire group (16.90 % II, n = 10; 44.10 % ID, n = 26; 39.00 % DD, n = 23) did not diverge from substantially from those estimated by the Hardy–Weinberg equilibrium. All ACE genotype groups have shown significant increase on body fat mass & fat percentage, on the other hand; free fat mass (FFM) & body mass index (BMI) and 3000m running performance (VO2max) have shown significant decrease in the test as compared to the 2004 initial levels.
Conclusion: The results obtained from this study will be able to reveal whether the metabolic effects in organism created by ACE gene polymorphism are triggered or not as a result of exercise and life-style.
Keywords: genetics, polymorphism, physical fitness, training.

Introduction

Relationship between genetic and sportive performance, fitness or healthy life is revealed by cross-sectional studies which have been carried out over the last quarter century and which include a new finding coming out each passing day. A great majority of the conducted researches are restricted in terms of their status due to insufficiencies related to both economy and sample group and cannot reflect the society-wide. The minority of the conducted researches related to the development of genetic and sportive performance is longitudinal. Repeating the genetic studies conducted on individuals for a long period of time and revealing the differences or similarities between the obtained results and the other genotypes can create a new point of view and perception effect. Within this framework, the changes in behaviors or physical abilities caused by individual differences in time under the umbrella of environmental factors and life-style and the effects that they create in metabolism can be understood much better.

The codes of cells stored in the structure of the DNA vary according to each individual. These differences between individuals may result in different levels of effects to the warnings or reactions (training loads, training adaptation, environment adaptation, the way of diet, type of muscle fibers, blood pressure etc.) they have encountered. Genetic structure affects individuals fitness level and exercise adaptation. Thus, individuals with the same genotype structure can respond to exercises performed in a similar manner on a regular basis [1]. In this study, we specifically focus on angiotensin I-converting enzyme (ACE) gene, which has been one of the most extensively studied polymorphisms in the field of performance genetics.

The ACE gene is known to have effects on the muscular force & the degree of fatigue (aerobic endurance) and adaptation to workout sessions [2]. ACE has an essential role in the regulation of cardiovascular function and metabolic processes in muscles. The renin-angiotensin-aldosterone-system exerts an important role in systemic regulation of blood circulation and blood pressure [3]. ACE catalyzes the conversion of angiotensin I to angiotensin II, which causes vasoconstriction and through the release of aldosterone influences the regulation of electrolytes and water. In addition, ACE reduces the vasodilatory effect of bradykinin causing an increase in blood pressure [4,5].

ACE gene includes a polymorphism enclosing of the availability (insertion, I) or nonentity (deletion, D) of a 287 base pair sequence in intron 16 [5,6].comprising 26 exons and encode for ACE, which perform operative role on various substrates. ACE gene polymorphism appears to have significant mission on ACE at a tissue level [2,7] and may effect angiotensin II production [8] Higher ACE levels increase angiotensin II productivity and thus the increased level of plasma angiotensin II restricts the blood flow to the tissues[1].

ACE genotype variants have different characteristics (polymorphism) respectively; DD homozygous, II homozygous and ID heterozygous [9,10]. D allele is associated with high ACE activity, leading to increased levels of angiotensin II and improving performance in strength training, I allele assists the performance of endurance athletes through factors such as the mechanical efficiency of skeletal muscles and the muscle fiber ratio [11], and the I/D (compound heterozygous) allele is associated with normal ACE activities, partial advantage is observed for both properties [9,10,11].

Researches in which a lot of genes have been used and which reflect the great majority of the society can reveal clearer and more explanatory information. Even though the characteristics related to physical performance pass down, it is known that factors such as life-style and environmental factors affecting individual differences, exercise, healthy diet and stress determine the physical status or fitness level of the individuals. Analyses of the genetic contribution to the physical performance phenotypes provide not only insight into the importance of genetic factors but also in the contribution to the environmental factors [12]. Having the ideal genes does not guarantee Olympiad success or protection from cardiovascular diseases (high blood pressure, diabetes, heart diseases, Alzheimer, paralysis etc.).

Genes which are the determiners of lifetime are triggered as positive or negative with the effect of life-style and environmental factors. Individuals who have genetic susceptibilities to endurance characteristics can succeed in the activities where aerobic capacity or aerobic power is effective. It is a minimal chance that these individuals can be a successful sprinter or a bodybuilding athlete. The important thing is realizing the effects that genotypes can create and being able to adapt the manners (life-style) into the features in question.

The main objectives of this study is to determine the effect of ACE gene polymorphism on the parameters tested in the follow-up study, which has been carried out for many years and to find out whether the differences in ACE gene's metabolism due to the influence of parameters such as environmental factors, lifestyle and training, have a role in the development of sportive performance or not. This study may also reveal whether individual differences caused by genes will have any positive or negative role in performance unless there is a change in behavior or lifestyle.

Methods

Participants

The study group consisted of 59 male Turkish army officers (total number of the subjects participated in the study were 186 in 2004). The subjects who were not involved in the follow-up study (127 subjects) leaved from the army for special or health related reasons. No contact was made with the subjects during the 15-years period. The subjects took care to maintain their physical performance capabilities only under the task intensity & scope, and regularly participated in physical ability evaluation tests (two minutes push-ups, sit-ups, pull-ups, & 3000m run) and comprehensive health checks every year. The male subjects participating in the research study did not regularly deal with any sports activities as professionally. The subjects took care to maintain their physical performance capabilities only under the task intensity and scope, and participated in physical ability evaluation tests (two minutes push-ups, sit-ups, pull-ups, & 3000m run) and comprehensive health checks every year. Mean age of the subjects was 26 ± 1.4, body weight was 73 ± 2.2 kg, and height was 175 ± 2.4 cm. All subjects have provided written consent to participate in the study and appropriate ethics committee approval has also been granted.

3000m running test (VO_2max)

The subjects were given detailed information about the importance of the study before the tests began. All subjects participated in tests with sportswear. Subjects performed warm-up exercises for 20 minutes before starting the test. All subjects had attended 3000m running test. The tests were performed on the athletics track and the measurements were recorded with the hand stopwatch.

Body composition measurements

All subjects participated in body composition measurements with empty stomach early in the morning (subjects were informed about the purpose of the test before body composition measurement). Body weight and body composition were measured with the bio impedance technique using a INBODY 2000 electronic scale. The device was plugged in and calibrated to account for the weight of clothing (0.2 kg). Afterwards, data regarding a participant's age, body height, and sex were entered. Then, the subjects stood on the scale with their bare feet on the marked places. The device analyzes body composition based on the differences of the ability to conduct electrical current by body tissues (different resistance) due to different water content. All subjects were measured for certain body weight and body composition variables. The following measurements were made; body weight (kg), fat mass (kg), fat mass percentage (PBF), fat free mass (FFM, kg) & body mass index (BMI, kg/m2).

Genetic analysis

The ACE genotype was assessed essentially as described in [13].Each subject provided a written consent to participate in the study and appropriate ethics committee approval. Peripheral venous blood of subjects receiving the approvals were collected on K2EDTA scrapers and stored at -20 ° C until used for DNA isolation. All molecular analyses were carried out in the Molecular Medicine Research Laboratory of the Department of Pediatrics, Ege University Medical Faculty Hospital. "Genomic DNA was extracted from 200 l of EDTA-anti coagulated peripheral blood leucocytes using the QI Amp Blood Kit (QIAGEN, Ontario, Canada, Cat. no: 51,106). Amplification of DNA for genotyping the ACE I/D polymorphism was carried out by polymerase chain reaction (PCR) in a final volume of 15 l containing 200 M dNTP mix, 1.5 mM MgCl2, 1£ Buffer, 1 unit of AmpliTaq® polymerase (PE Applied Bio systems) and 10 pmol of each primer. The primers used to encompass the polymorphic region of the ACE were 5-CTGGAGACCACTCCCATCCTTTCT-3 and 5 -ATGTGG CCATCACATTCGTCAGAT-3" [14]. DNA is amplified for 35 cycles, each cycle comprising denaturation at 94°C for 30 s, annealing at 50°C for 30 s, extension at 72°C for 1 min with final extension time of 7 min. The initial denaturizing stage was carried out at 95°C for 5 min. The PCR products were separated on 2.5% agarose gel and identified by ethidium-bromide staining. Each DD genotype was confirmed through a second PCR with primers specific for the insertion sequence" [15]."The samples with II and DD homozygote genotypes and ID heterozygote genotype were selected at random. These samples were then purified by PCR products purified system (Genomics, Montage PCR, Millipore) and directly sequenced by the ABI 310 Genetic Analyzer (ABI Prisma PE Applied Biosystems)" [16].

Statistical analysis

Statistical analyses were performed using SPSS for Windows version 10 (SPSS Inc., Chicago, IL, USA). Methods applied were frequencies, descriptive statistics and means. Statistical significance was set at the $P< 0.05$ level. The mean differences between groups that have been split on two within-subject factors that are ACE genotype group and time were compared with two-way repeated measures ANOVA. The post hoc analysis was conducted with Least Significant Difference method (LSD). Lastly, the differences between 2004 and 2019 values with in each ACE genotype group were observed and analyzed by box-plot and paired t-test respectively.

Results

ACE genotype was determined in 59 subjects who form the basis of this report[13]. The dispersion of genotypes in the entire group (16.90 % II, n = 10; 44.10 % ID, n = 26; 39.00 % DD, n = 23) did not diverge from substantially from those estimated by the Hardy–Weinberg equilibrium. There was no significant deviation in the distribution of genotypes in the complete group in comparison to those stipulated by the Hardy-Weinberg equilibrium. All ACE genotype groups have shown significant increase on body fat mass & fat percentage, on the other hand; free fat mass (FFM) & body mass index (BMI) and 3000m running performance (VO_2max) have shown significant decrease in the test as compared to the 2004 initial levels [1,13]($P < 0.05$ for all).

Genotype	n	2004	2019	Time Effect (Within subject) *P Value*	Genotype Effect (Between subject) *P value*
II	10	44.63±2.63	29.18±4.59	0.000	0.019
ID	26	47.29±2.89	31.21±3.16		
DD	23	47.81±3.81	31.57±3.67		

Table1: Effect of ACE genotype on 3000m running (VO_2max) performance over time. (Significance level *$P < 0.05$)

The mean 3000m running (**VO_2max**) performance scores achieved, both in 2004 and 2019, were highest for subjects with genotype DD, intermediate for subjects with genotype ID, and lowest for subjects with genotype II. It is proven that there is a significant decrease in the 3000m running (**VO_2max**) performance on the average for all genotypes (p=0.000). After applying LSD test, it is showed that ID and DD genotypes have significantly greater 3000m running (**VO_2max)** scores compared to genotype II. In other words, the genotype does have a significant effect on this decrease. However, p value for interaction between decrease in 3000m running (**VO_2max)** score and genotype is 0.448, which is insignificant.

Genotype	n	2004	2019	Time Effect (Within subject) *P Value*	Genotype Effect (Between subject) *P value*
II	10	9.04±3.63	20.68±7.94	0.000	0.683
ID	26	8.96±2.03	18.9±5.92		
DD	23	9.1±2.33	18.5±4.82		

Table 2: Effect of ACE genotype on fat mass (FM) over time. (Significance level *P < 0.05)

The mean fat mass (FM) achieved, both in 2004 and 2019, were highest for subjects with genotype DD, intermediate for subjects with genotype II, and lowest for subjects with genotype ID in 2004 [1]. However, it was highest for with genotype II, intermediate for subjects with genotype ID and lowest for subjects with genotype DD in 2018. It is revealed that there is a significant increase in the fat mass on the average for all genotypes (p=0.000). However, the differences between fat mass of three genotypes were not significant by one-way ANOVA (p=0.683). In other words, the genotype does not have a significant effect on this increase. Also, p value for interaction between increase in fat mass and genotype is 0.33, which is insignificant.

Genotype	n	2004	2019	Time Effect (Within subject) *P Value*	Genotype Effect (Between subject) *P value*
II	10	61.95±5.18	36.49±5.06	0.000	0.786
ID	26	62.64±4.52	36.55±3.75		
DD	23	62.5±3.68	36.47±3.21		

Table 3: Effect of ACE genotype on fat free mass (FFM) over time. (Significance level *P < 0.05)

The mean fat free mass (FFM) achieved, both in 2004 and 2019, were highest for subjects with genotype ID, intermediate for subjects with genotype DD, and lowest for subjects with genotype II in 2004 [1]. However, it was highest for with genotype ID, intermediate for subjects with genotype II, and lowest for subjects with genotype DD in 2019. It is revealed that there is a significant decrease in FFM on the average for all genotypes (p=0.000). However, the differences between FFM of three genotypes were not significant by one-way ANOVA (p=0.786). In other words, the genotype does not have a significant effect on this decrease. Also, p value for interaction between increase in FFM and genotype is 0.759, which is insignificant.

Genotype	n	2004	2019	Time Effect (Within subject) *P Value*	Genotype Effect (Between subject) *P value*
II	10	12.41±3.96	23.68±5.83	0.000	0.805
ID	26	12.25±2.36	23.13±5.13		
DD	23	12.54±2.43	22.23±4.72		

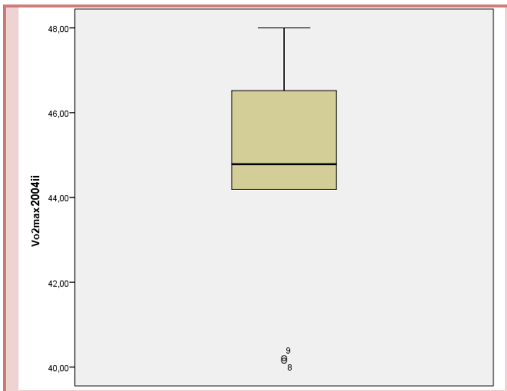
Table 4: Effect of ACE genotype on fat percentage (%, FM) over time. (Significance level *P < 0.05)

The mean amount off fat percentage (%, FM) achieved, both in 2004 and 2019, were highest for subjects with genotype DD, intermediate for subjects with genotype II, and lowest for subjects with genotype ID in 2004 [1]. However, it was highest for with genotype II, intermediate for subjects with genotype ID, and lowest for subjects with genotype DD in 2019. It is revealed that there is a significant increase in the fat percentage on the average for all genotypes (p=0.000). However, the differences between fat percentage of three genotypes were not significant by one-way ANOVA (p=0.805). In other words, the genotype does not have a significant effect on this increase. Also, p value for interaction between increase in fat percentage and genotype is 0.358, which is insignificant.

Genotype	n	2004	2019	Time Effect (within subject) *P Value*	Genotype Effect (between subject) *P value*
II	10	22.4±2.4	26.25±3.99	0.000	0.860
ID	26	22.53±1.71	26.05±2.89		
DD	23	22.5±1.71	25.71±2.27		

Table 5: Effect of ACE genotype on body mass index (BMI) over time. (Significance level *P < 0.05)

The mean BMI achieved, both in 2004 and 2019, were highest for subjects with genotype ID, inter mediate for subjects with genotype DD, and lowest for subjects with genotype II in 2004 [1]. However, it was highest for with genotype II, intermediate for subjects with genotype ID, and lowest for subjects with genotype DD in 2019. It is revealed that there is a significant increase in the BMI on the average for all genotypes (p=0.000). However, the differences between BMI of three genotypes were not significant by one-way ANOVA (p=0.860). In other words, the genotype does not have a significant effect on this increase. Also, p value for interaction between increase in BMI and genotype is 0.501, which is insignificant.



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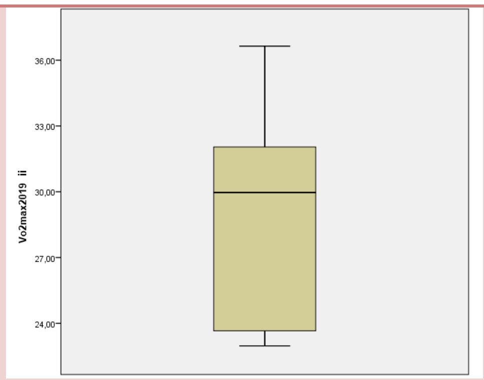
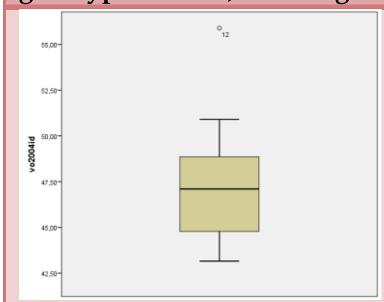


2019

Figure 1: It is seen that the median of 3000m running (VO_2max) score decreased over time for genotype II. Also, It has right skewed distribution in both 2004 and 2019.



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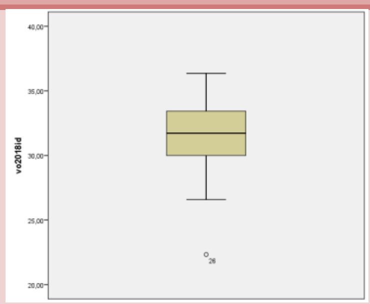

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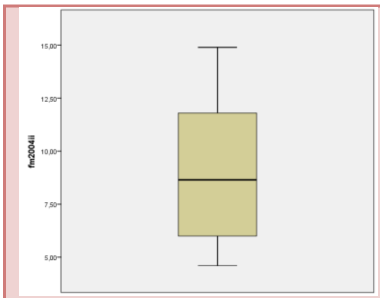
Figure 3: It is seen that the median of 3000m running (VO_2max) decreased over time for genotype ID. Also, It has almost symmetric distribution in both 2004 and 2019.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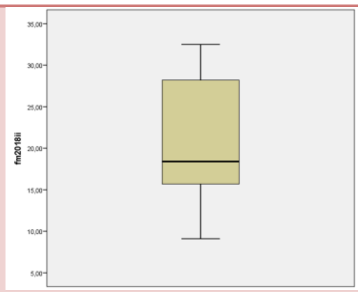
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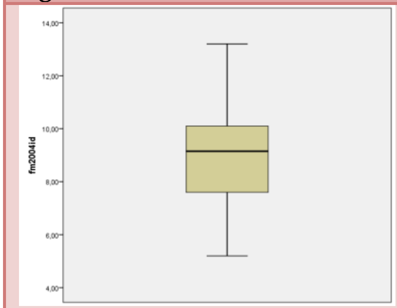
Figure 4: It is seen that the median of fat mass increased over time for genotype II. It has right skewed distribution both in 2004 and 2019.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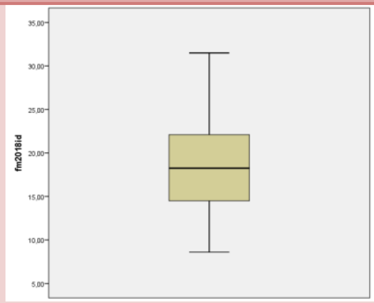
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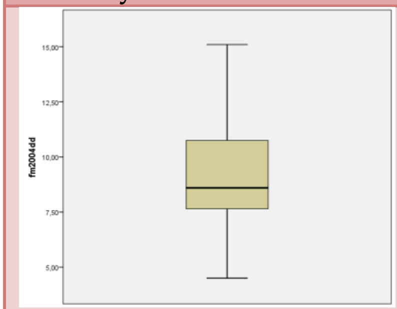
Figure 5: It is seen that the median of fat mass increased over time for genotype ID. It has almost symmetric distribution both in 2004 and 2019.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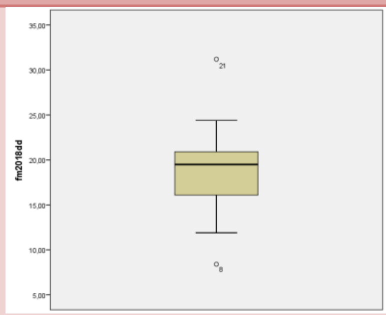
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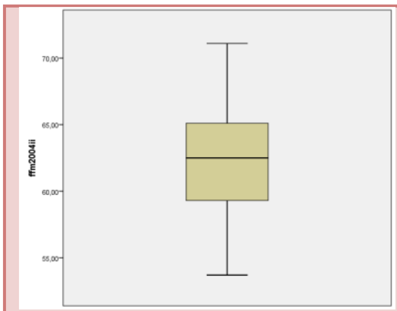
Figure 6: It is seen that the median of fat mass increased over time for genotype DD. It has right skewed distribution in 2004, but it has left skewed distribution in 2019. Also, there are two outliers in 2019.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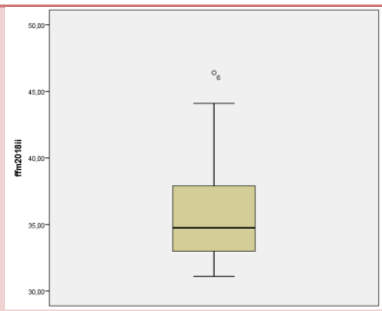
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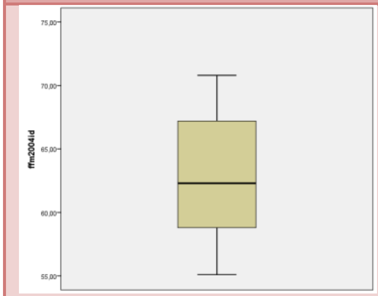
Figure 7: It is seen that the median of FFM decreased over time for genotype II. It has symmetric distribution in 2004, but it has right skewed distribution in 2019. Also, there is an

outlier observation in 2019.



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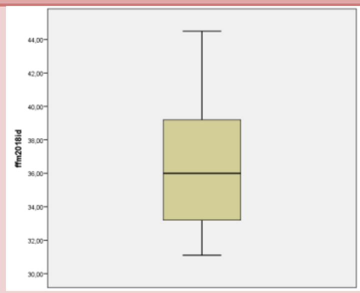

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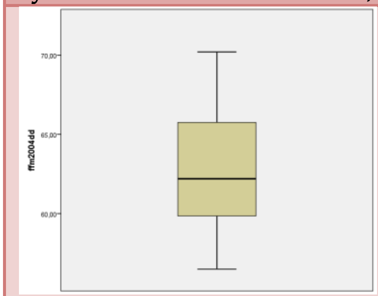
Figure 8: It is seen that the median of FFM decreased over time for genotype ID. It has symetric distribution in 2004, but it has right skewed distribution in 2019.



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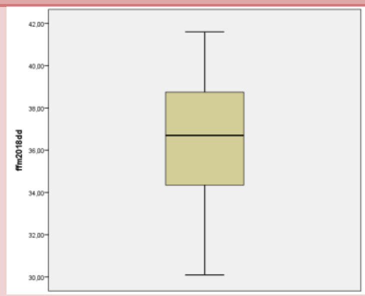
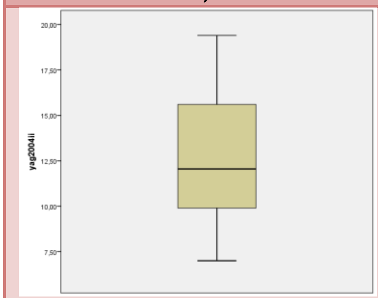


2019

Figure 9: It is seen that the median of FFM decreased over time for genotype DD. It has right skewed in 2004, but it has left skewed distribution in 2019.



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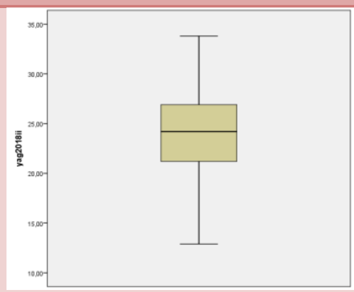

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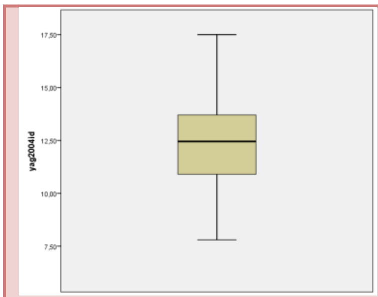
Figure 10: It is seen that the median of fat percentage (%) increased over time for genotype II. It has right skewed distribution in 2004, but it has symmetric distribution in 2019.



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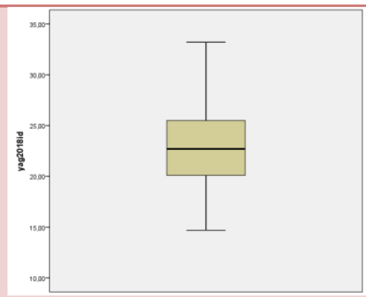

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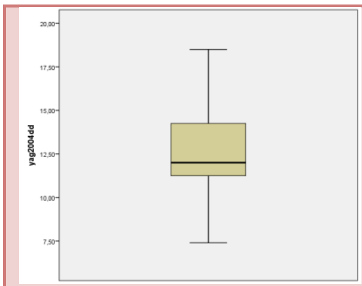
Figure 11: It is seen that the median of fat percentage (%) increased over time for genotype ID. However, it has symmetric distribution both in 2004 and 2019.



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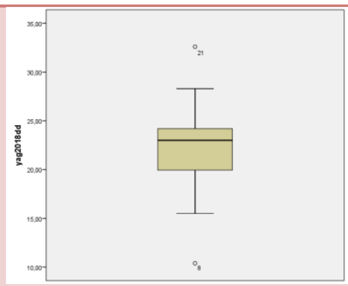
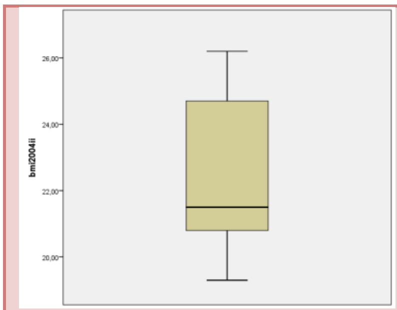


2019

Figure 12: It is seen that the median of fat percentage (%) increased over time for genotype DD. It has right skewed distribution in 2004, but it has left skewed distribution in 2019. Also, there are two outlier observations in 2019.



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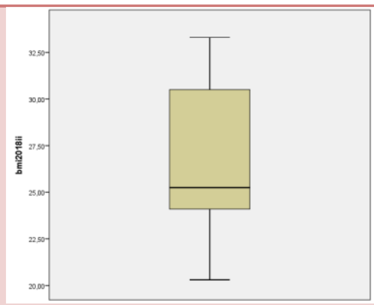

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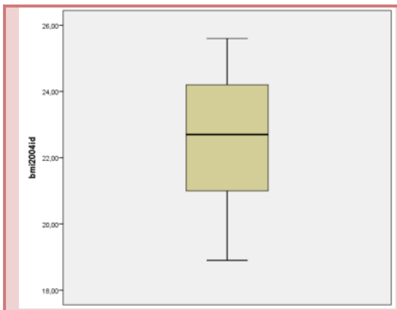
Figure 13: It is seen that the median of BMI increased over time for genotype II. However, it has right skewed distribution both in 2004 and 2019.



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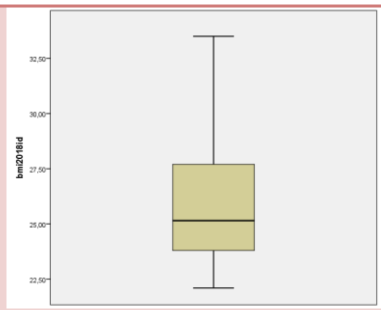

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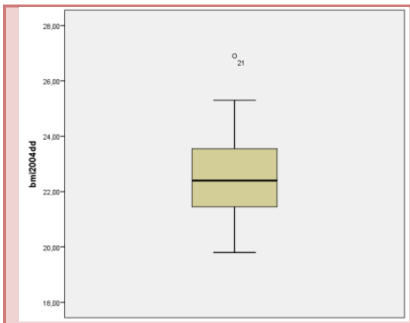
Figure 14: It is seen that the median of BMI increased over time for genotype ID. It has left skewed in 2004, but it has right skewed distribution in 2019.



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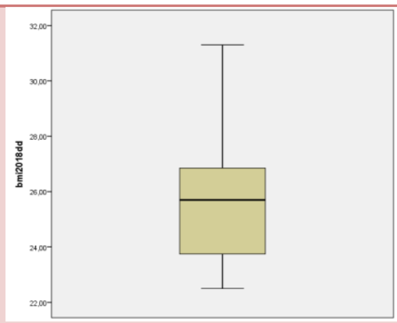

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Figure 15: It is seen that the median of BMI increased over time for genotype DD. It has almost symmetric distribution and an outlier observation in 2004, but it has right skewed distribution both in 2019.

Discussion

In this study, we have focused on the effects of the ACE genotypes on VO_2max and body composition among the army officers. The study project maintained both cross-sectional and follow-up study.

Throughout this study; during the first two weeks of the 12-week boot camp in 2004, 2400m run, 3000m run, 3000m run with military equipment, push-ups, sit-ups and pull-ups and body composition measurement (pre-test) & analysis of the ACE genotypes (II, ID, DD) was performed on 186 subjects. Subjects were participated combined training exercise program (aerobic endurance, anaerobic endurance, muscular endurance and military obstacle training) for two sessions, 6 days per week for 12 weeks. All subjects were re-enrolled in the above-mentioned performance tests (post-test) after completing the 12-week exercise program [13]. At the end of the cross sectional study, the first search on the data obtained from the subjects [13] which was stated in Zudin et al. (2011) review article about the first published report of the ACE genotype being associated with physical performance in the last 12 years [17].

Adaptations to physical exercise differ significantly while some individuals are more responsive than others to physical exercise intervention. Therefore, there is no strong correlation between the responses of individuals, they may gain improvements in one area; on the other hand changes are not seen in others. [18]. In this respect, individual variation in the response to exercise can be observed in many parameters such as blood pressure, body composition, muscular strength, aerobic & [19,20]. anaerobic capacity, anatomical structure and somatotypes (mesomorph, ectomorph & endomorph).

Genetic factors are determinants in 20-80% of the variation of important characteristics of athletic performance [21]. The study of Bouchard (2008) in sedentary individuals notifyed that the average increase in VO2max was 25%, uniformed training ranging from baseline to doubling VO2max in different exercises show interaction between the environment and genes [22]. In this regard, analyses of the genetic contribution to physical performance phenotypes provide not only insight into the importance of genetic factors but also in the contribution of environmental factors [12]. In this respect, overall gains in VO2max in response to endurance training depend on numerous factors, including the baseline fitness status of an individual, the duration and intensity of the training program, single workout ([23]. knowledge of the trainer and the talent of the athletes.

Likewise, genetic variants that determine the body composition and muscle fiber type ratio may have a positive or negative effect on athletic performance. Additionally, aerobic or anaerobic training ability varies between individuals. It appears to be genetically determined among individuals, partly due to the composition of the muscle fiber type (type I & type II [24]. Type I fibers (slow twitch oxidative fibers) have high resistance to fatigue (and are thus suited for endurance performance), type IIa fibers (fast twitch oxidative glycolytic fibers) are better suited for medium-term anaerobic exercise, and type IIb fibers (fast twitch glycolytic fibers) are adapted for short bursts of high speed and power [24,25,26]. Normally, the fast twitch muscle fibers are important for short-duration and high-intensity work bouts, where as the slow twitch muscle fibers are better suited for sub-maximal and prolonged activities[24] Similarly, Cerit et al. (2006) reported that "ACE DD genotype seems to have an advantage in development in short duration aerobic performance development that requires high level VO2max. There was also a linear trend in performance enhancement as ACE DD > ID > II ACE DD" [13].

After realizing the relationship between ACE genotypes on muscle fiber type & the development of VO2max, it is important to figüre out the cardiovascular effects of the ACE gene in metabolism and muscle. ACE gene has an essential role in the regulation of cardiovascular function and metabolic processes in muscles. High ACE activities converts the angiotensin I into angiotensin II and which causes, vasoconstriction, and the short and long term effects on the organism are observed as weight loss, protein fragmentation in skeletal muscle mass and an increase in oxygen level or consumption[27]. These mentioned effects of ACE gene polymorphism can determine the behavior or performance differences between individuals partially or completely. For instance; ACE DD genotype is related with higher ACE activity[6], angiotensin II secretion rate & the high rate of the fast twitch muscle fiber [8,3]. This genotype plays a key role in the development of speed & power parameter, which is the determinant of anaerobic activities [28,29]. Additionally, it has more advantage in low volume high intensity type of anaerobic workout period [3].

There are many cross-sectional studies in the literature about the effects of ACE gene polymorphism on metabolism. In the framework of this studies, after the long term breaks given to exercise brings about loss of improvement, in order to obtain the results of VO2max & body composition measurements of the same subject group (59 officers) whether the factors affecting individual performance can result from gene polymorphism or not.

In our study, we obtained in advance the results of the body composition measurement of the subjects in order to compare the effects of ACE gene polymorphism on VO2max performance during cross-sectional & follow-up studies. To be able to reveal the differences occurring in the body composition and aerobic performances by re-testing (3000 m run & body composition variable) the individuals' changing metabolism almost 59 individuals from the same sample group (186 subjects) as in the research in 2004, due to the life-style and environmental factors 15 years later again after the data obtained from research carried out in 2004 [1,13].

In this framework, due to the fact that ACE DD and ID genotypes have high level of anabolic structure (using high rate of fast twitch muscle fibers) in comparison to II genotype, it is assessed that they may have lost more energy and that's why they incur losses of body weight and percentage of fat [1]. Moreover, ACE DD genotype improves the aerobic capacity and increases the VO2max levels and shows better performance in short duration aerobic endurance training [13,2,3]. and performance improvement in maximal efforts, in which VO2max is dominant and lasting between 8-10 minutes[13,2] (Cerit et al.2006; Rieder et al. 1999). The study of Agnes et al. (2016) showed a more remarkable trend of increase in the VO2peak during the 5-year period among skiers (male & female) with the ACE ID genotype. However, no significant genotype-related associations were found in the dynamics of the VO2peak during the 5-year period [30]. Similarly, Holdys et al. (2011) reported that no association was found between I/D polymorphism in the ACE gene with VO_2max values. All of the subjects (154 men and 85 women) in their study were professional athletes representing various sport disciplines and levels of fitness. They also stated that I allele was found to have an advantageous effect on higher VO_2max values[31].

Unlike these studies, we found the performance level of VO_2max were highest for subjects with genotype DD (47.81±3.81; 31.57±3.67), intermediate for subjects with genotype ID (47.29±2.89; 31.21±3.16) and lowest for subjects with genotype II (44.63±2.63; 29.18±4.59), both in 2004 [1], and 2018. It is proven that there is a significant decrease in the VO2max performance on the average for all genotypes. Our study showed that ID and DD genotypes have significantly greater VO2max performance compared to genotype II. In other words, the genotype does have a significant effect on this decrease. However, p value for interaction between decrease in VO2 max performance and genotype is 0.448, which is insignificant (Table 1).

Studies of Sander et al. (2015) supporting our study, they stated that subjects carrying D allele demonstrated larger improvements in VO2max and capillary length after the training stimulus of recreational skiing [32]. Furthermore, Nicole et al. (2014) reported that D-allele carriers showed positive improvement in VO2max following high intensity interval training, as a result of the ergometry exercise performed in 20 active healthy adults 3 days a week for 6 weeks. However, ACE I-allele carriers would be expected to gain greater VO2max improvements following continuous moderate exercise than high intensity interval training [6]

In contrast to our study, Frederiksen et al. (2003) reported that they found no substantial effects of ACE genotype on physical performance in neither the cross-sectional nor the follow-up study [33]. However, in our studies all ACE genotype groups showed significant differences about VO2max & body composition variables in the follow-up study (2019) compared to (2004) cross-sectional research [1]. (Table 1, 2, 3, 4). Similar to our result, Zhao et al.(2003) reported that individuals with ACE DD genotype have a greater VO2max than those with the ACE II genotype[34]. In a number of previously conducted studies has been stated that ACE DD genotype is affect VO2max in healthy adults [35] and some studies have shown that there is no relationship between ACE genotypes and VO2max development [20].

In the literatüre, some studies has been expresed that a maximal a-VO2 diff decrease with ageing partially contributes to age-reductions in VO2max [36,37,38,39] and muscle mass usually peaks at 25–30 years and there-after begins to decline[40]. Also in our study, VO2max and muscle mass level decreased in all subjects with increasing age.

The effects of ACE gene polymorphism on the development of VO2max may also be create a substantial changes on body composition. Montgomery et al. (1999) reported that "The effect of genetic factors as well as other variables, such as the training that creates changes in body composition, is an undeniable reality" [41]. Thus, body fat and body weight could be raised and lowered accordingly by stimulating and inhibiting the production of Ang I [42]. In studies involving genetic and sportive performance relationships, the ACE II genotype is indicated to have a close relationship with the low body fat percentage (%, FM) and uses fatty acids efficiently as an energy source [43,44,45]. The body fat percentage increase of the ACE I variant has been clarifyed to be unable to effectively provide the fuel source of fatty acids during the long-term aerobic activities, whereas losing more fat mass during high-intensity workout periods [41,46].

Bassame et al. (2007) reported that the ACE II genotype was observed as not only increasing the muscle strength compared to other genotypes following the training period of 10 weeks, but also increasing the fat mass & lean mass [47]. Likewise, Passaro et al. (2011) & Kijin et al (2012) stated that ACE ID polymorphisms are associated with fat distribution. The effects of exercise on body composition was more effective in I allele. However, D allele of ACE gene is postulated to manifest lower body fat mass (%, FM) compared to I allele. [48].

Another studies comparing body composition of ballet dancers with normal adults stated that ballet dancers had significantly lower score not only for fat mass rate but also free fat mass compared to the control group of women of the same age. They also found that ACE DD genotype of ballet dancers had higher percentage of body fat and fat mass compared to ACE II genotype when comparing body composition of ballet dancers per genotype. From the result of this study, ACE DD genotype from ACE ID polymorphism was related to higher percentage of body fat for ballet dancers [44].

In this regard, our study showed that amount of fat mass were highest for subjects with genotype DD (9.1±2.33), intermediate for subjects with genotype II (9.04±3.63), and lowest for subjects with genotype ID (8.96±2.03) in 2004 [1]. However, it was highest for with genotype II (20.68±7.94), intermediate for subjects with genotype ID (18.9±5.92), and lowest for subjects with genotype DD (18.5±4.82) in 2018 (Table 2). It is revealed that there is a significant increase in the fat mass on the average for all genotypes (p=0.000). However, p value for interaction between increase in fat mass and genotype is 0.33, which is insignificant.

Studies of [49] investigate the effect of 12 weeks of combined training on changes in body composition (weight, body fat percantage, percantage of muscle mass, body mass index) according to the ACE gene polymorphism in 21 senior Korea Air Force Academy cadets. They reported that body composition factors among ACE gene polymorphism groups between pre & post-training in all groups were not statistically significant [49].

Exercise-mediated change on body composition may differ according to ACE gene polymorphism [48].Data from a study of Lemes et al. (2013) stated that angiotensin converting enzyme insertion/deletion polymorphism is associated with increased adiposity and blood pressure in obese children and adolescents showed that DD and ID have lower body fat when compared to II genotype[50,51]. On the other hand, studies related with the European population did not demonstrate differences for body fat in any group related to ACE gene[52]. Similar to these expression, it is indicated in another study that there is no significant correlation between body composition and ACE genotype [53].

In our study, we reported that the amount of free fat mass were highest for subjects with genotype ID, intermediate for subjects with genotype DD, and lowest for subjects with genotype II in 2004 [1]. However, it was highest for with genotype ID, intermediate for subjects with genotype II, and lowest for subjects with genotype DD in 2018 (Table 3). It is revealed that there is a significant decrease in free fat mass on the average for all genotypes. However, the genotype does not have a significant effect on this decrease. Also, p value for interaction between increase in free fat mass and genotype is 0.759, which is insignificant. In addition, we found the amount off fat percentage were highest for subjects with genotype DD, intermediate for subjects with genotype II and lowest for subjects with genotype ID in 2004 [1]. However, it was highest for with genotype II, intermediate for subjects with genotype ID, and lowest for subjects with genotype DD in 2018. It is revealed that there is a significant increase in the fat percentage on the average for all genotypes. However, the genotype does not have a significant effect on this increase (Table 4).

In another study on the respective gene, the ACE II genotype has been determined to increase the body mass index in normal subjects [27]. Katsuya et al. (1995) reported that patients with the DD genotype had lower BMI than individuals with the ID genotype [54]. The studies of Oishi et al. (2016), analyzed the ACE I/D gene polymorphism among the Brazilian rafting team. They found that no differences between the percentage of fat among athletes of the DD and ID genotypes, but athletes carrying the I allele had significantly higher BMI and muscle mass[11].

We may also found that, the mean BMI were highest for subjects with genotype ID (22.53±1.71), intermediate for subjects with genotype DD (22.5±1.71), and lowest for subjects with genotype II (22.4±2.4) in 2004[1]. However, it was highest for with genotype II (26.25±3.99), intermediate for subjects with genotype ID (26.05±2.89), and lowest for subjects with genotype DD (25.71±2.27) in 2018. It is revealed that there is a significant increase in the BMI on the average for all genotypes (Table 5). However, the genotype does not have a significant effect on this increase. Also, p value for interaction between increase in BMI and genotype is 0.501, which is insignificant ($P < 0.05$ for all).

In conclusion, we found significant effects of ACE genotype on physical performance & body composition measurement for the cross-sectional study. We observed considerable change of physical performance and body composition measurement on the subjects for the follow-up study, ACE polymorphism does not have a significant effect on this alteration.

We hypothesis that individual performance differences caused by genes will not provide a meaningful development in the way that there are no changes in the behaviors or lifestyles of individuals. The results obtained from this study will be able to reveal whether the metabolic effects in organism created by ACE gene polymorphism are triggered or not as a result of exercise and life-style.

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Conflicts of Interest

The author declares that there is no conflict of interest regarding the publication of this paper.

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Evaluation of the Ability to Cope with Stress, Self-Efficacy Beliefs and Sport Self Confidence Situations of Injured and Non-Injured Athletes

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Abstract

Purpose: The purpose of this study is to assess the ability to cope with stress, self-efficacy beliefs and sport self-confidence situations of the injured athletes.
Methods: There were a total of 221 athletes (age: 21.35 ± 4.74), including 133 women and 88 men. The data was collected by using coping with stress, self-efficacy beliefs and sport self- confidence scales. In the analysis of the research data, t-Test, One Way Anova, Mann Whitney U and Kruskal Wallis tests were used.
Results: The result of the analysis show that there is a significant difference ($p< 0.05$) in constant self-confidence, state self-confidence, the self-efficacy beliefs and the social withdrawal which is the sub-dimension of the coping with stress of the injured male and female athletes. There is a significant difference ($p< 0.05$) in the self-efficacy beliefs and the relaxation which is the sub-dimension of the coping with stress of the injured and uninjured athletes. There is a significant difference ($p< 0.05$) in the self-efficacy beliefs and the avoidance which is the sub-dimension of the coping with stress in terms of league levels of the injured athletes. The self-efficacy beliefs, constant self-confidence, state self-confidence and the sub-dimensions of the coping with stress in terms of sports ages of the injured athletes have no significant difference ($p<0.05$). The self-efficacy beliefs, constant self-confidence, state self-confidence and the cognitive-physical coping, the avoidance, the social withdrawal which are the sub- dimensions of the coping with stress in terms of sports branches of the injured athletes have a significant difference ($p< 0.05$). The self-efficacy, the coping with stress and sport self- confidence in terms of injury durations have no significant difference ($p< 0.05$). The self- efficacy beliefs, constant self-confidence, state self-confidence and the sub-dimensions of the coping with stress in terms of injury area have no significant difference ($p< 0.05$).
Conclusion: As a result, the coping with stress, the self-efficacy beliefs and the sport self- confidence of the injured and uninjured athletes can be varied in terms of gender, league level, injury area and injury duration.
Keywords: Injury, Self-efficacy Belief, Coping with Stress, Sport Self Confidence.

1.Introduction

Elite athletes have a 50% injury risk within a year. The effect of injury can be more or less. The material, the tools, the equipments used in the sport, sporting environment and financial supports cause injury of the athlete and prolongation of the injury[1]. In a study conducted in Turkey, including the first league and second league teams, the match injuries and the training injuries were found to be 17,3% and 21,2%, respectively[2]. It has been reported that about 65-91% of Swedish football players are injured in one year[3]. In the other study on gymnastics, it is explained that there was about 83% injury in two years period[4].

Physical factors are the main causes of sports injuries, but psychological factors cause the sport injuries, as well. Recent researches show that psychological factors play an important role in the injury rehabilitation process[5].Depending on the psychological factors in the occurrence of injuries; muscular imbalance, high-speed collision, extreme training, physical fatigue are the main causes of sports injuries[6,7].Stress level is defined as an important dimension of sports injuries. The searches examine the relationship between stress and injury in life[8,9]. Individuals may experience positive or negative stress conditions. The situations such as divorce of the individuals, death of your loved ones, depression, mental disorders, works in the school, loss of position in the sports, selection eligibility criterion, social status, contest status anxiety, social support, coping skill, self-confidence, self-efficacy can be give as examples[10].

As a result, it is important for both the athlete and the coach to understand the cause of the injury, to be aware of the changes in the life of the athlete and the stressful situations experienced during the training or competition. It is important for the athlete to know the consequences and the process that the injury has brought or to take precautions to prevent the injury beforehand. While the reactions and recovery times of every individual are different, the coach's injury rehabilitation knowledge, experience and supports given to the athlete will contribute to overcome more positively. Otherwise, it is possible to encounter such the situations as alienation from training and even leaving the sport completely in the process.

2.Materials and Methods

The priority in the study was to identify the injured athletes. The injured athletes have been examined for their injury duration and area. The severity of the injury has been related to the period of the injury and has been formed by taking references from previous studies.

Injuries are classified as mild (1-7 days), moderate (8-21 days), severe (21 days and over)[11]. How far away the athlete is from the game determines seriousness of injury. According to the studying of UEFA (Union of European Football Associations), the seriousness of injury was divided into three as minor (1 to 7 days lost), moderate (8 to 28 days) and major (more than 28 days)[2].

Injuries were examined in terms of gender, duration of injury, disability area and place of occurrence of injury. Injuries periods were divided into 7 days, 8-28 days and 28 days, and studies were made in this direction[12]. 1-7 days slight, 7-21 days moderate, 21 days and severely injured[13]. In the course of these studies, our study also examines the severity of injury based on the data obtained in terms of days lost.

2.1 Participants

There were a total of 221 athletes (age: 21.35 ± 4.74), including 133 women (age: 20.95 ± 4.62) and 88 men (age: 21.97 ± 4.90). In the study, the purposeful sampling method was used[14] .The athletes participating in the Super league, first league and second league level competition for football, volleyball, basketball and handball branches participated.

2.2 Data collection

In the study, the Sport Self Confidence Scale developed by Vealey[15], the Self-Efficacy Scale developed by Riggs et al.[16], and the Cope with Stress in Sports Scale developed in Canada by Gaudreau and Blondin[17], adapted by Arsan[18] were used.

In addition, the injury information form created by the researcher was applied to the athletes before the training, taking the necessary permits from the athletes' parents and coaches

2.3Data analysis

Within the scope of the study, the kurtosis and skewness values were examined in the analysis of the data to determine whether the data showed normal distribution. These values were taken between -1.96 and +1.96. Shapiro-Wilks if the group size is less than 50, otherwise Kolmogrov-Smirnov test was used to examine normality of the scores[19]. On the basis of the normal distribution of the data structure, T-test and One Way ANOVAanalyzes were performed according to the related variables. Mann Whitney U test and Kruskal Wallis tests were applied for the data structure with non-uniform distribution.

3.Results

3.1. T-test Table of Self-efficacy Beliefs and Sport Self-confidence Scores of Injured Female and Male Athletes

	Group	N	$\bar{X}$	S	sd	t	p
Continuous Sport Self- confidence	Female	94	90.83	14.16	158	-2.91	**.004***
	Male	66	97.33	13.48			
State Sport Self- Confidence	Female	94	91.10	14.31	158	-2.74	**.007***
	Male	66	97.50	14.89			

Self-efficacy Belief	**Female** **Male**	**94** **66**	**34.63** **37.69**	**5.20** **5.64**	**157**	**-3.52**	**.001***

*p< 0.05

While table 1 is examined, there is a significant difference in constant sport self-confidence (t = -2.91, p <0.05), state sport self-confidence (t = -2.74; p <0.05) and self-efficacy beliefs (t = -3.52; p <0.05) of injured male and female athletes.

3.2. Mann Whitney U-Test Results of the Cope with Stress of Injured Female and Male Athletes

	Group	n	Rank Average	U	p
Cognitive and Physical Effort	Female Male	94 66	82.87 77.13	2.87	**.440**
Relaxation	Female Male	94 66	84.33 75.05	2.74	**.210**
Seeking for Support	Female Male	94 66	80.10 81.08	3.14	**.895**
Avoidance	Female Male	94 66	74.97 88.38	3.62	**.071**
Social Withdrawal	Female Male	94 66	71.72 93.00	3.92	**.004 ***
Expression of Nonconforming Feelings	**Female** **Male**	**94** **66**	**75.06** **88.24**	**3.61**	**.075**

While Table 2 is examined, there is a significant difference (U = 3.92; p <0.05) in the social withdrawal from the ability to cope with stress sub-dimension of injured female and male athletes. There was no statistically significant difference in other sub-dimensions (p> 0.05).

3.3. Self-efficacy Beliefs T-test Analyzes of İnjured and Non-injured Athletes

Self-efficacy Beliefs	N	$\bar{X}$	S	sd	t	p
Non-İnjured Athletes	**61**	**33.98**	**5.11**			
İnjured Athletes	**159**	**35.88**	**5.58**	**218**	**-2.30**	**.022 ***

*p < 0.05

While table 3 is examined, there is a significant difference (t = -2.30; p <0.05) in the self- efficacy beliefs of the injured and non-injured athletes.

3.4. Sport Self-Confidence and the Cope with Stress Sub-dimensions Mann Whitney U-test of Injured and Non-injured Athletes

	Group	n	Rank Average	U	p
Cognitive and Physical Effort	Non- İnjured İnjured	61 160	101.18 114.74	5.47	**.158**

Relaxation	Non- İnjured	61	95.34	5.83	**.024***
	İnjured	160	116.97		
Seeking Support	Non- İnjured	61	104.15	5.29	**.323**
	İnjured	160	113.61		
Avoidance	Non- İnjured	61	112.33	4.79	**.849**
	İnjured	160	110.49		
Social Withdrawal	Non- İnjured	61	115.84	4.58	**.486**
	İnjured	160	109.16		
Expression of Nonconforming Feelings	Non- İnjured	61	98.97	5.61	**.083**
	İnjured	160	115.59		
Constant Self- confidence	Non- İnjured	61	103.18	5.35	**.261**
	İnjured	160	113.98		
State Self Confidence	**Non- İnjured**	**61**	**104.11**	**5.30**	**.323**
	İnjured	**160**	**113.62**		

*p < 0.05

While table 4 is examined, there is a significant difference in relaxation (U = .5.83, p <0.05) from the sub-dimension of cope with stress of injured and non-injured athletes. There was no statistically significant difference in continuous sport self-confidence and state sportive self- confidence dimensions (p> 0.05).*3.5. Self-efficacy Beliefs, Sportive Self-Confidence, and the Cope with Stress Sub- Dimensions Kruskal Wallis H-Test in terms of League Levels of Injured Athletes*

	n	Group	Rank Average	sd	x2	p
Cognitive and Physical Effort	67	Super League	89.95	2	4.14	**.126**
	97	1.League	72.89			
	57	2.League	81.11			
Relaxation	67	Super League	86.01	2	1.17	**.557**
	97	1.League	78.00			
	57	2.League	77.10			
Seeking for Support	67	Super League	79.49	2	.674	**.714**
	97	1.League	78.46			
	57	2.League	85.99			
Avoidance	67	Super League	81.97	2	9.96	**.007***
	97	1.League	89.88			

	57	2.League	60.06			
Social Withdrawal	67	Super League	75.61	2	2.89	**.235**
	97	1.League	87.51			
	57	2.League	74.19			
Expression of Nonconforming Feelings	67	Super League	81.79	2	4.54	**.103**
	97	1 League	86.65			
	57	2.League	66.61			
Constant Self Confidence	67	Super League	87.82	2	2.17	**.338**
	97	1. League	77.94			
			74.49			
	57	2.League				
State Self Confidence	67	Super League	81.56	2	.552	**.759**
	97	1. League	77.66			
	57	2. League	84.43			
Self-efficacy Belief	67	Super League	93.12	2	7.34	**.025***
	97	1. League	75.92			
	57	**2. League**	68.14			

While table 5 is examined, there is a significant difference (x2 = 9.96; p <0.05) in the dimension of avoidance from cope with stress sub-dimensions in terms of league levels of injured athletes. There was no significant difference (p> 0.05) in state sport self-confidence and continuous sport self-confidence. There is a significant difference in self-efficacy beliefs (x2 = 7.34; p <0.05).

3.6. Self-efficacy Beliefs Anova Test Results in terms of Branches of Injured Athletes

	Ss	Sd	Mean Squares	F	p	Significant Difference

Self-efficacy beliefs	**720.60**	**3**	**240.20**	**8.86**	**.000**	**Volleyball-Football* Handball-Football* Football- Basketball***

*p < 0.05

While table 6 is examined, there is a significant difference (F = 8.86; p <0.05) in the self- efficacy beliefs of the injured athletes in terms of branches.

3.7. The Cope with Stress and Sport Self-confidence Kruskal Wallis H-Test in terms of Branches of Injured Athletes

	n	**Group**	**Rank Average**	**sd**	**X2**	**p**
Cognitive and Physical Effort	160	Volleyball Handball Football Basketball	87.82 59.41 92.65 87.21	3	13.20	**.004***
Relaxation	160	Volleyball Handball Football Basketball	80.82 70.17 87.48 100.00	3	5.31	**.150**
Seeking for Support	160	Volleyball Handball Football Basketball	83.04 76.44 84.10 73.39	3	1.06	**.786**
Avoidance	160	Volleyball Handball Football Basketball	62.29 105.23 92.98 79.79	3	26.55	**.000***
Social Withdrawal	160	Volleyball Handball Football Basketball	67.52 96.81 85.79 90.39	3	12.68	**.005***
Expression of Nonconforming Feelings	160	Volleyball Handball Football Basketball	73.26 87.52 86.77 87.00	3	3.65	**.301**
Constant Self Confidence	160	Volleyball Handball Football Basketball	79.69 63.90 101.25 102.71	3	13.84	**.003***
State Self Confidence	160	Volleyball Handball Football	78.38 68.87 104.52	3	9.86	**.020***

Basketball	**88.36**

*p < 0.05

While table 7 is examined, there is a significant difference of cognitive and physical coping (x^2=13.20; p<0.05), social withdrawal (x2 = 12.68, p <0.05), avoidance (x2 = 26.55, p <0.05) from the cope with stress sub-dimensions in terms of branches of injured athletes. There is a

significant difference in the sub-dimensions of state sport self-confidence (x2 = 9.86, p <0.05) and continuous sport self-confidence (x2 = 13.84; p <0.05).
The results of other analyze;

- There was no significant difference in the self-efficacy beliefs, constant self confidence, state self-confidence and being able to cope with stress sub-dimensions (p> 0.05) of the injured athletes as a result of the applied T-test and the Mann Whitney U-test analyses in terms of sport ages.

- There was no significant difference (p> 0.05) between self-efficacy, stress coping and sport self-confidence in terms of injury durations (severity).

- There was no significant difference (p> 0.05) between constant self-confidence, state self-confidence and stress coping sub-dimensions in terms of injury position with self- efficacy belief.

4.Discussion

Although Andersen and Williams did not find a distinction in terms of personality traits and sources of coping for stress in life, Hanson et al.[20] emphasize that coping resources are an important determinant of sport injury [21]. Johnson and Ivarsson[3] also found increased risk of injury in athletes who did not have effective coping. Petrie[21] found that there is an association between increased injury risk and high level of anxiety and emphasized that the ability to cope is related to the result of injury. He noted that the number of days lost after injury is associated with anxiety. Williams et al. stated that the sources of coping are determinants of disability for male and female volleyball players[22].
The athletes with low levels of self-confidence were reported to have lower self- confidence levels after having suffered a injury[23,24]. According to a study by Green and Weinberg[24], it is found that individuals who lack self-definition in sport have lower physical self-confidence and negative psychological response to injury.
Injured athletes were found to have higher levels of physical trait anxiety and bodily trait anxiety levels than uninjured athletes. In addition, individuals with reduced stress sensitivities were found to have a low incidence of disability. 27 out of 30 studies in sports injuries and psychosocial factor research, Williams and Anderson[25] found a positive relationship

between sports injuries and high stress in life. The risk of injury is directly related to stress in life[14]. Junge[26] found that there is a risk of injury between the emotional states and the stress level of the athletes. High-level anxious athletes experience more stressful situations and are more likely to face injury risk.
Johnson and Ivarsson[3] also found an association between ınjury and anxiety. They found that injured athletes have a higher level of stress than uninjured athletes. Lavallee and Flint[27] emphasized that there is a positive relationship between high competition anxiety and increased risk and severity of injury.
In another study conducted, there is a relationship between stress and injury in football players [11]. Athletes with high anxiety and low social support in their lives were found to have a higher risk of injury. Athletes under high stress are more likely to suffer injuries. The athlete with a high stress in life has a narrowing of sight, which increases the risk of injury [9]. In the study conducted with gymnasts, it was found that stressful life was related to the severity and the number of injuries[4].Williams and Roepke[28] found a positive relationship between stress and injury in the lives in 18 of the 20 of researchers. Hanson, Mc Cullagh, and Tonymon[20] found no relationship between the severity and frequency of injury in the study of male and female athletes[22].
Smith, Smoll and Ptacek[29] found that male and female athletes with low social support and coping in basketball, wrestling and gymnastics branches have a high risk of ınjury. In the study conducted by male and female football players in the first league level of Sweden, it was stated that women are more prone to injury than men and that state anxiety is positively associated with negative life events but not with daily life situations, coping and frequency of injury. There is no relationship with the coping and the occurrence of injury, the stress of negative life events, the state anxiety and the frequency of injury [30].

In the study of Kerr and Minden with gymnastics at level 2 and level 3, no relationship between anxiety and injury measurement was found. In another study with university-level athletes, there is no significant difference in the severity of injury of males and females[31].
There is a relationship between negative life stress results of male and female athletes but there is no relation in positive life results. There was no difference between sexes in stress level of life. Despite the fact that women lived more stressfully than men, there was no difference between sexes[21].

5. Conclusion

As a result, the coping with stress, the self-efficacy beliefs and the sport self-confidence of the injured and uninjured athletes can be varied in terms of gender, league level, injury area and injury duration.

Authors Contribution

In our study on the examination of psychological conditions of athletes who have had disability, it is thought that they will contribute to the literature.

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The Academic Motivation of Generation Z: Value-oriented and Cognitive Aspects

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Abstract

The availability of an intergenerational gap in the perception of the environment is now supported by more and more arguments. The generation of systems of values, typical for different generations, is performed in different environments; this factor influences the attitude towards self and the society as a whole, and it applies to each process comprising life activities. Present-day students represent youngsters born in the early 21st century. They have grown up and developed under the influence of socio-cultural changes, which are underway in the environment of widely spread information technologies, and they influence the socio-psychological peculiarities of their personalities. This factor should be considered in the process of developing educational environments at universities, which represent the media for professional self-identification and development. Currently, Russian higher education institutions are in the process of modernization; new types of educational environments are being developed, and the same about the teaching materials responsive to facts of life; the applicability of new teaching methods and technologies is being tested. The educational environment's readiness to accept the new generation, the awareness of its features, peculiarities, and motivation comprise the guarantee that highly qualified specialists can be nurtured by the universities. Peculiar value orientations and information perception mechanisms, typical for Generation Z, make it necessary to study their academic motivation. The co-authors offer the findings of the research project, implemented with the involvement of students enrolled with the two leading Russian institutions of higher education. The diagnostic assessment of intrinsic and extrinsic motivations was performed on the basis of the questionnaire entitled "The Scale of Academic Motivation" (developed by Gordeeva, Sychev, and Osin), which represents an adapted Russian-language version of the questionnaire entitled "The Academic Motivation Scale, AMS-C", developed by R.J. Vallerand in cooperation with his colleagues. In the course of the research, the project developers identified a high level of motivation for learning and self-development demonstrated by the young people. We believe that the value orientations and cognitive abilities of this generation should be taken account of in the course of development of new teaching methodologies and technologies. The educational environment boosts motivation, and it should be developed on the basis of: 1) integrated theory and practice; 2) higher visualization of teaching materials; 3) an individual approach towards students, etc. Hence, now the role of a lecturer is different, as lecturers tend to convert into partners. The lecturer is no longer a transmitter of information; rather, he is a mentor, an adviser and a tutor. The career building environment gains importance, given the exceptional motivation for goal attainment demonstrated by the students. The compliance between the state of the educational environment and the priorities expressed by the young generation makes youngsters highly adaptive to the fast changing world and enables them to implement their potential capabilities. It will also contribute to their harmonious development.

Keywords: Values-based orientationsCognitionAcademic motivationGeneration Z Educational environment

1. Introduction

Humans strive for knowledge; this fact comprises the founding value, and its comprehension enables us to make a step towards the understanding of the reason for living, the idea of one's mission, to the outlining of the roadmap for self-identification and personal fulfillment. Personal and professional self-identification represent individualized multi-step processes, comprising such steps, as understanding, orientation, decision-making, implementation of an action, selection, rethinking, development, etc (Vlasenko, Ivanova, 2015). The motivation for learning enables students to unlock their potential, choose their pattern of the values-oriented behaviour in the educational environment, and select the strategy for living. Problems that accompany the promotion of motivation for learning are caused by the need for a continuous pattern of choice making that accompanies any person when he/she is young. That's when proactive learning activities make the system of human values transform under the impact of subjective and objective reasons.

In different countries, contemporary education systems undergo continuous transformations that accrue under the impact of globalization-related processes. These transformations alter the socio-cultural environment and generate the demand for innovative educational technologies. Moreover, development of the digital economy boosts distribution and use of information technologies in each area of life (Babkin, Burkaltseva, Kostin, Vorobyev, 2017), including education. Against this background, a new generation ("Generation Z", or "a digital generation") emerges. Soon this generation will dominate not only in the area of education, but also in the labour market, and it will bring its original priorities and values there.

Representatives of Generation Z, who have been taking advantage of digital sources of information, comprising the Internet, and using versatile electronic devices to access it, demonstrate the following set of socio-psychological features, including:

1) perception of any physical object as its digital equivalent. Hence, the digital world interweaves with the real one; moreover, the virtual world represents part of the real one. This peculiarity should be treated as a challenge to the educational environment in terms of its technological advancement and sufficiency of digital devices that enable lecturers to visualize the learning content (Pulyaeva, 2018);

2) the FOMO ("fear of missing out") syndrome (Stillman, 2018) that makes Z generation representatives nterested in the new trends; they are willing to be competitive, and they turn all the more proactive in order to attain their objectives, to choose their professional careers and to develop them accordingly;

3) their striving for maximal personalization. The identification and development of a personal image and significance is a true value for Generation Z; therefore, its representatives are interested in the individual approach, and they are ready to project their professional development themselves;

4) their willingness to learn anything new. Their motivation for learning and further professional activities is enormous, and it boosts competition in the educational environment;

5) their independent development of the learning strategy for their development. Generation Z have an extensive access to information resources; therefore, they are particularly interested in the availability of a variety of cognitive activities, and the use of interactive methods and technologies in the process of learning turns all the more relevant.

Given the above statements, it turns noteworthy that the values, perceived by young people in the course of their initial socialization, the condition of cultural and educational environments, which help young people to develop their personalities and professional skills, are essential to their motivation. This statement needs an in-depth study of the environment, in which particular generations have been raised in order to identify the regularities and peculiarities to be taken account of in the organization of the process of cognitive activities. Given the fact that any young audience acquire their profession and undergo the stage of their professional becoming, the authors have made an attempt to study the peculiarities of the academic motivation typical for Generation Z. Presently, this generation comprises young people, born in the early 21st century. Let us track the evolution of the ideas concerning the formation of different generations and their values and cognitive abilities.

2. Literature Review

Young people and their intergenerational interaction were the subject of socio-humanitarian researches performed by various civilizations in different centuries. Problems of young people were proactively discussed by Socrates, Plato, Aristotle, Augustine ("The Confessions"), P. Abélard ("Historia Calamitatum"), T. More ("Utopia"), T. Campanelle ("La città del Sole"), J.-J. Rousseau ("Émile ou de l'éducation"), D. Diderot ("La Religieuse", "Le Neveu de Rameau"), I. Kant ("On Pedagogy"), G. Hegel ("The Philosophical Propadeutic"), F. Schleiermacher ("Monologues"), etc. It is noteworthy that thinkers of the past did a lot to study young people and to identify special features typical for their generations. The 20th century was also rich for research works on young people. In the 20th century, heterogeneous viewpoints were generated in respect of young people within the framework of various areas of knowledge. Features of the young generation are being studied by sociologists, psychologists, ethnographers, demographers, economists, etc.

The majority of the researchers consider young people as a socio-demographic group that is characterized by a set of features, values, and life philosophy; they represent a specific layer inside a society, or "a generation". Researchers tend to stick to the viewpoint initially expressed by the Spanish philosopher and publicist J. Ortega Y Gasset, who believed that the history of any society represented the outcome of a struggle between the generations which replaced one another at the helm; he thought that a "generation" meant "a difference in the life philosophy" (Ortega Y Gasset, 1965).

German scholars and psychologists, including Z. Freud and H. Marcuse, believed that the consciousness of the young generation was based on the "emotional unconscious spirit", while the "negation of societal values symbolized the negation of a father's authority" (Sergeeva, 2002).

K. Mannheim, who was intensively engaged in the resolution of problems of education and instruction of young people and who studied problems of youngsters in the contemporary society, wrote about the need to take advantage of young people in the days of societal transformations. He thought that only those societies that had organized cooperation between older, younger and middle generations could become dynamic and viable. K. Mannheim believed that a generation represented not merely a group of people of the same age, but "the reality" which emphasized the significance of collective, social and political experiences of a particular age group. He thought that this "reality" caused the consciousness and "world views", typical for these groups, to split. He thought that in a changing society these views could cause conflicts between people comprising different age groups. The author believed that young people had a special function in a society, he thought that "they were the reviving intermediary, kind of a reserve, which came to the fore when this revival turned necessary to get adjusted to swiftly changing and qualitatively new circumstances" (Manheim, 1994).

In the UK, the term "generation" was for the first time used by J. Deverson in 1964. She interviewed British teenagers as part of her project on British youth; her work was published by the British weekly magazine "Woman's Own". And finally this term was established as such in the works written by D. Coupland (Coupland, 2002), a Canadian writer. US scholars draw particular attention to problems of young people and the young generation. Sh. Eisenstadt, an American sociologist, speaks about youth as a social layer formed thanks to their common environment and lifestyle, when he performs a comparative analysis of civilizations (Eisenstadt, 2002).

American anthropologists and ethnographers, who studied archaic societies, drew particular attention to methods of transmission of culture from one generation to another. For example, M. Mead, an American anthropologist and sociologist, applies the criteria of transmission of experience between the generations to identify several types of culture, including postfigurative, configurative, and prefigurative cultures. She believes that traditional social interaction is typical for the postfigurative culture, this type of interaction was typical for patriarchal societies, in which children learned from their ancestors. The second type of culture is configurative; it is characterized by the reduced influence and authority of older generations; in this situation the younger generation learns from their age mates, the influence of youth groups goes up, and that's when subcultures emerge. The third type of culture, identified by M. Mead, reads as the prefigurative culture, it demonstrates a new type of social links between the generations. This link accompanies swift technological development, and, in the context of this culture, the older generation learns from their children, who are more mobile than their parents in the present-day society of electronic communications. "The society, similar to ours, demonstrates immense social mobility; the intergenerational gap is inevitable in terms of education and lifestyles. Nonetheless, in the course of their upward and outward motion, young people bump into particular values, shared by the majority of adults comprising the two older generations. The present-day world accepts gaps between the generations, and it expects each further generation to live in peace with a different technology." M. Mead thinks that the prefigurative culture is future-oriented. Thanks to new types of communications, young people get together to share new experiences. The present generation lives in a totally new world "which was unknown to older people", and vice versa, "the older generation will never see in the lives of young people any replication of its unprecedented experience of changes that replace one another. This gap between the generations is absolutely new, it is global and comprehensive," wrote M. Mead in her conclusion (Mead, 1983).

The theory of generations was summarized and presented by American researchers W. Strauss and N. Howe (Howe, Strauss, 1991). They described present-day young people, they focused their efforts on the dissimilarity in their values, and they drew particular attention to its background (the economic and technological development of societies, political changes, etc.) They identified several types of generations, limited them to specific time periods and developed detailed characteristics for each generation.

E. Shamis and E. Nikonov decided to customize the American theory of generations to the Russian reality (Shamis, Nikonov, 2004). They analyzed the theory of generations to identify the key factors, which influenced the formation of various generations in their book "Theory of generations. Extraordinary X", and made an attempt to understand the logic of actions, priorities and expectations of various generations. The factor governing the attribution of a person to some particular generation encompasses both the period of his/her birth, his/her involvement in specific historic events and his/her sharing of the same system of values. In particular, in the time period, covered by the research project, implemented by the co-authors (2003 – 2004), representatives of the following generations were living in Russia (their dates of birth are provided in brackets): the Greatest generation (1900 – 1923), the Silent generation (1923 – 1943), baby-boomers (1943 – 1963), Generation X (1963 – 1984), Generation Y (1984 – 2000), Generation Z (after 2000).

As it has already been said, Generation Z comprises all individuals born after 2000. They have grown up on new technologies; they have been proactively using tablets, iPads, VR and 3D realities. Their mindset is characterized by multitasking and mosaic thinking which cause learning problems, inability to concentrate, insufficient ability to emphasize, etc. They are dependent on digital and mobile devices; they are irritable and introverted. However they know how to take advantage of any information; they develop fast and strive for a high level of professionalism. This generation "requests" a special approach and a new educational environment, as well as non-conventional teaching methods (Zaichenko, 1998).

Finally, given the extraordinary features demonstrated by Generation Z, identified though the employment of the retrospective analysis of the turnover of the generations and given their attitude to life and environment, let us conduct a research into their motivation with account for their value orientations in terms of learning and features of their learning activities. Besides, important issues, formulated by the group of researchers, include the nature of interaction between lecturers and centennials, the types of transformations to be applied to the educational environment, technologies and teaching methods that will improve academic motivation.

3. Procedure and Methods of Research

3.1. Participants

The questionnaire method, psychological diagnostics, focus group interviewing and comparison were applied to obtain thee empirical data. The questionnaire surveying was launched in January 2019 among the students of the Moscow State University of Civil Engineering and the Financial University under the Government of the Russian Federation. Full time students of the first, second and third year, enrolled with different schools, participated in the project. The total sampling reached 160 respondents, and more detailed information about the samplings is provided in Table 1.

Table 1. *Respondents.*

	Frequency	Percent	Valid percent
Moscow State University of Civil Engineering	60	37.5	37.5
Financial University under the Government of Russian Federation	60	62.5	62.5
Total	160	100.0	100.0

3.2. Materials

The respondents were to complete the Motivation Scale questionnaire, which represents a Russian-language version of The Academic Motivation Scale, AMS-C, developed by P. Vallerand together with his colleagues (Vallerand, Pelletier, Blais, Brière, Sénéca, Vallières, 1992). The Russian language version was developed by a team of co-authors in 2014 (Gordeeva, Sychev, Osin, 2014). In the course of the diagnostics, the respondents were to provide the extent of their consent with each of 28 statements according to the Likert scale (Wuensch, 2005). This test can identify intrinsic and extrinsic factors that motivate students.

3.3. Procedure

Seven areas of motivation are identified pursuant to this psychological methodology: intrinsic motivation, broken down into motivation for cognition, motivation for achievement, motivation for personal growth; extrinsic motivation, broken down into motivation for self-esteem, introjected motivation, external regulation and amotivation. The motivation for cognition is to diagnose the willingness to learn something new, to understand the subject matter, and it is associated with interest and pleasure obtained in the process of learning. The scale of the motivation for achievement measures the willingness to attain maximal results in the process of studying and to experience enjoyment in the process of solving complex problems. The scale of personal growth measures the willingness to develop one's capabilities and potential within the framework of educational activities, to attain the feeling of competence and skillfulness. The scale of motivation for self-esteem measures the willingness to study for the sake of the feeling of personal significance boosted by successes in the course of studies, and it corresponds to the need for respect and self-esteem, identified by A. Maslow (Maslow, 1999), and a similar type of needs identified by other authors (Harter, 1978).

The scale of introjected motivation is used to measure the incentive for learning based on the sense of shame and duty in respect of oneself and other important persons. The scale of external regulation assesses the situation, when the studies are forced on an individual who needs to meet the requirements imposed by the social environment: he/she studies to prevent any potential problems, while his/her need for autonomy causes frustration. The scale of amotivation measures the absence of interest and the lack of understanding in respect of the need for studies (Gordeeva, Sychev, Osin, 2014). The correspondence between the questions and each motivation factor are provided in Table 2.

***Table 2**. Correspondence between the statements of the "Scale of Academic Motivation" questionnaire and factors of motivation.*

Factor of motivation	Number of the statement
Intrinsic - cognition	1, 8, 15, 22
Intrinsic – achievement	2, 9, 16, 23
Intrinsic – personal growth	3, 10, 17, 24
Extrinsic – self-esteem	4, 11, 18, 25
Extrinsic - introjected	5, 12, 19, 26
Extrinsic – external regulation	6, 13, 20, 27
Amotivation	7, 14, 21, 28

Statistical functions of the Excel spreadsheet were applied to analyze the empirical data.

4. Results

The project developers converted the responses, demonstrating the extent of consent, into figures, to facilitate the statistical processing of the findings of the psychological diagnostics performed pursuant to the questionnaire, where 1 stands for "completely disagree", 2 - "I rather disagree", 3 – "something in-between", 4 - "I rather agree", 5 - "I completely agree". Further, the average statistical value of answers was calculated for each statement, and the same about the mode (M_0). The findings are provided in Table 3.

***Table 3**. Responses sampling analysis based on the questionnaire "The Scale of Academic Motivation"*

Statement	Financial University	MGSU

	Average	Mode	Average	Mode
1. Intrinsic motivation: Cognition				
1. I find it interesting to study	3.84	5	3.90	4
8. I like to study because it's interesting	3.74	4	3.75	4
15. I simply like to study and to learn something new	3.88	4	3.82	3
22. I do take enjoyment in learning the new material in class	3.52	3	3.55	4
2. Intrinsic motivation: Achievement				
2. I take enjoyment in my studies, I like to solve complex problems	3.59	4	3.45	4
9. I feel satisfied when I am in the process of solving complex problems	3.81	4	3.51	4
16. I like to solve complex problems and to apply intellectual efforts	3.61	4	3.53	4
23. I simply like to study, to solve complex problems and to feel competent	3.67	4	3.55	3
3. Intrinsic motivation: Personal growth				
3. Because I take enjoyment when I overreach myself in my educational achievements	3.86	4	3.97	5
10. My studies enable me to feel satisfied in the process of my development	3.41	4	3.63	4
17. For the sake of enjoyment generated by new successes in my studies	3.37	4	3.57	4
24. I find it pleasant to realize how my competence and my knowledge grow	4.02	4	3.82	4
4. Extrinsic motivation: Self-esteem				
4. Because I'd like to prove that I am able to study well at the university	3.44	5	3.80	5
11. Because when I study well, I feel significant	3.06	3	3.17	4
18. In order to prove that I am a smart person	3.16	3	3.23	4
25. Because I want to demonstrate it to myself that I can be successful in my studies	3.23	3	3.63	5
5. Extrinsic motivation: Introjected				
5. Because I feel ashamed when I study badly	3.29	5	3.20	5
12. Because my conscience makes me study	3.03	4	3.70	3
19. Because it is my responsibility to study, and I cannot neglect it	3.12	4	3.42	4
26. Because I must attend my classes and study after I have entered the university	3.41	4	3.55	4
6. Extrinsic motivation: external regulation				
6. I have no other choice, as any absences are registered	3.10	5	2.70	3
13. To avoid problems with the administration and exams	3.25	4	3.27	4
20. Because my family will criticize me, if I study badly	2.52	1	2.87	4
27. I have no other choice, because otherwise I will not be able to live an affluent life	3.03	4	3.63	4
7. Amotivation				
7. Frankly speaking, I don't know, it seems to me that	2.42	1	2.05	2

I am simply wasting my time here				
14. In the past I realized why I studied here, but now I am not sure whether I should continue	2.21	1	2.13	1
21. I come here, but I am not sure if I do need it	2.65	1	2.30	1
28. I come here by force of habit, but, frankly speaking, I don't know why I do it	2.02	1	2.02	1

Table 3 demonstrates high intrinsic motivation of all respondents. Nonetheless, representatives of the technical university give answers which are different from those of the representatives of socio-economic universities. Let's consider these differences in detail on the basis of averaged values of motivation factors (Table 4).

Table 4. *Factors of respondents' motivation: average values*

Motivation factors	Financial university	MGSU
Intrinsic	**3.69**	**3.67**
Cognition	3.75	3.75
Achievement	3.65	3.51
Personal growth	3.67	3.75
Extrinsic	**3.15**	**3.28**
Self-esteem	3.22	3.46
Introjected	3.24	3.27
External regulation	2.98	3.12
Amotivation	**2.33**	**2.13**

The analysis has proven that the respondents demonstrate equally high motivation for cognition, while students of the Financial university demonstrate higher motivation for achievements and MGSU students have higher motivation for self-development. The extrinsic motivation value is the same as the intrinsic motivation of achievement, as far as the MGSU students are concerned. The value of the external regulation motivation is particularly low, and it proves that contemporary students comprising Generation Z are focused on their personal desires, primarily, on their willingness to develop at universities. Average values of amotivation are lowest, and it confirms high academic motivation of the respondents. Figure 1 demonstrates the average values of all motivation scales, demonstrated by the students of the Financial university and MGSU. The average value of scales demonstrated by all respondents is drawn as a black line. We can see that the values of such motivation factors as self-esteem and self-development are above average at MGSU, while the Financial university demonstrates higher motivation of achievement and amotivation.

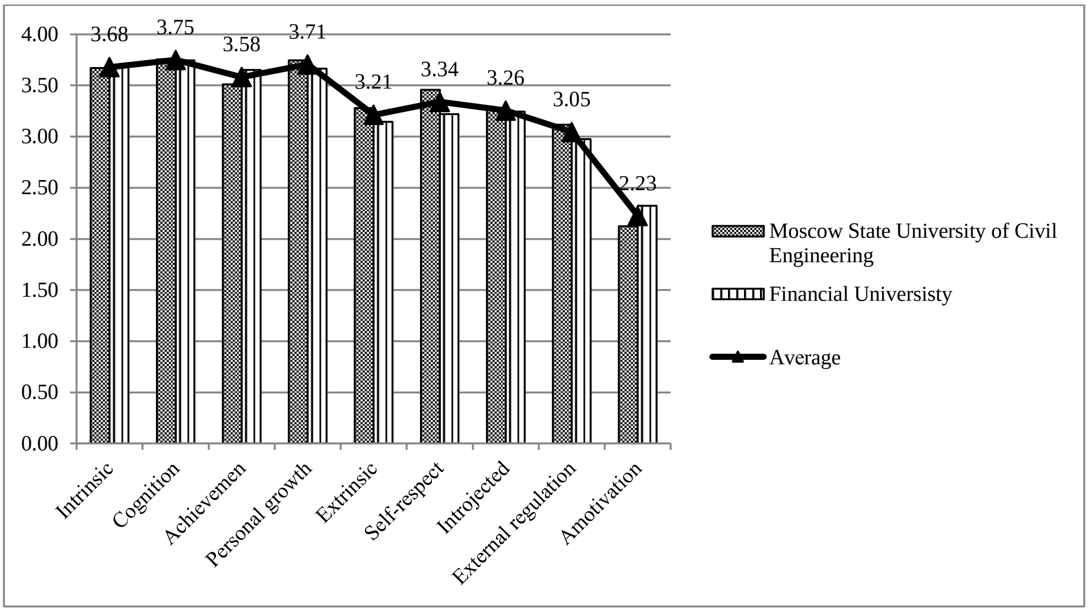

Figure 1. *Factors of respondents' motivation: average values.*

Therefore, we can make a conclusion that the hypothesis, that says that Generation Z demonstrates high intrinsic motivation, oriented towards cognition and self-development, has been confirmed.

5. Discussion and conclusions

Therefore, having analyzed the peculiarities of the "digital generation" and students' preferences, exemplified by the findings of the research, conducted at the Financial university and MGSU, we can develop a number of recommendations aimed at the improvement of the educational process against the background of the society's digitalization, and the most relevant recommendations are as follows:

1) it is necessary to make sure that the individual approach is in place and effective person-to-person interaction between students and lecturers is maintained;

2) it is vital to support theoretical knowledge by practical application and use;

3) any information, provided to students in the course of studies, must be visualized due to mosaic thinking and extreme influence of mass media;

4) Advanced information technologies, including video courses, interactive boards, virtual and augmented realities, must be proactively employed;

5) The flexibility of studies. As Generation Z is used to the availability of choice options in the virtual world, their preferences should be taken account of when the educational process is organized; they must have the right of choice and the right of vote;

6) a distinct objective to be attained in the course of studies must be formulated, as "knowledge for the sake of knowledge" enjoys no demand among young people;

7) Effective timing of the educational process. As Generation Z do their best to "have the time for everything", they may refuse to waste their time on learning or attending some classes.

A contemporary individual has accumulated an enormous amount of knowledge, and he/she is concentrated on the future, in which he/she will have to demonstrate the ability to develop relationships in a complexly manageable environment of the digital economy. Today it's important to predetermine features of humans of the future, who will be ready to solve problems of their lives in the world full of versatile means of communications (Vlasenko, Ryazantseva, Ivanova, 2018). On the whole, drastic changes in the life of a society, the adulting of the "digital generation" challenge the present-day system of higher education, thus, there arises a need for a comprehensive study of this problem, on the one hand, and for the development of a transformation plan, on the other hand. If we are aware of the features of the young generation, we will be able to develop more efficient factors of motivation and methods of organization of the educational process, including interaction with students. Information technologies, which have been intensively penetrating into all areas of the society, must act as the very resources that will satisfy the cognitive needs, preferences, and priorities of the new generation of students.

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Role of Social Potential in Management of the Development of Industrial Enterprises as a Part of Industrial Parks

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Abstract

In the modern conditions not only the quantitative, but also qualitative characteristics of the economic growth have the basic value for the domestic economy. One of main objectives, which the country leaders set before the industrial sector of the economy, is ensuring balance in the industrial development of various territories. The achievement of such balance is possible due to the concentration of the efforts on the launch and support only of those projects, which correspond to the specifics of each region, its provision with transport, energy and raw material resources, opportunities in operating and perspective chains of production and cooperation, taking into account the social opportunities of the dislocation region. One of the main forms of the modern economic development in the industrial sphere, which meet the aforesaid requirements, are the industrial enterprises as a part of industrial parks.

At the same time carrying out the complex assessment to management of development of the industrial enterprises as a part of industrial parks, which will allow to unite the potentials, which are saved up in various spheres is important (production, infrastructure and social). For carrying out such an assessment the statistical data, obtained within expert and ball assessment of 76 domestic industrial enterprises - "anchor residents" of the industrial parks of the Russian Federation, which are parts of industrial parks, were used. According to the received data some typological groups which allowed to create the assessment model (in the form of the equation of the linear regression) for management of the development of the industrial enterprises as a part of industrial parks, and to estimate the quantitatively influence of production, infrastructure and social potentials on the integrated potential of appeal of the industrial enterprises and the structure of industrial parks.

Keywords: industrial parks and industrial, enterprises, production potential, infrastructure potential, social potential

1. Introduction

The industry holds the specific place in the modern structure of any national economy, with confidence it is possible to be called the leading vector of the goods production. After adoption of the Federal Law on December 31, 2014 No. 488-FZ "On the industrial policy in the Russian Federation" and Resolutions of the Government of the Russian Federation from October 1, 2018 No. 328 on the approval of the State Programme "Development of the industry and the increase in its competitiveness" there appeared the legal bases for the acceleration of the development of the Russian industrial enterprises which still interfere with numerous unresolved questions, interfering successful realization of the strategic priorities, established by the state. Researchers and experts in the field of the industry note the existence of worn and obsolete equipment at many enterprises, the long term of development of new products, high load of the production infrastructure facilities, the lack of idle capacities for the development and also low social image of some industrial enterprises in the domestic business environment. However, the indexes of the industry development of the last years demonstrate, that the trend, noted earlier on the deterioration in the situation in the country is suspended: according to Federal State Statistics Service of the Russian Federation the index of the industrial production in 2017 made up 101.0% in comparison with 2016, 98.5% in December, 2017 in comparison with December, 2016, 108.2% in comparison with November, 2017. At the same time in 2017 the volume of industrial release, for example, in the processing industry was exceeded by the index of 2013 for 7.1%. It is important to note that the state sets the purpose to provide balance in the development of the industrial enterprises in scales of the Russian Federation due to concentration of efforts to the implementation only of those projects, which corresponds to some specific features of each territory, its provision with transport, energy and raw material resources. At the same time the possibility of the subsequent integration of the industrial enterprises into the operating and perspective production communications directed to expansion of opportunities of development of production has to be provided. Rather new phenomenon in the domestic industry was the creation of industrial parks, which main distinctiveness is the opportunity for the industrial enterprises to form collateral decisions on the development of the production infrastructure, involving a wide range of interested persons in these processes.

It should be noted, that the reduction of quantity of the industrial enterprises, which are not involved in any forms of network interaction and cooperation, is observed: in 2016-2018 their quantity was reduced by 17% (from 16011 to 13240 units). However, in operating industrial parks the increase in the quantity of the industrial resident enterprises of industrial parks by 24% (since 2190 to 2725 units) was registered for the same period. The analysis also proves the negative phenomena – the suspension of operations of some enterprises. In 2016-2018 twelve industrial parks (created and operating) stopped their existence because of some reasons, including low level of provision with the necessary production infrastructure, formats of business and terms of the implementation of projects of the production development, connected with it changes in the adverse party for later dates in comparison with those earlier planned.

We can mention the situation in Iran. Scientific-and-technological parks in Iran hold a specific place in scientific-and-practical and economic activity of the country. Scientific-and-technological parks as the social institutes are created for the purpose of the increase in innovations in the technological sphere, for the economic development, for creation of jobs for specialists and researchers. The considerable quantity of innovations in the technological sphere was created and obtained the development in these parks. Creating the necessary atmosphere, the states seek to prepare proper conditions for the small and medium-sized companies' activity. Thus, the role of the state in the successful development of such parks has the vital character.

The main issue of the creation of scientific-and-technological parks is the improvement of welfare of the society by the means of the increase in innovative culture and the constructive competition between the companies, which are included in the science-and-technology parks as well as the institutions founded on the scientific knowledge. The most important types of activity of science-and-technology parks are the following: market assessment, generation of the ideas, scientific research, engineering design, fast prototyping, industrial design, development of standards and technical know-how, filing of intellectual property, commercialization, sale and subsequent support for selling of technological products in the sphere of the industrial production and also specialized services.

In 2001 there was only one science-and-technology park in Iran, however in 2001 8 science-and-technology parks were started all over the country. The number of science-and-technology parks of the country from 2001 for 2016 became the quite considerable. The process of the increase in the quantity of science-and-technology parks in all the provinces of the country continues and in October...November, 2016 their quantity reached 39 items. Statistically, in 2002 17 development centers acted in the country: by 2006 their quantity reached 43 all over the country, and by October-November, 2016 their quantity increased up to 178.

The international cooperation, which has the purpose is to use of the international experience and also the effective presence in the world markets of technologies are the strategic tasks of science-and-technology parks.

The special role in the development and management of the industrial enterprises, both Russian and abroad, is played by the level of development of social infrastructure of science-and-technology park. Social infrastructure is a part of the productive forces of the society, creating the conditions for the effective functioning of a human in production. It expresses the economic relations between the society and its members during consumption both material and non-material services, which are necessary for reproduction of labour and harmonious development of the person.

The industries of social infrastructure do not participate immediately in the creation of final products, but they provide prerequisites for normal development of the production. The role of social infrastructure consists in that it promotes ensuring needs of production for shots of the required qualification, promotes reproduction and their fixing in rural areas, provides labour protection and the accident prevention.

Divisions of the social infrastructure participate in the creation of conditions for satisfaction of household requirements, both employees of the enterprise, and terms of their families. From the economic point of view the appeal of the industrial enterprises as a part of industrial parks form the key characteristics of social-and-economic development, and first of all (according to N.A. Dubinina): "the average level of income of the population and extent of their differentiation, life expectancy, human health level, education level, level of consumption of the material benefits and services, provision of households with durable goods, health care level, state of environment".

All the facilities and services of social infrastructure can be subdivided into two groups on purpose, formation sources, territorial placement and participation in production.

The facilities which are immediately in the structure of the resident enterprises belong to the first group. Their tasks include programmes for improvement of working conditions on production, the accident prevention and rest of employees of science-and-technology parks. The first group includes household rooms of productions, points of public catering in divisions of the enterprises (buffets, kitchens, dining rooms), health care facilities, cultures and rest (dispensaries, medical offices, red corners, reading rooms, etc.), points of fire safety.

The second group is made up by the facilities of social infrastructure, which are located in the territory of the industrial parks and industrial settlements, intended for satisfaction of household needs of the population and created, as a rule, at the expense of the state resources and special means of the large resident enterprises. The facilities of housing-and-communal services, public service establishment, healthcare institution (policlinics, hospitals, out-patient clinics), sports palaces, schools and preschool institutions, recreation centers and clubs, trade enterprises concern them. These facilities of social infrastructure are designed to serve for all the residents of the industrial settlements irrespective of the sphere of application of their work and their social status.

Above-mentioned groups are considered during the integrated assessment of investment attractiveness of science-and-technology parks which, in turn is a part of the investment attractiveness index. Besides, financial, territorial, productive, personnel, infrastructure, innovative, ecological, informational and social attractiveness are estimated. The listed directions of the assessment of the investment attractiveness prove that the increase in the investment attractiveness is influenced by versatile factors and parameters.

We should notice that measures of the increase in the attractiveness of industrial settlements are correlated on two groups: the first group represents the complex of actions for the improvement of characteristics of industrial infrastructure, roads, communications, etc., the second group includes the system of privileges for the investors.

The measures of the first group create the long-term conditions to attractiveness of the industrial enterprises as a part of industrial parks, the measures of the second group, have only temporary effect, because of the dynamic legislative system. At the same time granting privileges is quite justified as it is routine on the expiration of a privilege, the industrial park becomes the settlement, making profit and making up the favorable environment for the potential resident enterprises.

2. Literature Review

The principles of the development of the industrial enterprises management are presented in works by G.S. Abushenko, S.P. Alyokhin, A.G. Badalova, Yu.G. Vaylunova's, A.N. Hnatiuk, Yu.Ya. Eleneva, A.V. Zheltenkov, E.D. Korshunova, O.A. Nikolayevskaya, S.V. Semyonov, O.V. Syuzeva, R.A. Fatkhutdinov, I.M. Frolov, R.M. Khabibulin, A.I. Shebarov, O.V. Shalamova, A.V. Schmidt. The matters of management of groups of the industrial enterprises, which are carrying out interaction on the basis of network approach and the concept of interested parties were considered in works by the famous foreign and domestic experts: M. Castells, R. of X. Coase, R. Miles, M. Porter, S.B. Avdasheva, A.N. Asaul, E. Bukhvald, A.A. Vorobyova, P.C. Greenberg, M.A. Gosteva, G.B. Kleyner, V.V. Kobzev, A.C. Krivchenko, B.JI. Makarova, S.I. Parinova, E.V. Popova, D.V. Popova, I.A. Strelets, A.E. Shastitko, M.Yu. Sheresheva.

M.G. Averkin, M.V. Akimov, A.A. Astakhova, N.Yu. Borodavkina, B.N. Weber, V.V. Dyomin, A.G. Komarov, T.M. Kryukova, M.G. Leshchenko, B.A. Matveev, O.A. Mednikov's researches, A.A. Movchan, O.V. Chistyakova, Yu.P. Feoktistova and other authors devoted their works to the aspects of functioning of industrial parks and to the assessment of effectiveness of their activity.

The issues of the effective development of industrial parks are presented in works of some foreign authors: A.A. Alchian (1953), L. Baas (2004), P. Berman, F. Boons, B. Cameron, Hahn Shi, Fey Yu.

In A.N. Hnatiuk, D.S. Mironov, S.P. Alyokhin, N.V. Voronkova's works in the field of management of the industrial enterprises for ensuring welfare needs of workers of the industrial parks are also very useful.

Despite the research by various authors, some matters of management of development of the industrial enterprises as a part of industrial parks remain unresolved. Formation of new evidence-based approach on the basis of the quantitative indices of the industrial enterprises as a part of industrial parks will allow to develop the methodical tools of management of development of the industrial enterprises necessary for ensuring their effective activity on the basis of the development of qualitative production infrastructure for the development assessment.

3. Method

3.1. Materials

As statistical selection 76 enterprises main were chosen ("anchor residents") the industrial enterprises which make a powerful contribution to development of economy not only the region of dislocation of the enterprise, but also region economies in general. Leaders in typological group in production potential are the industrial enterprises ("anchor residents") of Moscow and the Moscow region, St. Petersburg and the Leningrad Region with the indicators varying in the range of 6-12 points; the industrial enterprises ("anchor residents") of the Republic of Tatarstan also have the high rates varying in the range of 6-9 points. Outsiders on grouped sign "the production potential" are the industrial enterprises ("anchor residents") of the Kaluga, Ryazan, Oryol regions with the indicators varying in the range of 1-4 points. The high rates varying in the range of 14-17 points show the industrial enterprises ("anchor residents") of the Republic of Tatarstan, Moscow and the Moscow region, the Leningrad and Novosibirsk regions for grouped sign "the infrastructure potential". The low indicators varying in the range of 3-6 points on grouped sign "the infrastructure potential" have the industrial enterprises ("anchor residents") of the Republic of Udmurtia and Krasnoyarsk Krai. Considering the industrial enterprises ("anchor residents") for grouped sign "the social potential", the trend of high rates at a high rate of production potential was noticed, for example at the industrial enterprises of Moscow and the Moscow region and also the Republic of Tatarstan. The analysis of the expanded circle of factors, which is carried out within the research, allowed to update and introduce the author's provisions in the technique of assessment of the industrial enterprises as a part of industrial parks of the Russian Federation, developed by the analytical center of "Expert" media holding, which are divided into three groups of significant factors:

The first group of the factors, influencing production potential reflects the general level of development of business.

The second group of the factors influencing infrastructure potential reflects the fissile development of branch classes such as availability of human resources, quality and adequacy of transport and engineering infrastructure, availability of bases of suppliers.

A third group of factors, represent the factors influencing on: "social potential which proves the reputation of the industrial enterprise as a part of the industrial park in the domestic and foreign social-and-political and business community and also the possibilities of social development of the group (staff of the organization), namely that is the substantial enrichment of the interpersonal relations in group the purposes and problems of its activity, their public substance".

The results of expert and ball assessment of the industrial enterprises ("anchor residents" of industrial parks) as a part of industrial parks can be divided according to the factorial signs: production, infrastructure, social capacity and integrated potential of the attractiveness of the industrial enterprises as a part of industrial parks are (respectively). in Table 1.

Table 1 – Results of the expert and ball assessment of the industrial enterprises ("anchor residents" of industrial parks) as a part of industrial parks on the factorial signs: production, infrastructure, social capacity and integrated potential of the appeal of the industrial enterprises as a part of industrial parks (respectively)

Name of the industrial enterprise ("the anchor resident") as a part of the industrial park	*ΣP* Production potential	*ΣI* Infrastructure potential	Σ S Social potential	*PAIP* Integrated potential of the attractiveness
Technopolis Himgrad	6.99	7.98	17.50	22.47
"Alabuga"	6.99	4.95	17.80	19.74
Maryino	10.00	6.87	11.10	17.97
Master Kama industrial park	6.99	5.88	14.20	17.07
Technopolis Moscow	12.00	3.14	10.50	15.64
Nizhnie Cotly	12.00	5.36	8.10	15.46
Zavolzhye industrial zone	1.17	10.42	13.50	15.09
A Plus Kolpino Park	10.00	7.32	7.00	14.32
Stankomash	3.84	6.05	14.20	14.09
Greenstate	2.77	6.57	14.10	13.44
"Dubna"	8.13	3.55	10.50	12.18
Kotovo	8.13	5.62	7.60	11.35
Kaluga South	1.07	6.52	13.50	11.09
A Plus Park Shushary	10,00	5.89	5.00	10.89
Rosva	1.07	4.98	14.50	10.55
Production and logistic park of the Novosibirsk region	3.04	7.93	9.50	10.47
Chelny	6.99	6.11	7.30	10.40
Dega Claster Noguinsc	8.13	7.21	5.00	10.34
Vorsino	1.07	3.47	15.80	10.34
Preobrazhenka	4.04	9.09	7.20	10.33
Grabtsevo	1.07	7.00	12.20	10.27
"Togliatti"	4.04	5.67	10.50	10.21
Stupino Square	8.13	3.56	8.50	10.19
"Lipetsk"	1.67	5.02	13.50	10.19
Agidel	4.88	6.63	8.00	9.51
Springs	1.87	7.82	9.80	9.49
Chemical Tagil park	5.56	3.61	10.20	9.37
Ufa	4.88	5.28	9.20	9.36
"Kaluga Lyudinovo"	1.07	4.07	14.20	9.34
Baltic industrial park	1.16	8.91	9.20	9.27
SKIP Master	2.31	8.46	8.50	9.27
Pro-Business-Park	5.56	5.84	7.80	9.20
"Ulyanovsk"	1.17	10.67	7.20	9.04
Levoberezhny	2.77	4.40	11.80	8.97
Fedorovskoye	2.77	4.68	11.50	8.95
Angarsk science and technology park	3.56	6.68	8.50	8.74
Maslovka	3.00	7.46	8.20	8.66
Red Yar	4.66	7.43	6.50	8.59
Southern gate	8.13	4.52	5.90	8.55
M4	8.13	5.74	4.60	8.47
Novosib	3.04	11.71	3.60	8.35

Vanguard	1.80	7.53	8.90	8.23
UAZ	1.17	9.96	7.00	8.13
Kurgan	0.64	9.06	8.20	7.90
Screen (Ekran))	3.04	8.37	5.50	6.91
Koledino	8.13	4.16	4.60	6.89
M10	2.77	5.57	8.20	6.54
Strunino	1.28	6.63	8.60	6.51
Lemminkyaynen I-park	1.07	4.55	10.90	6.52
Otvel	1.19	7..75	7.20	6.14
Tyube	2.40	9.47	4.00	5.87
Prospect	3.00	4.93	7.90	5.83
Kama glades	6.99	5.82	3.00	5.81
ZMZ	3.59	4.61	7.60	5.80
DAAZ	1.17	6.27	8.20	5.64
Nevinnomyssk	2.31	6.50	6.80	5.61
Marvelous	4.66	7.93	2.60	5.19
Novoulyanovsk	1.17	7.66	6.00	4.83
Novocherkassk	4.86	4.97	5.00	4.83
Tolyattisintez	4.04	6.56	4.20	4.80
Dalyenergomash	1.80	7.94	5.00	4.74
Development	1.54	9.97	3.20	4.71
Obninsk	1.07	4.32	9.30	4.69
Volokonovsky	2.12	7.86	4.60	4.58
Izhevsk plant	1.54	10.43	2.60	4.57
May Day	1.82	7.28	5.00	4.10
Stavrovsky	1.28	5.16	7.50	3.94
Oka Polymer	3.59	4.67	5.20	3.46
Sheksna	1.63	7.18	4.00	2.81
Green grove	0.78	6.61	5.10	2.49
Kineshma	1.87	7.49	2.60	1.96
GS technopolis	1.16	4.74	5.60	1.50
Vyatka glades	1.13	5.07	5.00	1.20
Stankozavodskoy	1.01	7.05	2.50	0.56
Technologies of Belogorie	2.12	6.43	1.30	0.85

3.2. Participants

As statistical selection 76 enterprises main were chosen ("anchor residents") the industrial enterprises which make a powerful contribution to development of economy not only the region of dislocation of the enterprise, but also region economies in general. Leaders in typological group in production potential are the industrial enterprises ("anchor residents") of Moscow and the Moscow region, St. Petersburg and the Leningrad Region with the indicators varying in the range of 6-12 points; the industrial enterprises ("anchor residents") of the Republic of Tatarstan also have the high rates varying in the range of 6-9 points. Outsiders on grouped sign "the production potential" are the industrial enterprises ("anchor residents") of the Kaluga, Ryazan, Oryol regions with the indicators varying in the range of 1-4 points. The high rates varying in the range of 14-17 points show the industrial enterprises ("anchor residents") of the Republic of Tatarstan, Moscow and the Moscow region, the Leningrad and Novosibirsk regions for grouped sign "the infrastructure potential". The low indicators varying in the range of 3-6 points on grouped sign "the infrastructure potential" have the industrial enterprises ("anchor residents") of the Republic of Udmurtia and Krasnoyarsk Krai. Considering the industrial enterprises ("anchor residents") for grouped sign "the social potential", the trend of high rates at a high rate of production potential was noticed, for example at the industrial enterprises of Moscow and the Moscow region and As statistical selection 76 enterprises main were chosen ("anchor residents") the industrial enterprises which make a powerful contribution to development of economy not only the region of dislocation of the enterprise, but also region economies in general. Leaders in typological group in production potential are the industrial enterprises ("anchor residents") of Moscow and the Moscow region, St. Petersburg and the Leningrad Region with the indicators varying in the range of 6-12 points; the industrial enterprises ("anchor residents") of the Republic of Tatarstan also have the high rates varying in the range of 6-9 points. Outsiders on grouped sign "the production potential" are the industrial enterprises ("anchor residents") of the Kaluga, Ryazan, Oryol regions with the indicators varying in the range of 1-4 points. The high rates varying in the range of 14-17 points show the industrial enterprises ("anchor residents") of the Republic of Tatarstan, Moscow and the Moscow region, the Leningrad and Novosibirsk regions for grouped sign "the infrastructure potential". The low indicators varying in the range of 3-6 points on grouped sign "the infrastructure potential" have the industrial enterprises ("anchor residents") of the Republic of Udmurtia and Krasnoyarsk Krai. Considering the industrial enterprises ("anchor residents") for grouped sign "the social potential", the trend of high rates at a high rate of production potential was noticed, for example at the industrial enterprises of Moscow and the Moscow region and also the Tatarstan.

3.3. Procedure

Information on the separate industrial enterprises obtained in the course of statistical observation as a part of industrial parks characterizes them from various parties. For assessment of the impact of the factors considered above it is necessary to enter them into assessment model reflecting influence of production, infrastructure, social potential on the potential of appeal of the industrial enterprises as a part of industrial parks.

From the mathematical position it is necessary to pass to model of regression which determines an expert functional of assessment of PAIP at values of a total score of the sizes ΣS ni, Σ Pni (k=3). Creation of model of assessment reflecting influence of production, infrastructure, social potential on the potential of appeal of the industrial enterprises as a part of industrial parks in the form of regression model with a large number of the factors united in 3 groups gives the chance to define at the same time influence of each single group and complex impact of several groups on an effect variable.

In this case we will apply approach to assessment of integrated potential of appeal, in the form of regression in which it is obviously possible to consider influence of several factors on it. Such approach to assessment of integrated potential of appeal of the industrial enterprise as a part of the industrial park allows to define influence of each factor separately and their cumulative impact on the estimated indicator.

Considering the aforesaid equation of regression it will take a form:

$(PAIP)=f(PAIP1,PAIP2,\ldots,PAIPn)$

Depending on the quantity of factors and for the assessment of the correlation dependence which is necessary for definition of the direction, a form and extent of communication (narrowness) between several factors to determination of the importance of the factors included in assessment. It is supposed that in a form correlation communication can be the linear because change of values of one factor leads to the uniform change of another

The simplest form of dependence between factors is the linear relation that allows to pass to model of a type of the linear regression:

$PAIP= aPI+bII+c\text{S}i+d$,

where a, b, c, d-- are the coefficients of regression model.

We shall use PAIPi, for the i-th observation of an effect variable as and observed values of the explaining variables –Pi1, Ii2 ,…, xik , i.e. in designation ij x the first index i defines number of measurement, and the second j-number of a variable. Then the following model of observations takes place$PAIP = aP_{iI} + bI_{iI} + cS_{ii} + d + \varepsilon$, i = 1, 2…n

This function is interpretation of target function which is mathematical expression of some criterion of quality of one object in comparison with another.

$$PAIP_I^T = aP_I + bI_I + cS_i + d$$

$S = \sum_{i=1}^{n}(PAIP_i^T - PAIP_i)^2 \rightarrow min$

$$S = \sum_{i=1}^{n}(aP_I + bI_I + cS_i + d - PAIP_i)^2$$

Having applied a method of least squares to this set of equations we receive a set of equations for calculation of coefficients in the equation of regression of integrated potential of appeal of the industrial enterprise as a part of the industrial park.

$$\begin{cases} S_a' = \sum 2(aP_I + bI_I + cS_i + d - PAIP_i) \cdot P_I = 0 \\ S_b' = \sum 2(aP_I + bI_I + cS_i + d - PAIP_i) \cdot I_I = 0 \\ S_c' = \sum 2(aP_I + bI_I + cS_i + d - PAIP_i) \cdot IM_I = 0 \\ S_d' = \sum 2(aP_I + bI_I + cS_i + d - PAIP_i) = 0 \end{cases}$$

For the solution of this set of equations the Analysis of Data tool the section "Regression" of the software "Excel" and the Regression tool online of the software of "Math.Semestr" which is in open access is used.

Problem of regression to come down to that in each case to reveal a communication form between ΣP, ΣI, ΣS and PAIP, to express it the corresponding equation which will allow to assume possible changes of PAIP on the basis of the known changes of one or several values ΣP, ΣI, ΣS, connected with PAIP. ant point in creation of the equation of regression is definition of regression coefficients which show intensity of the influence of factors ΣP, ΣI, ΣS on the productive indicator PAIP.

The following step in calculation is definition of a vector of estimates of regression coefficients. We apply a method of least squares in which a vector S=(XT)−1XTY, where - these are factors of separate types of capacities of the industrial enterprise as a part of the industrial park ΣP, ΣI, ΣS, Y are integral. The results of multiplication of matrix, (XTX) и (XTY) are presented in Table 2.

Table 2- Matrixes (X^TX) и (X^TY).

Multiplication of matrix (XTX)				Multiplication of matrix (XTY)
76	284.37	497.29	608.2	631.86
284.37	1728.6247	1718.9565	2316.779	2923.5602
497.29	1718.9565	3521.1855	3815.456	4095.848
608.2	2316.779	3815.456	5944.48	5998.015

The inverse matrix $(X^TX)^{-1}$

$$(X^T X)^{-1} = \ldots = \left|\begin{array}{llll} 0 & 424;-0 & 0132;-0 & 0395;-0 \\ 0129;-0 & 0132;0 & 0017;8 & 0E\text{-}5;-0 \\ 0395;0 & 0009520 & 00466;-0 & 0129;8 \\ 0E\text{-}5;0 & 00103;0 & 000674;-0 & 0395;0 \\ 000953;0 & 000674; & & \end{array}\right|$$

Vector of the estimates of regression coefficients is equal

$$Y(X) = \left|\begin{array}{llll} 0 & 424;-0 & 0132;-0 & 0129;-0 \\ 0395;-0 & 0132;0 & 0017;8 & 0E\text{-}5;0 \\ 000953;-0 & 0129;8 & 0E\text{-}5;0 & 00103;0 \\ 000674;-0 & 0395;0 & 000953;0 & 000674;0 \\ 00466 & & & \end{array}\right| \cdot \left|\begin{array}{l} 1389 \\ 97;5764 \\ 915;12077 \\ 808;9056 \\ 87 \end{array}\right| = \left|\begin{array}{l} -9 \\ 751;0 \\ 991;0 \\ 987;0 \\ 987 \end{array}\right|$$

Regression equation (regression equation assessment) is the following:

$Y = -9{,}751 + 0{,}9912X_1 + 0{,}9873X_2 + 0{,}9866X_3$, where

Y -

integrated potential of appeal of the industrial enterprise as a part of the industrial PAIP park,

X 1 – the factors influencing the production potential of appeal of the industrial enterprise as a part of the industrial park ΣP

X 2 – factors, influencing the infrastructure potential of appeal of the industrial enterprise as a part of the industrial park ΣI,

X 3 – the factor influencing the social potential of appeal of the industrial enterprise as a part of the industrial park ΣS.

Matrix of correlation of R: n=76 with number of explanatory variables equal we rub (ΣP, ΣI, ΣS) with dimension of a matrix five. Therefore, the matrix independent variables has X (ΣP, ΣI, ΣS) dimension (76x5), the table 3.

Table 3 – Matrix ($X^T X$)

76	631.86	284.37	497.29	608.2
631.86	6700.173	2923.56	4095.848	5998.015
284.37	2923.56	1728.625	1718.957	2316.779
497.29	4095.848	1718.957	3521.186	3815.456
608.2	5998.015	2316.779	3815.456	5944.48
Σx2	Σyx2	Σx1 x2	Σx2 2	Σx3 x2
Σx3	Σyx3	Σx1 x3	Σx2 x3	Σx3 2

We can determine the pair coefficients of correlation according to the formula:

Error!

Error!

Error!

Error!

Error!

Error!

Error!

The matrix of pair correlations of R is presented in Table 4.

Table 4 – Matrix of pair correlations R

	y	x1	x2	x3
y	1	0.5704	-0.06206	0.7541
x1	0.5704	1	-0.3364	0.04854
x2	-0.06206	-0.3364	1	-0.306
x3	0.7541	0.04854	-0.306	1

We can define the values of t-statistics for r_{x1y} according to the formula 3.15:

$$t_{studied} = r_{x1y} \frac{\sqrt{n-m-1}}{1-{r_{x1y}}^2}$$

According to the Student's table: T_{tabl}

$t_{extrime}$(n-m-1;α/2) = (74;0.025) = 1.99

As $t_{studied}$> $t_{extrime}$, then we reject the hypothesis of equality 0 coefficients of correlation. In other words, a coefficient of correlation statistically.

$$t_{studied} = 0.57 \frac{\sqrt{76-1-1}}{\sqrt{1-0.57^2}} = 5.97$$

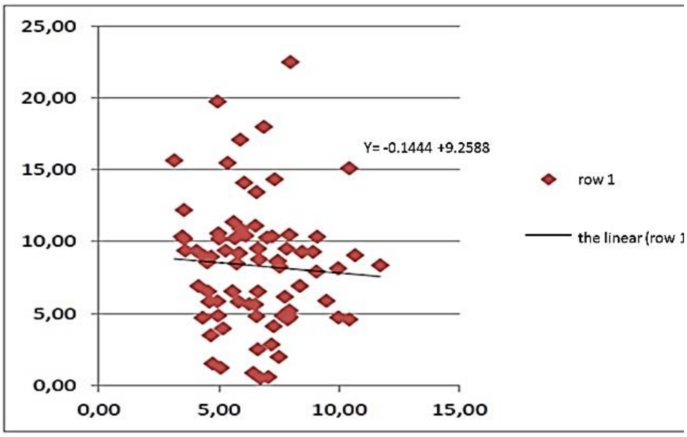

Figure 1 – Coefficient of correlation according to the factorial sign influencing infrastructure potential

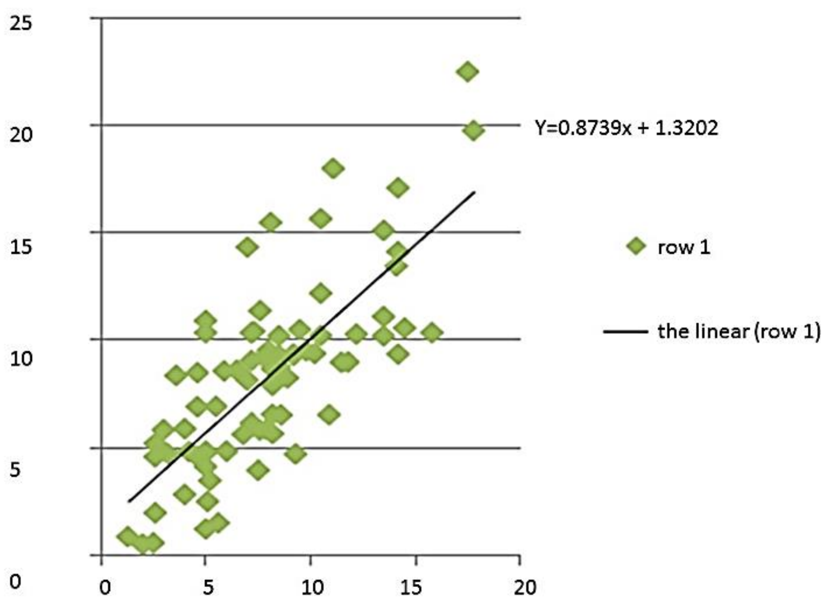

Figure 2 – Coefficient of correlation according to the factorial sign influencing the infrastructure potential

t-statistics for r_{yx2} is calculated as follows:

Error!

As $t_{studied} < t_{extrime}$, the coefficient of correlation is statically significant.

t-statistica for r_{yx3} is calculated as follows:

Error!

$t_{studied} < t_{extrime}$, the coefficient of correlation is statically significant.

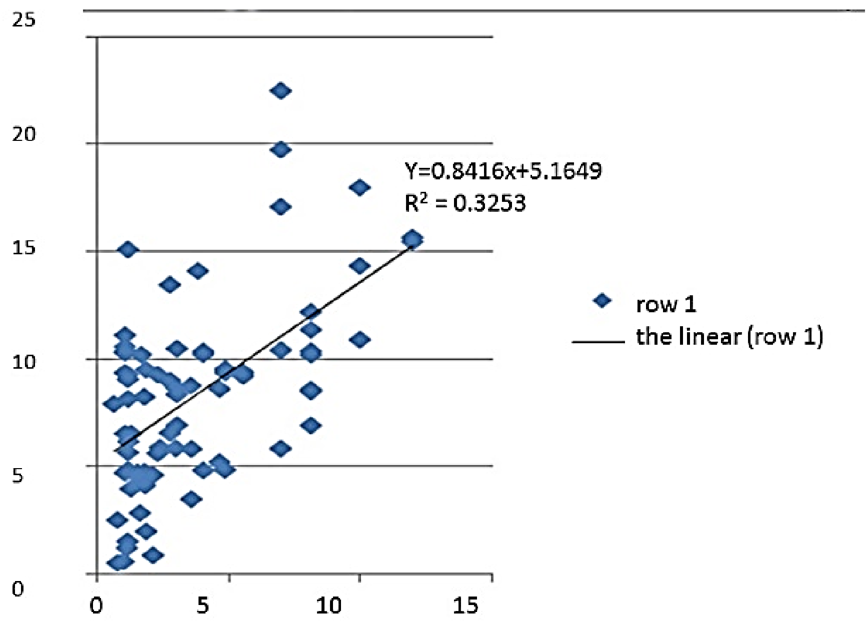

Figure 3 – Coefficient of correlation according to the factorial sign, influencing the production potential

Having applied the least square method for the assessment of the coefficients and using date from Table 4, we will have the set of equations:

$0.57 = \beta1 - 0.336\beta2 + 0.0485\beta3$

$-0.0621 = -0.336\beta1 + \beta2 - 0.306\beta3$

$0.754 = 0.0485\beta1 - 0.306\beta2 + \beta3$

We solve this linear equation system with the use of Gauss method: $\beta1 = 0.672$; $\beta2 = 0.424$; $\beta3 = 0.851$

Then the standardized form of the equation of regression takes the following form:

$t_y = 0.672x1 + 0.424x2 + 0.851x3$

4. Results

Calculation of the multiple coefficient of correlation, coefficient of determination and check of the general quality of the equation of the multiple regression are given. It is possible to define the quantitative dependences of the influence of production, infrastructure and social potentials on the integrated potential of attractiveness of the industrial enterprise as a part of the industrial park with the help of the obtained equation of the integrated potential of attractiveness of the industrial enterprise, taking into account its belonging to a definite typological group. As the calculation result the equation of the multiple regression which proves that the increase ΣP per 1 unit of measure leads to the average increase in PAIP per 0.991 units of measure was received; the increase ΣI per1 unit of measure leads to the average increase in PAIP per 0.987 unit of measure, the increase ΣS per 1 unit of measure leads to the average increase in PAIP per 0.987 unit of measure. The statistical significance of the equation is checked by the means of coefficient of determination and Fischer's criterion. It is proved that 99.88% of the general variability of PAIP is explained by change of factors ΣP in the studied situation. It is also proved, that the model parameters are significant statistically.

5. Discussion and Conclusion

The choice of option of the development of the industrial enterprise as a part of industrial parks is based on the set quantitative dependences of the influence of production, infrastructure and social potentials on the integrated potential of the appeal of the industrial enterprises as a part of industrial parks, taking into account their belonging to definite typological group. According to the revealed factors, forming the integrated potential of the appeal of the industrial enterprises as a part of the industrial park, it becomes possible to manage the industrial enterprises, which are the part of such parks, taking into account the need to develop these or those factors.

The aforesaid equation of the multiple regression of the integrated potential of the attractiveness of the industrial enterprises within the industrial parks, their statistics allowed to calculate and set the boundary values of ranks of integrated potential of attractiveness of the industrial enterprises as a part of industrial parks.

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The Dominance of Environmental Components in the Environmental Consciousness of Students-Residents of the Metropolis

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Abstract

The article discusses the components of the environment (natural, anthropogenic and social environments) and their representation in the environmental consciousness of students living in metropolises. The authors have undertaken the empirical study and presented the results of psychological testing of more than 150 students studying in different universities of Moscow. Quantitative (using methods of statistical processing) and qualitative data analysis showed the dominance of natural environment in the environmental consciousness of students in case of conflicting environments. The study revealed that the ratio of representation of anthropogenic and social environments depends on the ethnic component and professional orientation of a student. Factor analysis of data showed correlation between preferring altruistic values and the sense of harmony with nature. The authors concluded that the negative impact on natural environment and its significant transformation might lead to the increase in individualistic orientation of a person and the reduce of the conscious attitude to the nature in its entirety.

Keywords: Environmental consciousness, nvironment, Conflicting environments, Students, Natural human environment, Anthropogenic environment

1. Introduction

A person during his or her life rather interacts with the specific components of environment than with an abstract "environment" itself. The living environment of modern person consists of the following components (types of environment): natural environment, anthropogenic environment and social environment, the last of which significantly involves the information environment. The attitude to each of these components of living environment not only differs considerably, but also can be in a conflict with each other.

This subjective conflict between different types of environment is reflected in the ecological consciousness of a person. It ultimately refers to those manifestations of environmental consciousness that affect the environmental behavior of a person in specific situations.

Based on the above, there is the relevance of an empirical study on the question of dominant environments in the ecological consciousness of metropolis citizens (students) in case of conflicting environments.

2. Literature Review

The human environment is presented in the scientific literature as a system of interconnected environments concerning more narrow terms: the natural environment, the spatial environment, the social environment, the living environment, the production environment, the cultural environment, the information environment.

The influence on somebody or something acts as a constituent feature of the environment, since the environment always implies a subject in relation to which it exists. Conditions surrounding but not affecting a subject (a plant, an animal or a person) are not a part of their environment. Regarding *individual* and *personality*, the influence of various types of human environment on his or her mentality should be considered, including the natural environment[1-5].

The environment appears in human mind as the living medium, including different types of environment. In this case, the following types (components) can be distinguished: natural, anthropogenic and social environments, the last of which also includes information environment.

The authors assume that one should clearly separate the understanding of the natural environment in general and the natural human environment in particular.

The natural environment is a combination of abiotic and biotic factors, which are natural or slightly modified by people's activities. Such environment is considered regardless of direct contact with a person.

The natural human environment (the synonym is the natural human habitat) is a combination of external natural objects, phenomena and processes, which *are engaged* in person's life directly or indirectly. It differs from other components of human environment by self-maintenance and self-regulation without adjusting by a human.

A person diversely or – to be more specific – *ambivalently* influences the natural human environment when interacting with it. This influence can be both *negative* and *positive*. Replacing the *negative* human impact on the environment with the *positive* one is becoming one of the main tasks of further cultural progress of the humankind [4].

The natural human environment significantly influences the direction and speed of person's cultural development. The influence of natural environment on a person is certainly mediated in a complex way, but it is never so small as not to take into account its lasting importance in any historical and cultural analysis [5].

The psychological content of the concept of human environment in general and natural human environment in particular should be reflected in the conception of the second one as a natural and social surrounding of a person that has a set of influences and conditions providing an opportunity to satisfy person's *needs*, to manifest and elaborate his or her *abilities* [3].

When creating such opportunities, the social environment comes to the fore. *Social environment* is a set of social conditions of human life, affecting his mind and behavior.

Anthropogenic environment is the artificially created part of environment, which consists of technical and natural elements. This is the material world, which was created by a human and has all the attributes of modern life: technologies, their benefits and drawbacks, comfort and destruction of the original natural environment, material incomes and spiritual losses. Natural ecological systems are being replaced by artificial ones, therefore, the following pattern is revealed: the more the production and technical capabilities of mankind increase, the more dangerous the changes emerging in the biosphere become.

The environment appears in human minds as the living environment, including different types of environment. Four types (four components) are distinguished: natural, anthropogenic and social, that also covers information environment. These components of the environment are reflected in minds as opposed to each other, conflicting in a number of situations. Such conflict situations enhance environmental consciousness [3].

The opposition of natural and anthropogenic environments is the most common. The anthropogenic environment is the main way of human intervention into the existing ecosystems, which often appears to be negative and leads to irreversible degradation of natural landscapes. In particular, the development of cities, erection of dams and transport systems (canals, tunnels, paved roads, etc.), and extensive development of different minerals have reached planetary scales. The pathos of "nature transformation" was replaced by growing anxiety and pessimistic forecasts of the future of technocratic civilization.

In historical retrospective, the conflict of natural and social environment had different solutions that were reduced to two strategies: adaptation and accommodation [2]. Adaptation focuses on the requirements of the natural environment (climate, resource base of the economy, etc.), and entailed adequate changes in the social environment. Accommodation means purposeful change of landscapes in the interests of social organisms and is represented by examples of transformation of flora and fauna of different regions of the planet as a result of intensive agriculture. Not man-made, but demographic pressure on the natural environment came to the fore here.

The conflict between the technological and social environment has traditionally been seen as an inevitable consequence of progress. This conflict was considered the most manageable. In fact, there are quite enough examples of its successful solution: reduction of working time, wage supplements, the spread of mobile communication, tourism, etc. On the other hand, the environmental consequences are also quite obvious, for instance: growing landfill sites, ill-conceived development of resort areas, the consumption of genetically modified products.

3 Materials and methods

Within 2012-2018, the authors carried out the empirical study of relationships between the features of the natural environment influencing the formation of ecological consciousness of a young person and the social environment which rests on values and value paradigms [7]. The study engaged 150 students of Moscow universities. The sampled population is equalized by number of people, gender identity and age. Age of students was 18–21 years.

To solve the set tasks, the authors used the methods of theoretical analysis of scientific sources, generalization and systematization of data on the problem under study, observation, testing, and methods of mathematical computer processing of the obtained data. The following methods were applied:

1. Multifactorial methodology TEM (developed by the Psychological Institute of Russian Academy of Education, authors M.O. Mdivani, P.B. Codess and others), which covers a fairly wide range of essential characteristics of ecological consciousness and enables getting characteristics in quantitative form (20 indicators).
2. Methodology "Value Orientations" (VO) by M. Rokich modified by V.V.Kalita. A classical technique used in psychological assessment for studying and characterizing the motivational and value sides of a personality. The implementation of the methodology resulted in the provision of ranked lists of terminal and instrumental values.
3. To study the obtained empirical data, mathematical-statistical analysis (correlation, factor analysis) was applied with the use of package SPSS Statistics 17.0.

4 Results

From the perspective of the problem posed, the following indicators of the test are of the most interest: N+ "positive impact of nature on a person", N- "negative impact of nature on a person", NE- "choosing natural environment in case of conflicting environments", AE- "choosing anthropogenic (man-made) environment", SE - "choosing social environment". Based on the objectives of the experimental study and the convenience of analyzing the results, the authors averaged the data on each scale.

Table 1. Summarized results of average values on TEM scales, N = 150

TEM method scales	Averages
N+ positive impact of nature on human	39.6
N– negative impact of nature on human	36.6
NE natural environment	3.4
SE social environment	2.3
AE anthropogenic (man-made) environment	1.56
EM ecological motivation	11.3

The students demonstrate high showings on scales N+ "positive impact of nature on a person" (39.6) and N- "negative impact of nature on a person" (36.6), which reflects their deep understanding of the significant influence of natural environment on humans. Moreover, according to students' estimates, the positive effect of nature obviously exceeds all possible negative factors.

The students tend to demonstrate quite high showings on the environmental motivation scale EM (11.3). High ecological motivation is coherent with the priority choosing of the natural environment in case of conflicting environments (3.4). The second most important one is the social environment (2.3), and the last is the anthropogenic environment. This group of students shows the lowest indicator in terms of the choosing anthropogenic environment in case of conflicting environments (1.56).

The factor analysis of the main indicators of the TEM methodology identified six factors. The following factors are of specific interest:

The 5th factor reflected the high correlation between subjects' gender and the choice of the social environment in case of conflicting environments (girls tend to prefer the interests of the social environment);

The 6th factor showed a high correlation between the priority choice of the natural environment and the level of ecological motivation, while the choice of the man-made environment received the least weight (there is a clear opposition of natural and anthropogenic environment in minds).

The factor analysis of the results allowed revealing the following general laws: girls tend to prefer the interests of the social environment; there is a clear opposition of the natural and man-made environment in minds.

By processing the proceedings obtained using the "Value Orientations" (VO) methodology of M. Rokich, the authors implemented the following actions: at the first stage of processing the results, the data on all scales of List A and List B were averaged. To create a more complete image of value preferences for each group of participants, we ranked averages of each scale for the second time.

As a result of the factor analysis of the main indicators using the VO methodology, six factors were determined. Of particular interest are the following factors:

The 2nd factor (social environment – natural environment) reflects high loads in terms of the following indicators: "having good friends", "wealthy life", "happy family life", "love". The lowest weights belong to the indicators "beauty of nature and art", "environmental friendliness", "productivity".

The 4th factor (altruism – individualism) recorded maximum weights in terms of "harmony with nature", "happiness of others" and minimal loads in terms of "active life", "life wisdom", "responsibility".

The factor analysis of the results allowed revealing the presence of the following general patterns: division of the values of social and natural environment; correlation between the preference of altruistic values and harmony and the nature.

Then, all the data obtained by the TEM and VO methodologies were subjected to factor analysis by the principal component method with the further Varimax rotation. As a result of factor analysis of variables, the authors identified the following patterns.

The 1st factor (environmental responsibility) is characterized by high values in terms of "environmental responsibility" indicator, which are coherent with a high ranking indicator in terms of the following characteristics: "love", "happy family life", "health". «Environmental ignorance» indicator received the lowest values.

This factor reflects the understanding that a prosperous and harmonious individual human life is impossible without taking care of natural environment, indirectly reflects the awareness of the existence of environmental crisis and its possible consequences.

The 2nd factor is "gender stereotypes". High ranking indicators on the characteristics of "environmental friendliness", "harmony with nature" are coherent with the choice of the social environment in case of conflicting environments. The choice of social environment is combined with "female gender" indicator. The lowest weights were "entertainment", "having good and loyal friends", "self-control", which is combined with the choice of the man-made environment in case of conflict.

The 3rd factor (ecological sensitivity) includes high weights in terms of "unity with nature", "negative impact of a person on nature", "tolerance", "sensitivity". The minimum weights received "personal environmental responsibility", "development" and "knowledge".

The following interrelation is observed: with an increase in the value of individualism and the development of the intellectual component of a person, his or her perceived relationship with nature sharply decreases.

The 4th factor (social – individual values) includes the maximum loads according to the parameters "politeness", "carefulness" and "sensitivity". The minimum weights were gained by "firm will", "wideness of views", "rationalism", "freedom", "positive influence of human on nature".

It can be noted that the characteristics that are in the first group have socially adaptive nature. Apparently, it reflects the presence of two different tendencies in the choice of a life path, life priorities, which neutralize each other.

The 5th factor (natural environment – man-made environment) includes high loads on the scale of "unity with nature", "harmony with nature", "life wisdom", "responsibility", "honesty", choice of the natural environment and low loads according to the characteristics "active life", "man-made environment".

The 6th factor (social environment – natural environment) includes high loads in terms of "having friends", "love", "wealth", the choice of priority of the social environment and low values in terms of "harmony with nature", "environmental friendliness". There is a clear tendency to opposition of the social environment and the nature.

Interesting differences were revealed in the preferences of type of environment in case of environmental conflict for three groups of respondents: students from Africa (50 people), students from China (50 people), students from Russia (50 people).

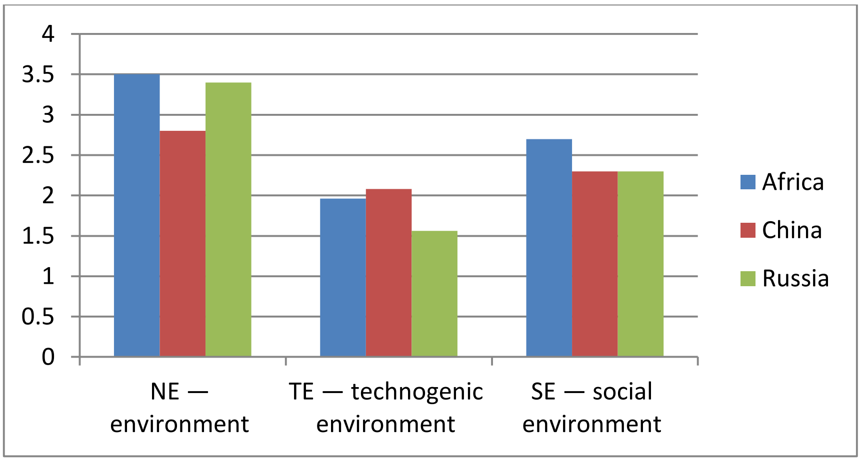
The sequence of preferences (1. the natural environment 2. the social environment 3. anthropogenic environment) in case of conflicting environments was the same in two groups: 1 (Africa-3,5-2,7-1,96) and 3 (RF– 3,5-2,12-1,8).

Table 2. Summarized results of average values on TEM scales for two groups of respondents: future specialists in public administration (38 people) and future medical specialists (46 people)

	Groups of respondents			Mann-Whitney criterion	
The TEM scales	Africa	China	Russia	χ2	asympt. v.
NE — environment	3,5	2,8	3,4	7,706	0,021
AE — anthropogenic environment	1,96	2,08	1,56	1,187	0,552
SE — social environment	2,7	2,3	2,3	5,130	0,077

Students from China also placed natural environment at the first place (2.5), but the indicators of preference for anthropogenic and social environments similar among Chinese students (2.36).

However, the indicator of preference for natural environment (NE) was significantly lower among the Chinese students then among African and Russian students. The indicators of preferences of social environment (SE) and anthropogenic environment (AE) do not differ significantly in all three groups. Only under the pairwise comparison, the difference between the group of students from Russia (1,8) and from China (2,36) in terms of preference of anthropogenic environment (AE) is statistically confirmed.



Picture 1. Summarized results of average values on TEM scales for three groups of respondents: students from Africa (50 people), students from China (50 people), students from Russia (50 people)

The authors have constructed the correlation matrix of indicators by TEM scale, of indicators by the values-based orientation methodology, with two additional variables: "country" and "gender". As a result of statistical processing performed with the help of SPSS 17.0 program, statistically significant correlations between the variables were obtained.

Indicator NE (preference for the natural environment) (when the significance level is $p<0.05$) correlates with A2 "life wisdom" (0.177), B8 "education" (-0.173), B11 "self-control" (-0.192).

The AE scale (preference for the anthropogenic environment) (when the significance level is $p<0.05$) correlates with characteristics A13 the "entertainment" (-0,196) and B12 "courage in defending one's decision" (-0,181).

The SE scale (preference for social environment) is statistically significant ($p<0.01$) and correlates with the characteristics A13 "entertainment" (0.244) and B18 "sensitivity" (0.215), as well as ($p<0.05$) with A14 "freedom" (-0.162) and B12 "courage in defending one's decision" (0.170).

At the second stage of the analysis of relationships between TEM and values-based orientation data, the authors conducted the factor analysis of these data by adding two more variables (country and gender). As a result of the factor analysis of variables, the following patterns were identified.

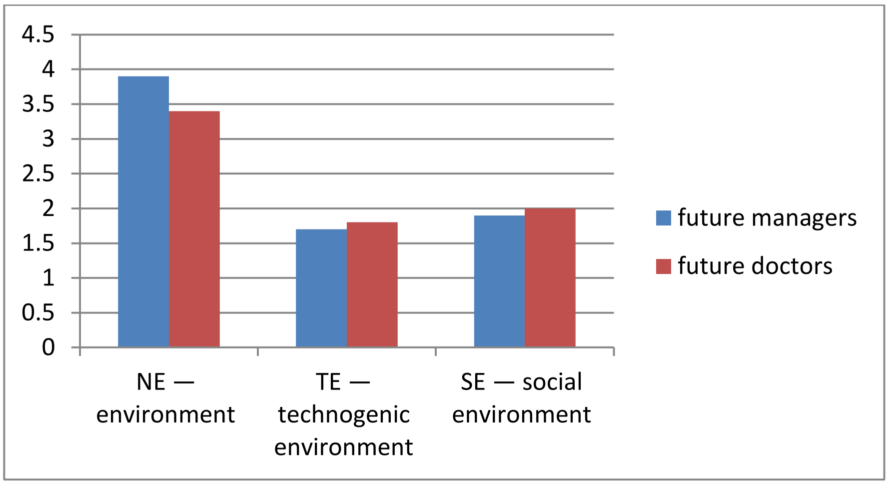
The 5th factor includes the maximum load in terms of the parameters of "active life", "life wisdom", the choice of priority of the natural environment and the minimum load in terms of indicators of "anthropogenic environment".

The selected factors allow obtaining characteristics of the main trends in relation to nature, the relationship of this parameter and other social attitudes: cognitivism is contrary to environmental friendliness, sociality is also at the opposite pole of harmony with nature.

Table 3. Summarized results of average values on TEM scales for two groups of respondents: future specialists in public administration (38 people) and future medical specialists (46 people)

	Groups of respondents		Mann-Whitney criterion	
The TEM scales	future managers	future medical workers	Uemp	signific. level
NE – environment	3,9	3,4	7,706	P<0,05
AE – anthropogenic environment	1,7	1,8	798,5	*
SE – social environment	1,9	2	734	*

The interesting differences were found in the preferences of the type of environment in the situation of conflicting environments. Although the sequence of preferences under conflicting environments did not differ in two groups (nature, social, technological environment), the level of preference for natural environment was significantly higher among future managers: 3.9 –future managers; 3.4 – students of medicine faculty ($U = 659$; $p < 0.05$). The authors assume that it is the result of special training of professional managers. They gain additional knowledge on the environment and the ways of influencing it. This leads to the greater willingness to implement environmental activities and themore optimistic assessment of their results.



Picture 2. Summarized results of average values on TEM scales for two groups of respondents: future specialists in public administration (38 people) and future medical specialists (46 people)

5 Conclusions

The factor analysis of the results allowed revealing the following general laws: the interrelation between the preferences of the altruistic type values and the value of harmony with nature is determined; there is a relation between the gender of subjects and the preferred choice of social environment in case of conflicting environments (women tend to prefer the interests of social environment); with an increase in the value of individualism and the development of intellectual component of a person, his or her conscious attitude to nature sharply decreases; there is an obvious confrontation between natural and anthropogenic environments in terms of consciousness and values; the separation and opposition of social and natural environments are determined.

According to the data obtained within the analysis, the following consequences can be expected. The negative impact on natural environment and its manifested transformation can entail the strengthening of individualistic orientation of a person, the decrease in perceived connection with nature (in such aspects as aesthetic feeling, bodily feeling, activity), reduction of the significance of such qualities as sensitivity, responsibility, tolerance, honesty, life wisdom (and lack of their development), which are considered to be ecologically significant personal qualities.

Future specialists in the field of public administration and future medical workers have a sufficient level of environmental motivation. They consider the measures of protecting the environment as personally important and prefer the interests of natural environment in the situation of its conflict with technological or social environment (especially persons with axiological and regulatory components of environmental consciousness).

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Key Aspects of the Formation of the Language of the Cross-Cultural East-West Dialogue: Revival of the Historical-And-Philosophical Agenda of the Buddhological School

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Abstract
The key aspects of the language of the cross-cultural dialogue between the East and the West are revealed in the article. The historical-and-cultural value of "Cyclopedia of Abhidharma" by Vasubandhu, its Sanskrit original furnishes the clue to the judgment of the Buddhist cogitative tradition. It was completely translated into Chinese, and in the 9th century into the Tibetan languages. The dialogue interaction in this case is considered as ways and results of the transfer of Indo-Buddhist religious and philosophical tradition by means of other cultures. The Tibetan lotsava created classic Buddhist Tibetan which, having arisen as the formalized target language of the Indian initial texts, developed further as a natural language. This unique phenomenon of the spiritual culture of Tibet to a large extent defined the history of the expansion of Buddhism in Central Asia. In the Far East, and first of all in China, translators initially remained within logic of a natural language and did not seek for the creation of any new morfologic-and-semantic formations. However the "selection of the values suitable according to sense" was eventually not effective for the reception of Indo-Buddhist outlook. The Sanskrit text contains philosophical material in the form of a natural language. At the same time the Sanskrit text of Abhidharmakośa by Vasubandhu is free from any non-Indian ideological stratifications. Rosenberg did not translate Abkhidkharmakosha's text. He saw another task, which was to create the catalog of problems which were developed in this treatise. Shcherbatskoy focused on the statement of the main theoretical concept of the Abhidharmakośa philosophy, the concept of the stream of elements of psychic life of an individual. L. de la Vallée Poussin proved that to open philosophical semantics, remaining within the Chinese version, is impossible. His translation, as a matter of fact, represented the preliminary material Publication in 1967 of the Sanskrit original of Abhidharmakośa allowed to pass to a systematic historical-and-philosophical and historical-and-cultural research of the Abhidharmakośa direction in the Buddhism.
Keywords: cross-cultural dialogue, East and Wes, Buddhism, Sanskrit texts, translation , philosophical comparative studies

1. Introduction

The idea of Eurocentrism was disproved by two world wars, environmental problems and that induced the Western European culture to refuse the claims for the superiority not only in the sphere of economy and politics, but also in the sphere of spiritual culture. Political prudence prompts that the West can keep the world influence, providing particular "reconciliation" with the East. Thus, there is a requirement of the cultures synthesis. But nevertheless, this synthesis mainly supposed that it would have to connect the western values and some eastern values, which are in a certain degree are conformable them. The impracticability of the conceived synthesis was fully proved during the national liberation movements which took place on the Africa and Asia in the 20th century.

But if synthesis is impossible, it is quite admissible that the idea of cross-cultural dialogue is really doable.

Dialogue is polyhedral, its phenomenon is fixed in interactions, and also in the history of studying of the philosophical texts interpretations (Kolesnikov, 2004). One of the most significant texts is the so called "Cyclopedia of Abhidharma", i.e. Abhidharmakośa, Abhidharmakośakārikā (Sanskrit - अभिधर्मकोश) or Verses on the Treasury of Abhidharma, written in Sanskrit verse by Vasubandhu (Sanskrit – वसुबन्धु) in the 4th or 5th century (Sarao, 2017).

The treatise represents the basic text, written in the Carrick genre, the poetic aphorisms, issued in a special way with prosaic self-comments to it. The treatise consists of eight sections: Doctrine on Classes of Elements, Doctrine on the Factors of Dominance in Mentality, Doctrine on the World, Doctrine on Karma, Doctrine on Potential Affects, Doctrine on Ways and Persons, Doctrine on Pure Knowledge, Doctrine on Yogic Contemplation (cited as Abhidharm-Koshabhasya of Vasubandhu, edited by Pradhan, 1967).

Abhidharmakośa by Vasubandhu is very interesting, as being a standard sample of abhidharmist philosophy, it was studied by representatives practically of all the schools and directions of the Buddhism both in India, and abroad: in Tibet, Mongolia, China and Japan. This fundamental text was meant for the monks of the highest rank, therefore many of the simplest provisions of the Buddhism were not considered in it. At the same time it contains all the conceptual-and-terminological framework of Indo-Buddhist religious-and-philosophical tradition and represents not only the ways of philosophizing, but also the style of thinking, which gained distribution in the Hinayana schools.

The historical-and-cultural value of this monument in the cross-cultural dialogue between the East and the West consists not only in that its original in Sanskrit furnishes the clue to judgment of the Buddhist cogitative tradition, but also in that it was completely translated into Chinese in the 6th and 7th centuries, and into Tibetan and Mongolian in the 9th century, the translations into English, French and Russian appeared recently. In this regard studying of the Sanskrit original appears to be the matter of paramount importance, as it allows to carry out a comparative substantial research of the Sanskrit, Tibetan and two Chinese versions and to make scientifically authentic conclusion on the ways and results of the presentation of the Indo-Buddhist religious and philosophical tradition by the means of others cultures, which acted as the recipients of this tradition. That is the very matter, which is considered in the article as the dialogue interaction of the Eastern and Western cultures.

2. Literature Review

The Sanskrit original of Abhidharmakośa was considered to be irrevocably lost for a long time. The research by J. Takakusu (1904), S. Yamakami (1912), F.I. Shcherbatsky (1930), O.O. Rosenberg (1991), Louis de la Vallée Poussin (1971) were the translations, attempts of interpretation of Abhidharmakośa, they were made on the basis of the Tibetan and the Chinese versions.

The first developed mentions of Abhidharmakośa can be find in the works of the Japanese researchers Junjiro Takakusu (Takakusu, 1904) and Sogen Yamakami (Yamakami, 1912). The authors believe, both of them are to be referred to the representatives of traditional learning.

In 1917 F.I. Shcherbatsky published Chapter 1 of the Tibetan translation of Abhidharmakośa within the "Bibliotheca Buddhica" series , the first half of Chapter 2 was published in 1930 (Shcherbatsky, 1917, Shcherbatsky, 1930). In 1918 F.I. Shcherbatsky together with the well-known French buddhologist Sylvain Levi published Chapter 1 of the Sanskrit comment of Yashomitra (Vyakhya) and prepared Chapter 2 for the edition together with U. Ogikhara (Lévi, 1932).

The monograph by O.O. Rosenberg "Matters of Buddhist philosophy" acted as the real beginning of the historical-and-philosophical research in the field of Abhidharmakośa and, more widely, in the sphere of Buddhist philosophical thought (Rosenberg, 1918).

Louis de la Vallée Poussin one of the greatest Western European buddhologists of the first third of the 20th century, published Abhidharmakośa translations from Chinese, but not into French, but into Sanskrit (de la Vallée Poussin, 1923-1931, de la Vallée Poussin, 1971).

The first buddhologist, who was a historian of philosophy and addressed the issue of the translation of the Sanskrit original of the treatise into the European (Russian) language was V.I. Rudoy (Rudoy, 1990, Ostrovskaya, Rudoy, 1998).

Abhidharmakośa in original was accidentally found by R. Sankrityayana in 1935 in the small Tibetan monastery Ngor in 1935. About ten years were required to prepare and publish the detailed paleographic and archaegraphic description of the manuscript, written on palm leaves, then the text was published by professor P. Pradkhan in 1967 (Abhidharm-Koshabhasya of Vasubandhu, edited by Pradhan, 1967, Yamada, 1977, Sarao, 2017).

3. Method

The main approaches, used in this scientific research are:

– system approach which is necessary for the consideration of the factors of the vivid interest in the Buddhist culture values and attempts of the creation of the world outlook concepts, based on the use of the philosophical ideas of the East in the wide context of global trends in the culture of that time;

– the dialectic approach, allowing to see the process of entry of the Buddhism into the European culture in its development and interrelation with other cultural phenomena;

– complex approach, necessary for the analysis of the Buddhism philosophy influence on different spheres and forms of the European culture;

– comparative approach, promoting the identification of common and specific aspects in various cultures, the definition of conditions and factors of the cultures interaction, and the bases of their complementary state.

Such methods as historical-and-philosophical reconstruction, hermeneutical method, philosophical-and-culturological analysis of literary works, contextual analysis, etc. were also used.

The main method of this research was the comparative analysis. It should be noted that comparative studying of Tibetan and Chinese translations of Abhidharmakośa gives the chance to analyze the general condition of spiritual culture of the studied period and therefore it has great culturological value.

Art and technique of conversion of the Sanskrit texts into Tibetan were the unique achievement of the Tibetan scientists. The Tibetan translations, representing the Indian originals exclusively precisely and literally thanks to a tracing method, can be considered as the only means for the check and interpretation of Indo-Buddhist sources, while most of them were lost partially or completely. Stereotypic Tibetan equivalents for Sanskrit words and morphemes, including prefixes, proper names and technical terms, though not always successful in the terms of Sanskrit grammar were used in the Tibetan translations.

The Tibetan translators practice became the main reference point for modern scientists during the recovery of the Indian originals on the base of the Tibetan translations.

Reconstruction of Indo-Buddhist religious-and-philosophical texts on the basis of old Chinese translations was essentially impossible, as purely semantic methods, considerably deforming the structure of the Sanskrit original were usually used in them. In this regard the translations by the "new school", founded by Xuan-Zang in the middle of the 7th century differ favourably. They do not give the chance of the full reconstruction of Sanskrit originals neither, but the system of conversion of technical terms is rather unified and unambiguous to them. The matter of whether the Chinese term transfers the meaning of its Indian equivalent, depends finally on two circumstances. The first circumstance is whether the translation represents the same formal system as the original, and the second circumstance is whether the semantic bunches of the terminological tools and the structure, determined by them, are understood correctly. If both circumstances are provided, the technical meaning of the term of the original is translated completely and the translation can be considered to be adequate.

4. Results

The destiny of Abhidharmakośa in Central Asia and in the Far East is a remarkable illustration of some regional features and general regularities of the process of the expansion of the Buddhism as the religious-and-philosophical system in the broad sense. The analysis of the Buddhist culture reception will inevitably remain incomplete without the careful research of the process of adaptation of Indo-Buddhist philosophical terminology in Tibet and China, as the philosophy in Buddhism acted as the highest form of reflection on culture in general. And thus, it is obviously important to estimate the ways, which were chosen by the translators of Vasubandhu's Abhidharmakośa, correctly (Rudoy, 1994, Jaini, Padmanabh, 1958, Aung and C. A. P. Rhys Davids, 1915).

Abhidharmakośa was translated into Chinese twice - by Paraaamartha in the 6th century AD (cited as Life of Vasubandhu by Paraaamartha, Takakusu 1904), and then by Xuan-Zang in the 7th century AD, and the sequence of these translations represented the two stages of rooting of the Buddhism in the Far East. The translation by Paraaamartha recorded the stage of the interpretation of the Buddhist conceptual terminology framework by the means of the Chinese cultural tradition, which preceded the Xuan-Zang reform. The plurality of lexical interpretations of the philosophical terminology was characteristic of this stage, as each of translation schools developed its own way of interpretation. Xuan-Zang aimed to unify the conversion of the Buddhist terms into Chinese and thus, to create a standard model of translation of Sanskrit, (i.e. original) Buddhist texts.

The Chinese translators were guided by the principle of "selection of the meanings, suitable on sense". At the same time they gave their understanding of the Buddhist philosophical ideas by the means of attraction of the terminology, created by Taoists and Confucians. And though this terminology was rethought in relation to the statement of Buddhist concepts, it inevitably left a peculiar mark in the semantics of the initial (Indian) world outlook material.

The Tibetan translators chose another way. Before arrival of the Buddhism into the Tibetan culture the philosophy as a form of spiritual activity was not known. And that, in turn, meant that for translation of the most difficult philosophical representations it was necessary to create a special language, as there were no conceptual and terminological tools in the natural language yet and, respectively, special lexicon was absent.

The Tibetan translators (lo tsa ba) found their special way of conversion of the contents, they created an absolutely special formal language for the conversion of the Sanskrit Buddhist terminology, adapted for the transmission of the complete world outlook system. That language which was used for the translation of Abhidharmakośa was the language, formal by its nature and accordingly it did not transferred semantics of the original in the autochthonic linguistic forms. The problem of such formal language was in "transplanting" of the complete world outlook system. The essence of the formalization came down to artificial designing of the morfological-and-semantic units, which are corresponding to the terms of the Sanskrit original univocally. That new language played the major role in the history of Tibetan Buddhism, it appeared to be not only the classic language of the translation, but also the primary terminological basis on which the living language of the Tibetan Buddhist learning began to develop actively.

Transplantation of the Buddhism both as religion, and as philosophy was the process, vital for the social structures, dominating in Tibet, which functioning could not be adequately supported with autochthonic religious beliefs any more. To move these beliefs to the background, it was necessary to make the language of Buddhist culture alive, available, and at the same time to keep all the semantic completeness both of the doctrines, and its logical-and-discursive interpretation at the level of Buddhism as the philosophical system.

The Tibetan lo tsa ba translators spent more than two hundred years on this task solution (7-9th centuries), and the result of their activity was the emergence of the classic Buddhist Tibetan language, which having arisen as the formalized target language for translation of the Indian initial texts, began its further development, submitting to the regularities of functioning of any natural language. This unique phenomenon of spiritual culture of Tibet to a large extent determined all the history of expansion of the Buddhism in Central Asia. In the Far East, and first of all in China, translators initially worked within the logic of the natural language and did not seek for the creation of any new morphological-and-semantic formations. However, "selection of the meanings suitable on sense" was eventually the way, much less effective for the reception of Indo-Buddhist outlook in its pure form. The cultural realities and ideological representations of Taoism and Confucianism, fixed in the natural language set the distinct seal of endemicity to the way of translation of the Sanskrit Buddhist technical terminology. Thus, the translation was made by the means of the Far East religious-and-ideological traditions; that substantially deformed the relevant semantics of initial (Indian) world outlook material. The target language for translation of the Sanskrit originals represented a certain cultural mixture: Buddhist culture was transferred by the Chinese translators by the means of the semantic units which were initially belonging to other cultural and historical basis.

The aforesaid consideration brings us to the thought of the value of the Sanskrit original of Abhidharmakośa, major for the historian of philosophy. The Sanskrit text contains philosophical material in the form of the natural language which kept communication of synchronic semantics of technical terminology with historically earlier diachronic layers of its formation; that cannot be considered during the work with the formalized Tibetan translation. At the same time the Sanskrit text of Abhidharmakośa by Vasubandhu is free from any non-Indian ideological stratifications.

The evidence-based idea of the Buddhism as an essentially non-uniform ideological formation was developed by O.O. Rosenberg within the domestic (Russian) historical-and-philosophical school of buddhology. This approach received the name of the analytical concept as it aimed to allocate the actual presence of three levels, which are not reduced to each other (the religious doctrine, the cult psychotechnical practice and the philosophical discourse), which were really functioning in the Buddhism throughout the whole diachronic cut of its existence.

We have tried to apply the idea of Buddhist structural polymorphism during consideration of synchronous versions of philosophical systems of the Buddhism. It allowed to reveal some conceptual or conceptual-and-terminological correlates of two other levels of historical functioning of the Buddhism in the logical-and-discursive texts, i.e. the levels of the religious doctrine and the cult psychotechnical practice (Buddhist yoga). Thus, the issue of historical-and-philosophical interpretation was operationalized as the issue of reconstruction and explanation of concrete historical forms of the existence of Buddhist structural polymorphism, as well as the issue of substantial interaction of the philosophical discourse with two other levels.

The history of studying of the treatise Abhidharmakośa by Vasubandhu makes up several decades, though Eugène Burnouf already knew about the existence of this treatise from the middle of the 19th century (Burnouf, 1844). The Chinese translations of the treatise remained in full-text, and the fact that both Chinese versions (by Paraaamartha and by Xuan-Zang) imprinted in themselves two consecutive stages of the reception of the Buddhism in the Far East is especially interesting, and it becomes especially obvious thanks to the comparison of both versions. The translation of Paraaamartha fixes the Chinese Buddhist terminology during the period preceding its unification by Xuan-Zang. Unifying the Buddhist terminology, Xuan-Zang pursued the aim to create a model of translation of Sanskrit, i.e. initial Buddhist, texts.

As for the classical Indo-Buddhist tradition, before the discovery of the Sanskrit original Abhidharmakośa was presented only by the comment of Yashomitra which was created according to the ideas of a late sautrantika and could be dated as the end of VIII - the beginning of the 9th century.

It is necessary to add that in Japan Abhidharmakośa acted as an obligatory subject in education of Buddhist clergy up to the last time. The Japanese commentator tradition (it consisted its feature) paid attention to the detailed explanation of well developed problems, and places obscure which sense was not obvious, specially were not considered.

However the treatise language, containing very developed conceptual-and-terminological philosophical tools, was the system which was almost closed for the European researcher of that period. For this reason the treatise by Vasubandhu, being known nominally, could not be introduced for the scientific use for a long time.

The first developed mentions of Abhidharmakośa can be found in the works by Japanese researchers Junjiro Takakusu (Takakusu, 1904) and Sogen Yamakami (Yamakami, 1912), who have to be named the representatives of traditional learning. Their research, carried out in English, apply for the status of scientific research of the time absolutely fairly, but both authors were Buddhists according to theit outlook, and thus their reflection could not overcome the limits, put by the Buddhist religious doctrine. S. Yamakami's research is also interesting because of the fact that the author tried to give the Buddhist philosophical ideas by the means of the European conceptual-and-terminological tools. At the same time historical-and-philosophical qualifications of Yamakami look rather amorphous, as the European philosophical semantics was realized by him not quite strictly. For example, everywhere, where the professional European historian of philosophy would use the term "individual", S. Yamakami used the term "subjective", and that deformed the idea of the European buddhologist on the Buddhist philosophy in general and abhidkharmist philosophy in particular substantially.

The real beginning of historical-and-philosophical research in the field of Abhidharmakośa and more widely in the sphere of Buddhist philosophical thought, was the monograph by O.O. Rosenberg, named "Matters of Buddhist philosophy" (Rosenberg, 1918). It is important to emphasize that Rosenberg did not translate Abhidharmakośa text. He considered another task - to create the catalog of matters, which were developed by Vasubandhu in his treatise. Such approach cannot be considered characteristic of the oriental research, attaching crucial importance to the translation. In this sense Rosenberg's research is supposed first of all for the historical-and-philosophical audience, as Rosenberg aimed to demonstrate that the Buddhist thought considered the same problems, as the European philosophy, and the difference consisted in the formulation of the problems identified and in the presentation of the material. Thus, the exclusive merit of O.O. Rosenberg consisted not only in the development of analytical approach to the interpretation of the phenomena of Buddhist culture, recorded in written monuments but also in that he managed to overcome the Eurocentric mindset in the assessment of Buddhist philosophy.

The analytical concept of O.O. Rosenberg allowed to estimate the role of philosophy in the system of Buddhist outlook correctly. Explaining it in the relation to the Buddhist canon, Rosenberg emphasized the crucial role of Abhidharmakośa for understanding of the sutras literature (Sanskrit - sūtra, सूत्र) . Here it is necessary to emphasize one essential circumstance, important for the adequate comprehension of the Rosenberg's idea. Russian buddhologist perfectly knew that the sutras literature is non-uniform according to the contents that in the canon the sutra exclusively saturated in the philosophical relation meet. However, its discovery consisted in the that systematic understanding of Buddhist philosophy on a basis of even such "philosophical" sutras is impossible. Only Abhidharmakośa , according to Rosenberg, systematized the theoretical views of the Buddhism in uniform consistent whole by philosophical exegetics. Out of Abhidharmakośa any, even the most "philosophical" sutra cannot be anything else, except as the fragment not capable to present Buddhist philosophizing in all its theoretical completeness. This situation formulated by Rosenberg, quite authentically and firmly and now.

One more most significant Rosenberg's achievement was that he carried out the identification of basic Buddhist concepts of the Indian (Sanskrit) and Far East traditions. In the theoretical relation such approach was very fruitful, as it considered historical and cultural genesis of the Buddhism. The Far East versions of Abhidharmakośa were considered by Rosenberg as the attempts to transfer Indo-Buddhist tradition by the means of other culture, but not as the certain reality, recorded in the Chinese or Japanese languages. Thus, the research of Abhidharmakośa, carried out by Rosenberg laid the foundation for the issue of the transregional studying of the Buddhism on the material of the philosophical treatises.

Rosenberg's research affected substantially the direction and contents of the international project according to the edition and studying of Abhidharmakośa who was finally developed by F.I. Shcherbatskoy in 1917 on the basis of "Bibliotheca Buddhica". Discovery of the Uigur version of the Vasubandhu's treatise by Sir Marc Aurel Stein was the formal cause for the organization of this scientific enterprise (Stein, 1937); purely philological interest in Uyghur coincided with the interest in Abhidharmakośa as to the monument of the Buddhist theoretical thought.

F.I. Shcherbatsky's project included the following:

1. Edition of the Tibetan translation of Carrick (basic text) and bhäsya (self-comment) by Vasubandhu; the publisher was F.I. Shcherbatskoy.

2. Edition of the Sanskrit text bhäsya (Yashomitra's comment); Chapter 1 - the publisher was S. Levi; other heads - the publisher was U. Ogikhara.

3. Edition of the Uigur translation; the publisher was D. Ross.

4. Edition of two Chinese translations (by Xuan-Zang and Paraaamartha); the publisher was U. Ogikhara.

5. French translation of Carricks and bhäsya ; the translator was L. de la Balle Poussin.

6. Russian translation of Carricks and bhäsya ; translators were F.I. Shcherbatskoy and O.O. Rosenberg.

7. French translation; the translator was S. Levi.

8. Systematic review of the Abhidharmakośa doctrine; research by O.O. Rosenberg.

9. English translation of Carrick and bhäsya ; translators -were F.I. Shcherbatskoy and O.O. Rosenberg [Tibetan translation of joint stock company, p. IV-V].

What managed to be realized from the project?

F.I. Shcherbatskoy published Chapter 1 of the Tibetan translation of Abhidharmakośa in the "Bibliotheca Buddhica" series in 1917 (Shcherbatskoy, 1917). The first half of Chapter 2 was published in 1930 (Shcherbatskoy, 1930), and in 1918 Shcherbatskoy published Chapter 1 of the Sanskrit comment of Yashomitra - Bhäsya along with the known French buddology S. Levi and prepared Chapter 2 for the edition (together with U. Ogikhara). Besides, the same year there the translation of the ninth, additional Chapter of Abhidharmakośa, made F.I. Shcherbatsky in the Tibetan text, appeared in "News of the Russian Academy of Sciences". As for the research part of the project,F.I. Shcherbatskoy published his monograph

"Central Conception of Buddhism", small on volume (Shcherbatskoy, 1923). The contents of this monograph become completely isolated by the Abhidharmakośa perspective and are devoted to the statement of the main theoretical concept of abhidkharmist philosophy, i.e. the concept of the stream of elements of mental life of the individual. The work is of unconditional interest in respect of the analysis of evolution of the scientific method of F.I. Shcherbatskoy. Applicable to our subject, i.e. to "Abhidharmakośa", in this monograph the appreciation of philosophical potential of an abhidkharmist thought is very essential.

5. Discussion and Conclusion

The carried out research allows to draw a conclusion on the extreme importance of the Sanskrit original of Abhidharmakośa. The Sanskrit text contains the initial philosophical material, expound according to the historically developed terminology, which had kept semantic communication with the earlier strata of the Buddhist tradition. It is free from any foreign culture, any non Indian stratifications. All this provides the possibility of deep understanding of the philosophy of Abhidharmakośa in its original form, of understanding of the nature of those ideas, which "external" appearance came off the Indian roots on the essentially different cultural basis, but on the conceptual essence it remained invariable.

Nowadays, when within the search of new ways of civilization development interaction and mutual understanding of various cultures is required, the search of opportunities of realization of the principle of mutually complementarity of types of philosophizing in the West and in the East (and in Russia as well) becomes extremely important. In our opinion, the Vasubandhu's work Abhidharmakośa has the undoubted potential for its involvement in the field of this search.

For the modern European, Russian reader, who is seriously interested in the Buddhism and possessing rather high degree of humanitarian culture, the acquaintance to abhidharmist cogitative tradition has the special importance. Abhidharmakośa allows to understand the interrelation of three levels of functioning of the Buddhism: the religious doctrine, the psychotechnics (i.e. Buddhist yoga) and philosophy itself. Besides, the destiny of Abhidharmakośa in Tibet and in the Far East is the illustration of the process of the expansion of the Buddhism, interesting and unique in its own way.

Only Louis de la Vallée Poussin, the largest Western European buddhologist of the first third of the 20th century implemented his part of the project completely . However Vallée Poussin's translations of Poussin from Chinese were very specific: all the conceptual terms framework of the abkidkharmist thought was translated by him not into French, but into Sanskrit. In other words, the tools was identified (according to Yashomitra's comment) and traced. Work, thus, resulted in paradoxical result: L. de la Vallée Poussin proved that to open philosophical semantics, remaining within the Chinese version, it is impossible. Its translation, as a matter of fact, represented very reliable preliminary material which could be put on use only after an ustanovlekniya of subject domain of values of Sanskrit philosophical terminology.

The publication of the Sanskrit original of Abhidharmakośa in 1967 allowed to pass to the systematic historical-and-philosophical and historical-and-cultural research of the abhidkharmist direction in the Buddhism.

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Psychological Aspects of the Formation of Language of The Cross-Cultural Dialogue in the Format of Buddhism, Psychoanalysis and Analytical Psychology

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Abstract

The process of the formation of the dialogue between the East and the West in the format of Buddhist cogitative tradition, on the one hand, and psychoanalysis and analytical psychology, on the other hand, is analyzed in the article. The search of the dialogue is determined by the condition of alarm of identity of both of its vectors. At the same time progressing of dialogue is provoked by the conflict of values of the East and the West. Such prominent representatives as E. Fromm, K.G. Jung, D.T. of Suzuki brought their contribution in the formation of the language of the cross-cultural dialogue. The participation of these thinkers in the dialogue is determined by both culturological and personal-and-psychological factors. Suzuki realized the personal tendency to go beyond the habitual sociocultural experience in aspiration to a one new. As for E. Fromm the life experience amplificated in the word "be" acted as the psychological aspect. His position in relation to the culture of the West always differed in criticism which in turn was also personally caused, and was created as the dominating line in perception of surrounding reality. K.G. Jung's position was contradictory. As in the theory, and practice he addressed materials of Buddhist culture. However, its works allow to draw a conclusion that the mentality of carriers of various cultures is uniform in symbolization processes, but people of the East and West, according to Jung, are divided by the impossibility of mutual understanding at the level of the text. And it, in turn, demonstrates that in Jung's position implicitly there is an idea of cardinal difference between the East and the West during the formation of subject and verbal

representations. Other choice of the dialogue object is the Buddhist doctrine about the mentality is necessary for the development of interrogation language qualitatively. The appeal to the deep universal mental bases is capable to update new quality of dialogue space for the East and the West.
Keywords: cross-cultural dialogue, Buddhism, psychoanalysis, philosophical comparative studies

1. Introduction

Contact of Buddhism, psychoanalysis and analytical psychology, which seem to be absolutely different phenomena of the human culture, in many respects anticipated the trends, updated only in the modern situation of the culture globalization. The development of the space of the cross-cultural interaction in the East –West continuum is directed by one of the vectors to the Buddhist East. The attitude of "East" (if we mean South Asian, Hindu-and-Buddhist vector of the world culture) historically developed as introvertive, being turned on the search of intra mental resources of the human nature. Such attitude appeared to be the fraught feeling of cultural loneliness which was only partly compensated during the contact with other civilizations by the position of the chosenness, natural in case of the introspection prevalence.

If "West" is worried because of washing out of the identity, then the trouble of "East" is the insulating degradation.

"West", entering the dialogue, seeks to peer at himself, being reflected in "another", and "East" seeks "to be with another", to enter the grandiose space of the world culture completely.

The dialogue between Buddhism and psychoanalysis was in many respects provoked by the conflict of values, inevitable in case of closer contact of the civilizations. Now in the situation of globalization of the culture, the tendency to integration of human values distinctly proves. It is obviously possible to characterize the space of dialogue of psychoanalysis and Buddhism on the basis of reconstruction of historical-and-philosophical and sociocultural contexts, in which mutual contact of psychoanalytic and Buddhist styles of thinking developed. during the of formation of dialogue space. Such prominent representatives as E. Fromm, K.G. Jung, D.T. Suzuki made their contribution during the formation of the dialogue space. Participation of those thinkers is determined by both culturological and personal-and-psychological factors.

2. Literature Review

Some proofs of the acquaintance to the Buddhism can be met in the western thought everywhere: in religion, philosophy and psychology, in the social movements, in the youth subculture.

The famous Austrian psychologist Siegmund Freud (1856-1939), the founding father of psychoanalysis and psychoanalytic school, of the therapeutic direction in psychology is an interesting example. In 1935 Jones wrote about Freud: "Personal studying of religious experience by Freud did not reach the east doctrine". However some facts, unknown earlier are appearing, disproving Jones's opinion. It is precisely unknown, whether Freud applied any Buddhist concepts in psychoanalysis, but he was interested in Buddhism philosophy.

Frank Alexander in 1930 drew an important analogy between Buddhist psychology and psychoanalysis in his small research "Buddhist Training and Artificial Catatonia". This work interested such psychoanalysts as Fromm and Horni later. Erich Fromm held the whole seminar on the subject: "Psychoanalysis and Buddhism" in 1949, which became a sort of push to writing of the whole work with the same name.

Carl Gustav Jung not only studied the concepts of the Buddhism, but also, created the whole directions in psychoanalysis, basing on them. For example, on the basis of the Buddhist concept of "five skandhas" or "pañcaskandhī" (Sanskrit: पञ्चस्कन्धी), Karl Jung entered the concept of "egoism" (German: Selbst) into science, which turned into the whole direction of psychoanalysis later. Jung also wrote prefaces to different Buddhist editions, in particular, to books by professor Daysetsu Teytaro Suzuki.

Professor Suzuki deserves special attention. He had an impact on the whole group of psychologists and humanists. In the 1940th years he held seminars on Zen Buddhism in Columbia University, where he got acquainted with Karen Horni and Erich Fromm; that allowed to maintain the professional relations with them further. Thanks to this cooperation Horni visited Japan in 1951 for the acquaintance to Zen Buddhism, and Fromm organized a special seminar on Zen Buddhism and psychoanalysis in the house in Cuernavaca in 1957. The seminar took place under the leadership of Suzuki and Fromm. The materials of the seminar were published as their joint book "Zen Buddhism and Psychoanalysis" (Fromm, Suzuki, Martino, 1960).

3. Method

The following approaches and methods were applied within the research:

- comparative-and-typological and topological structural-and-topographical) approaches;
- methods of historical-and-philosophical and historical-and-cultural reconstruction, comparative designing of the system of the interpreting concepts, biographic analysis, problem-and-thematic analysis of sources;
- techniques, characteristic of psychoanalytic approach: symbolical, genetic, analogical interpretations, psychoanalytic reconstruction.

4. Results

The Suzuki's movement towards to the West is the realization of his personal aspirations formed since the early childhood and embodied as one of important meanings of his life as the intermediary in the dialogue of cultures. Being a teenager D.T. Suzuki also contacted to the representative of Greek Orthodox Church, and to the Protestant preacher. He tried to find answers to the intrinsic questions in communication with them: why human society is organized in such a way and how the nature is arranged? Thus, initially Suzuki found the tendency to go beyond the habitual sociocultural experience in his aspiration to anything new, because the known reality did not satisfy his informative inquiries.

The first visit to the temple Kokudaydzi, where Suzuki went by himself, without recommendations, gave him feeling of shameful flight. The young man could not remain for training in art of Zen there, as he was tormented by loneliness and melancholy for mother. Here one psychological moment is important. Suzuki directed to work in fifteen miles from his home, but each day off he preferred to make a five-hour pedestrian way to meet his mother. His existence was like a pendulum: he regularly left and returned. This psychological pendulum in the future gained cross-cultural scope and reached Europe and America. Suzuki's brother promoted his device in the university, but Suzuki chose other path, having wished to study Zen under the leadership of Kosen Rosy in the monastery Engakudzi. In January, 1892 Kosen Rosy died, and mentor Syaku Soen, the author of books on Buddhism famous in the West replaced him. Syaku Soen was secular-focused person, who devoted a lot of time to the acquaintance to culture and science of West. He took part in the World Congress of religions in Chicago, and spent a lot of time on travelling across Western Europe. Such a conduct of life was unusual for Zen traditions, but that imposed Suzuki in the new mentor, he looked for such an environment, which would combine traditional Japanese and European things.

In terms of psychoanalytic interpretation, the similar lifestyle was the way of Suzuki's reaction of the first conflict of ambivalence, it was finding of that space in which he could leave his mother (traditional sociocultural way) and to return to her. Than translator's activity gained characteristics of the intermediary in the dialogue of cultures: he found himself in the "translation" into the native language of the things he saw, staying in Japan and vice versa. Symbolically he reproduced the former way home and back then.

Erich Fromm was engaged in studying of Buddhism in the 1920th. He actively got acquainted with literature – some general works, devoted to the corresponding perspective. Only in the 40th, thanks to the seminars held by Suzuki in which Karen Horni also took part, Fromm realized the opportunity to investigate Buddhism, in particular, Zen in the aspect of comparison with psychoanalysis. What this opportunity at this historical stage was, it is clearly visible at the appeal to the works by T.D. Suzuki.

Suzuki, stating bases of Zen, appealed first of all to the Yungian doctrine (Yung's theory), seeing in it, but not in Freudian psychoanalysis, the scope for the search of cross-cultural parallels. But the Yungian concept in view of the self-sufficiency did not need any foreign culture incentives for the development. The dialogue, offered by D. Suzuki was demanded by Freudians and by those who sought to move apart the horizons of the theory of Freudian psychoanalysis (like E. Fromm or K. Horni).

The studying of culture and philosophy of East, which took Fromm for several decades, found the completeness in intellectual contacts with Suzuki and the scientific project, developed and carried out together with him. It was not only promptly revealed Fromm's interest to Zen, which was embodied in this cooperation. The process of formation of the dialogue space the psychoanalysis Buddhism directed to identification of sociocultural universalia of East and West became result of the project.

Suzuki planned in his "Lectures about Zen Buddhism" (Fromm, Suzuki, Martino, 1960) the approach, which in many respects defined the perspective of the development of the dialogue and proved then E. Fromm had the aspiration to the registration of mutually recognition in psychoanalysis and Buddhism. The stories which were offered by T.D. Suzuki are self-sufficient. I would call them archetypic. Though we can admire, for example, the oriental dance, we can study its movements and imitate east dancing plasticity, there will always be that side which differentiate the imitation from the authentic execution. East and West, psychoanalysis and Buddhism request each other for various levels of reflection and imitation for the confirmation and formation of sociocultural identity; that is one of the cross-cultural dialogue lines.

Unconscious can be reflected in life experience, is amplificated in the word "to be". E. Fromm whose position in relation to the culture of West always differed in criticism responds to the world "to be". But this criticism of E. Fromm first of all is personally caused and was created as the dominating line in perception of surrounding reality. To open the genesis and development of this position of Fromm – the culturologist, the thinker it is obviously possible only with the support on the biographic method.

The dialogue of East and West in the foreshortening of psychoanalysis and Buddhism, personalized in the cooperation of E. Fromm and D. Suzuki was effective in such an aspect, as the mutual demand of the parties was brightly demonstrated, and their resources were complementary. Yungian doctrine, whom addressed Suzuki in his search of adequate dialogue partnership did not reveal as it is represented to me, the corresponding potential. The comparison of Yungian doctrine which is carried out by Suzuki and Zen demonstrated the similarity, which was so considerable, that it caused not a mutual attraction, but competitive motives.

Erich child (as far as it is possible to judge by his own memoirs) has the negative attitude to the world surrounding him. It was the world of the people, who are mainly making money, not caring for spiritual. Possibly, being at children's age he depreciated, was not able to allocate the proper elements of life of his immediate environment from the stream of existence and to accept them. It should be noted, that the boy was inclined to perceive only a part of the spiritual atmosphere. Erich Fromm's biographer Funk Ranier considers that he did not forgive his grandfather for the refusal of the mission of the rabbi in favor of material stability of the family. But, if to think, Erich's disappointment was connected not with the grandfather, it was only splashed out on the grandfather, who belittled himself. Father acted as the primary object of this experience. It destroyed idealization which, without having the opportunity to be turned to the father initially, moved to the grandfather as on the "last hope" which also appeared to be vain. Any slightest hint on money caused deep shame in Erich, and meanwhile, his father, Naftali Fromm, was a wine producer and supplier, i.e. he was engaged in commerce, though he is not too successful. Discrepancy of the relations of E. Fromm with his father were reflected in his memories: "My father was very nervous. He was scary timid in everything that was related to me. Pro se he had no fear, but concerning me he was the real neurotic. As the only child, I was in a bad situation. He indulged me, and I was very undisciplined. He most of all wanted me to remain always a three-year-old child. The elder I became, the less original interest in me he had. However, it does not mean that he loved me less." (Funk, 1998). Uneasiness of the father deprived Erich of the opportunity to go to the Middle East for studying Talmud. East remained his unrealized desire, which was waiting in the wings and which was carried out in the dialogue and cooperation with D. Suzuki.

Now we will consider how Eric Fromm's biography was interwoven into the American psychoanalytic movement. E. Fromm faced the manifestation of sense of guilt of the American psychoanalysis at Institute of social research. Fromm, developing social-and-psychological approach and emphasizing the primacy of vital destiny before inclinations, faced quite a sharp change of the attitude towards himself from newly appeared supporters of the orthodox freudianism. This situation coincides with the transition of an oncological disease of S. Freud to the preterminal phase.

Fromm's works devoted to criticism of orthodox psychoanalytic approach did not receive due consideration in the academic circles, and the arisen conflict soon passed into the plane of the personal relations, having come to the end with the cooperation termination.

I can note that "withdrawal" from the situation is not only characteristic vital strategy for E. Fromm in solution of the conflicts. I consider this trend decisive in the emergence of the dialogue between psychoanalysis and Buddhism and as it is paradoxical, constructive within the development of psychoanalysis in America. It is not undue to draw the attention of the reader, that sense of guilt is involved in this Fromm's "first leaving".

Psychoanalysts-revisionists among whom Karen Horni was the brightest star, became the circle of contacts for E. Fromm. Till 1940th Fromm and Horni maintained the close friendly relations. In 1937 Marianna, Horni's daughter, came to the Fromm's analysis according to the recommendation of her mother. In 1941 because of the difference of opinion which led to a conflict situation, K. Horni was disqualified at a meeting of the New York psychoanalytic society. Along with the group of supporters she organized an association, and then on the basis of that association an institute was established. But E. Fromm had no opportunity to get education in that institute as he did not have a medical diploma. Thus, in this conflict he appeared on the opposite side for Horni. Fromm resolved this situation in the way, usual for himself: when the conditions set for him were not accepted, he left.

The conflict with Horni also had other aspect caused by the results of psychoanalytic work by Fromm and Marianna, after carrying out the analysis, her relations with mother worsened. Karen Horni accused Fromm that put the end to their friendship. Fromm left, and his leaving was connected with the sense of guilt.

E. Fromm went to work in branch of the Washington school of psychiatry, and K. Horni's group endured one more large split subsequently.

Next "leaving" of E. Fromm represented his moving to Mexico in 1949. This time, leaving was not mediated by a split with the institution - the Washington school which turned into Institute of Williams of Elenson Whyte by then. Partly it was caused by some family circumstances: the performance the health of the second Fromm's wife Henny (who, as well as her predecessor Frida, was more senior than the husband for ten years). It should be noted also that in the USA the end of the 1940th was marked by a McCarthyism era, and it was possible, Fromm as the Jew sympathizing Marxism distinctly felt the threat of charge of the anti-American activity which hung over him.

The tendency to go beyond the methodological circle, "to leave" the conflict is represented to me important in the formation of the disconnect of the American psychoanalysis in the relation to the sociocultural environment. Certainly, this trend is not unique in case of E. Fromm, but as a personal contribution it is important.

The biographic and culturological literature, devoted to Fromm, includes a point of view that his acquaintance to Buddhism, thanks to G. Grimm's works and orientation to Zen in religious practice happened irrespectively of Fromm's formation as a psychoanalyst (Brown, 1997).

This conclusion is represented to me rectilinear and one-sided. E. Fromm, whose participation in the peripetias of the professional conflicts differed in relief of the position, having left a methodological circle of the psychoanalytic movement, " sacrificeed himself", transforming the psychoanalytic theory. he unconsciously promoted constructive trends in development of psychoanalysis in the USA. Moreover, Fromm promoted that the American psychoanalysis did not lose real Freudian approach, - just like during a game of chess, for the sake of advantage, the master sacrifices a figure.

Fromm addressed the Buddhism mirror with the attempt of the analysis of the American sense of guilt which personal resonance in him was so strong, and many joined him. Zen Buddhism became very popular in the American psychoanalytic circles and then it got to a sociocultural context.

E. Fromm's work "Zen Buddhism and psychoanalysis" had a considerable impact on this process as it was devoted, among other things, to the disclosure of the essence of spiritual crisis of culture of West. From the point of view of cultural comparative studies not so much detection of a set of real and imaginary analogies between Zen and psychoanalysis, but the solidarization of positions D. of Suzuki and E. Fromm surprise in the work. E. Fromm saw senselessness of existence in steadfastness of the material embodiment intellectual - in creation by the person of increasing number of things in the course of which and it also becomes a thing. The deprivation of sense of the existence, when the possession becomes the main thing in human life: It is more important "to Have" now, than "to Be" (cited as Fromm, 2004).

Some problems are created, Fromm says, in the face of those problem the person is powerless. The person of West lost the ability to resolve contradictions between thinking and feelings, otherwise such as ability is not created. The person of West exists in the disturbing and depressive continuum of subjective feelings, and it appears not to clear the purpose and sense of the life in forces. Activity of the carrier of the western culture is mainly directed away from danger and loneliness, thereby it only approaches them. The religiousness according to E. Fromm considers, is popularized and, at the same time, depreciated. According to him, the disclosure of sense of religiousness by S. Freud is that the faith in God comes from helplessness and vulnerability of the person, hoping for the parental support brought to the level of divine (cited as Fromm, 2004).

The modern western person "does not see God in the image of the father and thereby loses parental support in his face."

The sociocultural situation of the West is presented by Fromm to be closed on itself, deprived of resources for overcoming that insulation. He also demonstrated to the reader "the East mirror" for the first time: "… in the east there was no concept of the transcendental father Christ Redeemer peculiar to the monotheist religions. The rationality and realism were inherent in Taoism and the Buddhism more than in West religions. In East a person voluntarily, without coercion, joins the "awakened" people, because each person is capable to awakening and enlightenment. For this reason east religious thinking embodied in Taoism, the Buddhism and Zen Buddhism as their synthesis is of so great importance for the Western culture today" (cited as Fromm, 2004).

According to the results of consideration of the process of participation of Suzuki and Fromm in the dialogue Buddhism and psychoanalysis it should be noted that Zen is used by Fromm mainly as a mirror in which psychoanalysis should see its own lines more boldly. The search of analogies and registration of coincidence, which were carried out by the thinker in the work "Zen and psychoanalysis", did not apply, as a matter of fact, for the philosophical or culturological comparative studies. Retelling of some Suzuki's ideas undertaken by Fromm in the final part of this work proved that. He tries to record the vision of the foreign culture horizon in the dialogue of Buddhism with psychoanalysis once again. "In any case, - he summarized, - it is possible to say much more surely that studying of Zen and the interest shown to it can influence the theory and practice of psychoanalysis in an extremely fruitful way, which is capable to clear many of its aspects" (cited as Fromm, 2004).

In the context of the initial stage of the dialogue between Buddhism and psychoanalysis the activity of Suzuki appears to be multifunctional on the purposes. Certainly, Suzuki acted in the American culture both as the religious missionary, and as the culturologist educator, and as the historian of Buddhist philosophy, and, certainly, as the peculiar colleague of psychoanalysts, who was looking for new ways to the harmony of the person and the world too. Suzuki rehabilitated the image of Japan, depreciated by the role of this country in World War II, in the Western world, and particularly in the sociocultural reality of the USA. He showed the richness of the Japanese cultural heritage to the world and proved the prospect of integration of cultural values of the different people at the level of individual spiritual search. The appeal to Buddhism in the modern western culture is followed by references to the analytical psychology everywhere, particularly in the K.G. Jung's concept. The modern cut of interaction of the analytical psychology and Buddhism is characterized, in my opinion, by three main directions. The first of them is the attempt of integration of Buddhist ideas of mentality into the western the West compendia of psychological knowledge to enrich and expand the methods of transformation of intra-personal representations and the interpersonal relations.

The second way consists in the direct export of Buddhist psychotechniques, by their identification on the basis of the Jungian concept (cited as The Sahaja Yoga - great Yoga of our days).

The following questions are natural: how adequate are both ways of the use of analytical psychology as the explaining metaphor (transitional integrative space) and is the similar trend substantially constructive for the development of cross-cultural dialogue? The answers to these questions are hidden in the matter of the role of analytical psychology as the field of contact of East and West.

The third direction of the dialogue interaction of analytical psychology and Buddhism accumulates in itself those comparative researches in which tasks of search of a convergence and distinctions, identifications of analogies are set. In this question the research position of the St. Petersburg school of the philosophical comparative studies was focused on the analysis of works of Jung on psychology of religion and his comments to the works by D.T. Suzuki. The accent is put on the difference of West and East in their typological intensions - extroversion and introversion. According to this approach K.G. Jung made an attempt of the translation of symbolical language of culture of the Buddhist East into the West language, in which the subject's primacy is the basis for thinking (cited as History of modern foreign philosophy: Comparative approach).

Also the point of view of the cultural anthropologist R. Moakanin, who brought the parallels and analogies between analytical psychology and Tantric Buddhism to the first place, is of a certain interest. This comparative analysis is devoted to the comparison of analytical psychology and Tantric tradition in Tibetan Buddhism (Moakanin, 2004). However, as it is represented to me, the choice of subjects to comparison sins with incorrectness: the Tantric tradition is considered by the researchers in the aspect of the ritual practices and the most general concepts, and analytical psychology is considered as a theoretically complete concept.

K.G. Jung's position in relation to South Asian psychotechniques and exercises on the mentality comes to light in some his works of different time as the set of ideas, which are being in continuous development. The internal discrepancy of this position is also explained by that. All the research works, devoted to and K.G. Jung's life activity emphasize high extent of influence of Buddhist religious and doctrinal symbolism on the formation and development of his scientific views. The theoretical solvency and independence, the analytical psychology created by him as I believe, is found out in the fact, that the thinker appeal to Buddhism in the matters of symbolical interpretation of collective unconscious (Jung, 1994 [1]). Similar appeals are also found in his research of psychological types (Jung, 1994 [2]).

The universalism of the symbolical relations, revealed within the scientific research by K.G. Jung acted as the basis, the platform on which the construction and development of mutual understanding of East and West in the aspect of interpretation of human mentality is possible.

Jung's thesis (formulated by him in the preface to the English edition "Bases of Zen Buddhism" by D.T. Suzuki) about the impossibility of understanding of Buddhist texts by the western reader comprises the contradictions of at least two levels: "East religious concepts usually so much differ from our western concepts, that in case of attempt of a closer translation (not to mention value of these or those ideas), you meet such difficulties, that under some circumstances it is better not to translate them at all … Original Buddhist texts contain views and ideas, which the European intelligence is hardly capable to acquire" (cites as Jung, 200 u.0). On the one hand, Jung updates that interest in East, and in particular, Buddhist, to the representations of mentality which (as it becomes clear), cannot be realized without full disclosure of the corresponding concepts. Om the other hand, scientific interest is blocked by their inaccessibility to adequate translation and judgment. But the contradiction appears to be funded much more deeply; the mentality of the carriers of various cultures is uniform within the symbolization processes, but people of East and West, according to Jung, divides impossibility of mutual understanding at the level of the text. And it, in turn, that demonstrates that in Jung's position implicitly there is an idea of cardinal difference between East and West during the formation of subject and verbal representations.

According to the contradictory there was also Jung's contribution to the development of the dialogue between East and West: opening the dialogue space, it at the same time postulated essentially superficial level of the cross-cultural interaction which was expressed in particular in primitive and any analogies (attempts of integration and direct export Buddhist psychotechniques).

Why did such a courageous and original thinker how K.G. Jung, who put tradition of search of analogies in the psychological concepts of East and West, persistently come back to the problem of limited mutual understanding and impossibility of adequate translation?

I believe that the limit of penetration into depths of the Buddhist religious philosophical thought, in the doctrine about mentality was caused by the development of knowledge, coeval to Jung, including repertoire of translations, known by him. Acquaintance to Jungian heritage allows to claim that the translations of Buddhist theoretical treatises were not known to the thinker, he mentions only Mahayana sutra, i.e. samples of religious and doctrinal, but not philosophical discourse. Operating with figurative structures of the Buddhist religious discourse, Jung naturally expected the danger of irreversible regress of these figurative structures during contacts with some archetypic layers. Observing expansion of East to the daily culture of West, the thinker also warned about the danger of escape from the reality arising in the culture of West and sought to limit this expansion (Sidorova, 2004, Sidorova, 2005).

"An enlightened person, or a person convinced that he is enlightened, - Jung wrote, - anyway thinks that he is brightened up. The things, others think about that, can determine nothing for concerning his experience. Even if he lies, his lie is a spiritual fact. Moreover, even if all religious evidence are no more, than conscious inventions and falsifications, it is possible to conduct very interesting psychological research about the facts of such lie with the same scientific approach with what the psychopathology approaches studying of manias." This thesis caused the competitive and critical response of Fromm, regarding as a delusion that indifference, with which Jung treated the matter of reality of the enlightenment. According to Fromm this approach is unacceptable for Zen judgment (Jung, 1988).

5. Discussion and Conclusion

The difference in the approaches to the enlightenment phenomenon between analytical psychology and psychoanalysis distinctly reveals the conflict both in structuring dialogue between East and West, and in the vision of the prospects of integration of the ideas of human mentality, created in the genetically dissimilar cultures.

It is important to emphasize, that the direct dialogue was carried out between E. Fromm and D.T. Suzuki. Suzuki widely presented the Mahajana Buddhism in the culture of West, however in the dialogue with psychoanalysis he placed emphasis on Zen Buddhism. Such development of the dialogue space led to fixing only of the most general analogies, caused by the features of Zen Buddhist psychotechnique practice.

So, the dialogue of East and West, which was developing by the efforts of Zen Buddhism, psychoanalysis and analytical psychology was structured as obviously superficial, limited by the involvement of religious and doctrinal and psychotechnique material, and thus theoretically conflict.

Jung used Buddhism, Zen Buddhism as the illustrative material for the demonstration of opportunities of explanatory model of mentality in the analytical psychology. He spoke about Goethe's Faust, Nietzsche's Zarathustra as about the products of the European culture, correlated to the East culture. The systematic comparative research of Buddhism and analytical psychology did not take place, being changed for superficial analogies in attempt of overcoming sociocultural loneliness.

The comparative analysis of the Jungian psychological concept and Buddhism assumes, in our opinion, the appeal to the theoretical heritage of Buddhist religious-and-philosophical thought in which the doctrine on mentality found its strict logical-and-discursive outlines. In case of such a choice of the dialogue object the analytical psychology, appealing to the deep universal mental bases, is capable to update new quality of dialogue space for East and West.

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Genesis of language of the cross-cultural dialogue interaction of the Buddhism and psychoanalysis

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Abstract
Article considers the direct dialogue between Buddhism and psychoanalysis, which started in the 40th of the XX century, thanks to D.T. Suzuki seminars in Columbia University, where his interaction with E. Fromm began. The Japanese school of zen attracted interest because of dissatisfaction with the condition of the western culture and society. The American culture was the fertile field on which the contacts between Buddhism and psychoanalysis began: Fromm and Suzuki are appeared in the USA in the first half of the 1930th, when the country endured heavy consequences of economic collapse. By the beginning of the 30th psychoanalysis in the USA was in the specific circumstances, caused by features of internal development and considerable inflow of experts from Western Europe. Studying of culture and philosophy of East by Fromm for several decades, movable by his critical perception of values of culture of West, found the expression in the intellectual contacts with Suzuki and the scientific project developed and which is carried out together with him. Suzuki was planned by the approach which defined in many respects the perspective of the development of dialogue in general and shown in works by E. Fromm as well: the aspiration to registration of mutually recognition in psychoanalysis and Buddhism. The dialogue message of Suzuki consisted in the instruction on the deficiency of culture of the West. At the same time in psychoanalysis there is a trend to replenishment of the therapeutic arsenal at the expense of Buddhist psychotechnics. The deficiency and disruptiveness of the West seems to be the readiness for the action in the dialogue space, acting as the consequence of mainly rational attitude in the tendency to persuasive self-reproduction – both within their own culture and beyond its limits. Yung theory which Suzuki addressed in his search of an adequate dialogue partner did not receive any noticeable continuation. The comparison of the Yung theory, which is carried out by Suzuki and Zen demonstrated similarity, which was so considerable that caused not a mutual attraction, but competitive motives.
Keywords: cross-cultural dialogue, Buddhism, psychoanalysis , philosophical comparative studies

1. Introduction

Many researchers are used to connect the start of the dialogue of Buddhism and psychoanalysis as the vector of cross-cultural interaction between East and West with some concrete cultural events: carrying out seminars of the Zen mentor D.T. Suzuki in Columbia University in the 40ths, where his acquaintance to E. Fromm and the implementation of their joint project in Cuernavaca actually took place in 1957. In fact, thanks to this seminar with the participation of E. Fromm, D.T. Suzuki, I. Progoff, B. Vayninger, D. Scheckter, E.S. Tauber, M. Green, R. de Martino, P. Weis, D. Kirsch, Sh. Selver, A. Shtunkard, etc., Buddhism turned into the fashionable direction of the world outlook search of the American intellectuals in 1940ths...1950ths.

The Japanese Zen school and its Chinese prototype Chan attracted considerable interest of writers, artists, poets, unsatisfied with the condition of the western culture and society.

However, this seminar was not the starting point of the dialogue of Buddhism and psychoanalysis in full sense, as the subjects of cross-cultural communication found interest to each other much earlier, at least for two and a half decades. Considering this circumstance, we need to track in what sociocultural ways they moved ahead towards each other, which features of the persons and biographies of such great figures as D. Suzuki, E. Fromm, A. Watts served as the prerequisites to the exit out of the limits of their own culture and to the search of the dialogue between East and West. The USA were not the native land for anyone of them, but American culture was originally that fertile field, on which the contacts between Buddhism and psychoanalysis began. Fromm and Suzuki appeared in the USA in the first half of the 1930th, when the country endured heavy consequences of the economic collapse. Fear and uncertainty in tomorrow, characteristic of this historical period, gave the rise to sharp feeling of instability of life, unpredictability of further development of life and the existence of surrounding social reality. In such situation people needed any new reference points, promoting finding of sense of daily activity and renewing the lost sense of stability. The own culture, the American sociocultural reality did not contribute to the vision of similar reference points. There was not enough cultural potential, including psychotherapeutic potential, for the elimination of existential alarm, which epidemic struck the society, once prospering.

Psychoanalysis had been in the specific circumstances in the USA by the beginning of the 30ths, that was caused by the features of internal development and considerable inflow of the experts from Western Europe, immigrating in the USA because of the threat of fascism.

2. Literature Review

Within this research the following literature sources deserve attention:

- works by the participants of the initial stage of the dialogue between Buddhism and psychoanalysis, such as K.G. Jung, E. Fromm, D.T. Suzuki, A. Watts;

- works by the founder of psychoanalysis S. Freud, works by the authors of psychoanalytic theories of the object relations: M. Bálint , W. Bion, D.W. Winnicott, M. Klein, H. Kogut, H. Lewald, J. Sandler, R.D. Stolorow, E. Fairbairn;

- Buddhist classical philosophical treatises: Abhidharmakośa by Vasubandhu (4th...5th century), the Comment to Abhidharmakośa by Yashomitra (9th century), Abhidharma-samuccaya (Compendium of Abhidharma) by Asaṅga (4th...5th century) translated into the European languages;

- works by orientalists-buddhologists, devoted to the solution of comparative tasks within the input in the scientific turn of Buddhist philosophical sources, such as de la Vallée Poussin, E.P. Ostrovskaya, O.O. Rosenberg, V.I. Rudoy, F.I. Shcherbatskoy, etc.

- works on theoretical-and-methodological matters of the philosophical comparative studies by A.S. Kolesnikov, P.Ya. Korneev, I.I. Lapshina, V.G. Lysenko, M.T. Stepanyants, V.K. Shokhin, etc.

3. Method

The principle of equivalence and axiological commensurability of the East and West cultures, developed by the theorists of the philosophical comparative approach and philosophical anthropology is the basis for this research. This principle is concretized in the system of criteria of sociocultural comparison of the national cogitative traditions, acting in the dialogue of the philosophical cultures as the components of the uniform discursive process. Comparative-and-typological and topological structural-and-topographical approaches, allowing to explicate and compare the metapsychological theories in the Buddhist classical philosophy and psychoanalysis are applied in the research. The methods of historical-and-philosophical and historical-and-cultural reconstruction, comparative designing of the system of the interpreting concepts, the biographic analysis, the problem and thematic analysis of sources were used.

Some techniques, characteristic of the psychoanalytic approach to the consideration of the phenomena of culture, were also applied (symbolical, genetic, analogical interpretations, psychoanalytic reconstruction).

4. Results

P.S. Gurevitch believes that the appeal of some psychoanalysts to the culture of East was determined by their search of new ways for the development of psychoanalysis; he emphasizes the domination of differences between the explored currents, in comparison with similarities. But how the emergence of D.T. Suzuki (1870 - 1966) in the circle of psychoanalysts can be explained? It is significant that the Zen master noted that the mission undertaken became a part of his own spiritual way and directly led to the enlightenment.

The Suzuki towards movement to the West is the realization of the personal aspirations, formed since the early childhood and embodied as one of important meanings of his life as the intermediary in dialogue of cultures.

The studying of culture and philosophy of East, which took Fromm several decades, found its completeness in the intellectual contacts with T.D. Suzuki and in the scientific project, developed carried out together. The revealed Fromm's interest to Zen was embodied in this cooperation. The process of formation of the dialogue space between the psychoanalysis and Buddhism directed to the identification of sociocultural universalia of East and West became the result of the project. In "Lectures on Zen Buddhism" (Suzuki, 1990). Suzuki lanned the approach, which in many respects defined the perspective of the development of the dialogue and then it was shown by E. Fromm as the aspiration to registration of mutually recognition in psychoanalysis and Buddhism. Suzuki accented the tendency to interpretation, carrying out the comparative analysis of the hokku by Matsuo Bashō and poems by Tennyson, thereby having pointed to the main thing: psychoanalytic thinking out of the interpretative field traditionally is not built, both dialogue between Buddhism and psychoanalysis can be developed only in the aspect of interpretation.

5. Discussion and Conclusion

Buddhism as the way of attitude is defined by Suzuki in the opposition to the intelligence, technocratisation and the requirement "to possess", in the synonymy on the creativity which is the way "to be". The interrelation of somatic and mental is presented so, that "our physical body is the material corresponding to the painter's canvas, a tree, a stone or clay for the sculptor, a violin or a flute for the musician, vocal chords for the singer. And everything corporal (hands, legs, the trunk, the head, interiors, nerves, cages, thoughts, feelings, all they make the complete personality) is at the same time the material and the tool from which and by the means of which the personality, using one's creative genius will transform during one's behavior, to all the forms of action, to life. Life displays then every image, created from an inexhaustible source unconscious." (Suzuki, 1997) Unconscious in the daily occurrence of everyone, it is related to sensual experience which is suppressed with the developing intelligence. This phenomenon of continuous intellectual leveling of naive experience of initial direct is interpreted Suzuki as "affective infection" (flare) or intellectual occupation (Kalpana). Clarification from the affective infection generating in conscious experience of alarm and other affects is reached in Zen by release from under the power of intelligence, resulting in spontaneity, to "proximity unconscious". In so various interpretations and definitions unconscious which are offered by Zen, nevertheless, the metapsychological approach meaning reconstruction unconscious per se is traced: "We speak about "something" or "someone" as for such life outside the ordinary field of consciousness we have no words, except denials … Unknown, X is too indistinct. As it comes into contact with consciousness; so that this can use X all consciously found abilities; it can be designated as unconscious." (Suzuki, 1997, page 33.)

The criticism of the scientific approach is supposed to show the fact that, in its format the identification of the researcher with the research object is impossible. In this regard one more "coincidence" between Buddhism and psychoanalysis should be noted. The psychoanalytic-focused psychotherapy assumes the temporary identification with the research object, i.e. with the patient. The only way of studying Me in terms of Buddhism is the self-knowledge without going beyond one's own Me. That is the way of the introspection and self-control, as Me stays in the absolute subjectivity. The static aspect of Me is described, being always in the movement: "Me" is the point of absolute subjectivity, conveying the sense of immovability and rest. But this point can move anywhere, occupy infinite variety of places, and therefore in fact it is not a point." (Suzuki, 1997) It is possible to name the following characteristics of Me: imperceptibly, vaguely, scientific approach in studying; Me comes to the state which is metaphorically described by the principle of uncertainty of Heisenberg. Me knows oneself from within and never learns oneself from the outside and if Me is identified with anything external, i.e. with action, then the result of similar identification there can be only "an intellectual personality", synchronous "instant" model of Me, but that is not Me as such. As for content, experience of Me, it is psychologically unique, it is saturated with "feeling of autonomy, freedom, self-determination and, at last, creativity" (Suzuki, 1997).

The relevance of the dialogue between psychoanalysis and Buddhism is visible in the interpretation of identity, individuation and individualism by D. Suzuki. The essence of the appeal of Buddhism for psychoanalysis is that from the position of Buddhism the nature of violation of the narcissistic balance of culture of the West is brightly shown. The identity is relative and connected with self-affirmation that creates the opportunity for control. The individualism is controlled in the basis, being connected with restrictions and alarm, deficiency of manifestation of freedom and spontaneity. "Individuation, according to D.T. Suzuki, represents the objective term for the identity individuality from individualism" (Suzuki, 1997, page 44). The border passes where isolation becomes denial of another.

The unconscious finds various ways for the expression and if for it there is no natural course of identity, then it goes way of destruction or psychopathology. Rapprochement of psychoanalytic and Buddhist positions seems considerable here, and in this point of reasoning Suzuki disclose the specifics of Zen school in Buddhism: "Grieved by all this, Buddha proclaimed the doctrine about an annatto (not existence), or a niratma, or not-ego to awaken us from visibility dreams. Zen Buddhism was not quite satisfied with the negative way of demonstration of the doctrine offered by Buddha. It submits the doctrine in the most affirmative and direct way that Buddha's followers did not wander in search of reality" (Suzuki, 1997, page 45). The difference is shown only in strengthening of sounding of the Buddhist position in tradition of Zen.

Dialogue between East and West in the foreshortening of psychoanalysis and Buddhism personalized in the cooperation of E. Fromm and D. Suzuki was effective in such aspect as the mutual demand of the parties was brightly shown, and their resources were complementary. Yung theory, which Suzuki addressed in his search of adequate dialogue partnership did not reveal the corresponding potential, according to the author. The comparison of Yung theory, which is carried out by Suzuki and Zen, demonstrated the similarity so considerable, that it caused not a mutual attraction, but competitive motives.

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Contextual Education as a Condition for the Development of Professional Qualities of a Manager

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Abstract
The article is devoted to the review of the problem of development of professional qualities of a manager; it defines contextual education for the purposes of formation of the qualities of a future manager and highlights reasonable characteristics of contextual education as the most effective conditions for the development of professional qualities and abilities of a future manager. It identifies positive shifts in the application of contextual education at higher education institutions and defines the main steps of the teacher in order to implement the context-based educational approach in future managers education.
Keywords: contextual education, context-based educational approach, professional qualities of a manager, justification of contextual education for the development of professional qualities of a manager,

1.Introduction

The increasingly complex social problems require from educational systems more effective approaches to the choice of means of influence on the professional development of the individual at all levels (Magera, 2016). However, education cannot meet the needs of a modern changing world. The problem of education as the main driving component for productive power formation has become the subject of political and scientific interest. Professional education must be oriented on the qualified professionals who are able to perform their professional functions qualitatively (Vlasenko, Pryadko, 2016; Savina 2015; Shnyrenkov, Pryadko, 2015).

The analysis of psychological and pedagogical researches on the problem of training managers for professional activities allowed to determine the contradiction between the requirements to the high-quality professional level of a manager of an organization and insufficiency in professional qualities of a future manager who is capable of effectively managing production procedure. The discrepancy between the theoretically justified arguments of high-quality preparation of managers for professional activity in higher education institutions and the existing qualities of the personality of the future manager determined the problem of our research.

The development of professional skills of a specialist, including a manager, who is capable of building his professional activity in cooperation with other people and managing them, is caused by the contradiction between the new requirements imposed on the management sphere by the society and the practice of using innovative models and concepts in education (Romanova, 2016; Khripko, 2017; Magera, 2017).

Contradictions may be overcome through professional training of a manager in the way that ensures the collective character of the upcoming professional activity, through the development of personal qualities and abilities of a specialist (Ishkov, 2014) , and through the need for the systematic use of knowledge and skills in future work activities (Leontev, 2018) . An analysis of theoretical developments of scientists indicated that contextual education could act as such training (Verbitsky, 2006; Kalashnikov, 2012; Verkhova, 2009).

The content of the work of an organization management specialist is determined by a set of specific rules corresponding to a particular position, the management level, and to the organization itself, that is, the role that he/she plays in the course of his/her professional activity. Since the specialist's educational level depends on the conditions laid down in education, the problem and subject in our study will include determination of contextual education conditions which contribute to the professional development of a future manager, whose scope of work is determined by a set of specific rules that correspond to a particular position, level of management, and the organization itself. There is the role that he/she performs in the course of his/her professional activity (savina, 2014; Verkhova, 2009).

1.Justification of contextual education as a condition for the development of professional qualities

of a future manager

In our research, we adhere to the definition that contextual education is the education in which the subject and social content of students' future professional activity is consistently formed using the science language and the whole system of forms, methods, and traditional and new means of education (Verbitsky, 2006).

Our interest in contextual education is not accidental because, first of all, the concept of contextual learning can be one of the approaches that contribute to the effective solution of the tasks of restructuring higher education and its psychological and pedagogical support, which is currently one of the problems of higher education.

Secondly, while the education is being focused on the training of high-quality professionals, contextual education virtually ensures psychological and didactic conditions through the integration of students' educational, scientific, and production activities and through the creative development of the individuality of each future specialist, including the manager. Theoretical studies and practice of applying contextual education at higher education institutions are insufficient for its implementation into manager training procedure. The analysis of scientific developments in the field of managers education and implementation of contextual education of the students over the past ten years has made it possible to determine that professional training, including that of future managers, contains:

– the studies presented by the concepts, systems, frameworks of the discipline and course, a study of certain personal qualities and abilities, and means and psychological conditions of the future specialist's readiness to manage people (Miloradova, Ishkov, 2015; Rosina, 2012;

– over the past decade, there are no surveys of psychologists and teachers regarding the implementation of contextual education at higher education institutions for the purposes of students training.

However, the works on the formation of a personal and professional orientation of students and development of cognitive and professional motivation of higher education institution students can be practically used for professional training (Miloradova, Ishkov, 2015).

As regard to the use of contextual education at the higher education institutions with a full range of psychological and didactic support of the organization's management future employee's training, we can state that this problem is not sufficiently covered in the researches of scientists, and there is no justification for the conditions given by the contextual education for the effective development of professional qualities of the manager.

In our study, we assumed that orientation to the specified justifications of contextual education is a necessary condition and factor for the development of the professional qualities of the manager. In other words, the main condition for the development of the professional qualities of the manager is the inclusion of the student into the substantive work. It means that within the framework of education which is the main activity of the student, it is necessary to use techniques that are adequate to the future professional activity of the student, including the future manager. According to our assumption, contextual education leads to significant changes in the qualities and abilities of the manager.

The basis for such assumption are:

– conceptual approaches to the activity theory of assimilation of social experience and experience of active education (collective activities of the educational process subjects), the meaning-making category "Context" (the system of internal and external conditions of human behaviour and activity in a particular situation, giving meaning and importance to this situation as a whole and to its components);

– contextual education as the arrangement of transition of students activity from the tangible forms of past experience to the professional activity which has cooperative nature and which is performed in a dynamically changing environment (in the means of arrangement and types of activities, active methods, and learning tools);

– the leading role of collective activity, interpersonal interaction, and dialogical communication of subjects of the educational process (a teacher and students, students among themselves), problematic content of education and its deployment in the educational process;

– within the framework of contextual education, the content of the future professional activity is gradually recreated and general and professional development of the specialist's personality is carried out;

– the content of contextual education is represented in the logic of this subject as a "conserved" past scientific knowledge and the logic of future professional activity (a differentiated model of a specialist with a description of the system of basic professional functions, problems, and tasks); perception of professionally important qualities becomes more adequate;

– contextual learning ensures consistent modeling of the content of professional activity of specialists in the forms of students' activities (the composing aspects are substantive and technology aspect and social aspect);

– contextual education motivates educational activity, makes it meaningful and productive, and makes cognitive and professional motives inter-conditional and intervariable; guides the students within the holistic spatiotemporal context "Past–Present–Future", where the students understand the "frozen" samples of theory and practice, cognitive activities performed by them, and modelled situations of professional activity; cognitive motivation in education, the focus of which is associated with the level of student's acceptance of the value of self-actualization, is transformed into professional motivation by the end of education;

– within the framework of contextual education, there is an orientation towards the upcoming professional activities is realised, the ability to perform professional activities is formed (Romanova, 2018);

– the methodology of contextual education does not deny other approaches and offers to use any forms, methods, and procedures applicable within the framework of other approaches; the student who masters the norms of competent subject actions and norms of relationships between people, in the course of individual and joint analysis and resolution of "professional-like" situations, progresses both as a specialist and as a member of society, and professional qualities of the future manager may progress as well (Johnson, 2002; Verbitsky, 2006).

The psychological and pedagogical research practice of higher education institutions shows that in relation to the participants of the teaching process, during which the students are prepared for professional activities:

– students are ready for active learning, they are allowed to uptake the information by psychological capabilities (such capabilities of mastering project are reflected in the age specifics of students) and by psychological readiness of students (shaped mental processes, qualities, and abilities of the student's personality affect the uptake of the components of action in the performance of active cognitive activity);

– the higher education institution teacher has a certain theoretical and practical base in the sphere of the use of contextual education: carries out transition from the academic educational activity (lectures, seminars) to quasi-professional (business games) (Leontev, 2017) , and then to educational and professional (the diploma project, practice); fills the activity of students with dynamic actions (the innovative technologies ensuring communication of anticipation and reflection, i.e. mechanisms of regulation of understanding, thinking and in conscious activity in whole, what allows to see the category "Context"; valuable and semantic reference points, etc.).

We believe that the arguments we have put forward in favor of contextual education suggest that it is a reasonable condition for the development of the future professional, including an employee in the field of organization management. Due to its influence on the students, there are positive changes in the basic professional competencies, which are the content of the professional qualities of the manager. Contextual training itself cannot be an obstacle to the assimilation of the content of the actions inherent in it, which contribute to the development of professional qualities of the future manager, as two participants of the teaching process (the student and the teacher) have the prerequisites for the implementation of contextual education in practice.

2. The problem of implementation of contextual education in the development of professional qualities of the future manager

There have been significant changes in higher institutions of professional education over the past decade, which can serve as the basic conditions for the implementation of contextual education in the development of professional qualities, including those of the future manager:

– orientation to a new paradigm of education and the competence-based approach with its technological and didactic provision made it possible to take certain steps in better preparation for the professional activity of the student, including the future manager;

– theoretical research and practical recommendations in the sphere of an organization of training regarding innovative technologies;

– implementation of psycho-didactic and methodological training of higher education institution teachers within the framework of the implementation of students training with a focus on a new educational paradigm;

– there is a theoretical justification of contextual education as a condition for the shaping of professional competence of the student (bachelor, master) as well as research on some parameters of the use of contextual education (the relationship of cognitive and professional motives, personal and professional orientation, etc.) in training.

The analysis of the existing conditions of the implementation of contextual education at higher education institutions allowed us to conclude: there are not enough inventions on the problem of development of professional qualities of the future manager. Thus, for the system of functioning of the contextual approach in the education of future managers, the goals, forms of training, methods, and technologies that would be not only adequate to the logic of the deployment of the content of contextual education but also take into account the task of effective development of professional qualities of the manager have not been developed and chosen. In other words, there is no corresponding technological and didactic support of education in the context approach (integration of educational, scientific, and production activity of students, conditions for the creative development of the individuality of each student, including the future manager).

Preparation of the student for professional activity, including the development of professional qualities of the future manager, within the framework of a certain subject, is carried out by the teacher, so we define the actions of the teacher of the discipline in order to provide technical and didactic support of training in the context approach.

Step one. When choosing any method of training, the teacher must comply with the principles, set learning goals, and take into account the content of the program material, the conditions under which the educational process takes place, the contingent of students, the spheres of their professional education, and their individual preferences. We express our full agreement with the principles of contextual education, by which we assume to be guided in the process of managers training. However, with regard to the topic of our study, the teacher of the discipline, when implementing contextual education, should choose the purpose: for the development of what socially and professionally important qualities (competencies) of the manager, the educational process is organized?

Step two. When selecting the content of contextual education as the development of educational, quasi-professional, and educational and professional activities, the teacher prepares the tasks in the logic of the content of the discipline (this is nothing but a model of a manager), and to them, problems (problem situations) compiled with the orientation to the content of the program material and the educational text of the discipline. Additionally, for the implementation of social components in the model of a manager (the ability to work as a part of a team, to be a leader, etc.), appropriate tools for joint activities of teacher and students should be selected, during the selection of which one, it is recommended to be guided by the logic of the deployment of the content of training.

Step three. The role of each participant of the teaching process in the methods and technologies of teaching chosen by the teacher is defined (the material can be forms and methods of teaching, both innovative and traditional, which correspond to semiotic, imitational, and social teaching models in contextual training); the instruction of the sequence of actions in a problem situation is being developed.

Step four. Professional actions of a manager differ in their qualities and functional responsibilities, therefore, the teacher must select such technologies and teaching methods that would effectively influence the development of the professional qualities and abilities of the future specialist. In other words, as we assume, a higher education institution teacher must select the conditions for:

– the development of individual peculiarities of the manager's personality (creativity and intelligence, achievement motivation, social competence and his/her own credibility);

– performance by the future manager of the functions (development of plans and working procedures, control performance (project-based education));

– having communication skills, owning methods of managing people and organization, having negotiation skills, managing innovation activity.

Thus, step-by-step preparation by the teacher of the technology-didactic accompaniment of the contextual approach will enable to perform contextual education.

3. Conclusions

1. Analysis of the implementation of contextual education in the development of professional qualities of the future manager helped to suggest that this problem should be solved in the context of contextual education.

2. The reasonable conditions that allow developing the future professional, including the employee in the sphere of organization management, according to our assumption, are provided by contextual education which can influence on the development of professional qualities of the manager.

3. The following basic conditions have been created for the implementation of contextual education at a higher education institution for the purpose of effective development of the professional qualities of a manager: the orientation to a new educational paradigm and a competence-based approach, theoretical research and practical recommendations in the organization of education using innovative technologies, the implementation of psychological and didactic and methodological training of higher education institution teachers, the theoretical basis of contextual education.

4. The practical implementation of the ideas of contextual education in the process of development of professional qualities of a manager in higher education institutions involves creation by the teacher of the discipline of appropriate technological and didactic support, which allows to take into account development of personality qualities and abilities of a manager within the framework of the context approach.

These conclusions suggest the reasonability of contextual training use as an effective development of the professional qualities of a future manager.

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Problems of communication between generations

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Abstract
This article suggests a comprehensive review of the problems faced by the different generations and their specific traits. The discribed difference between generations is a main concern of thoughtful individuals, especially when the conflict situation takes place. The new approach to this problem gives society instead of blaming and judging more effective tool to cope with it. And this work explains why generations are so spaced apart by a wide gap in terms of values they daily share. Understanding of this social phenomenon opens up a way to generating an all-inclusive image of our society with utmost clarity and with neither prejudice, nor condemnation. And the vision of the whole picture gives society a chance to build up relationship and cooperation effectively without losing time for conflicts and misunderstanding. This work is devoted to generation issue and aimed at those who are desire to live at higher level of consciousness, sharing true values in spite of the gap between generation.
Keywords: Generation values, Marketing approachs, Motivation, Psychology

1.Introduction

In this world many theories exist describing human behavior and explaining how to motivate them. But especially, the interest to the generation theory seriously grew recently. It is interconnected with several aspects, such as:

- decreased efficiency of regular marketing,
- the lost of efficiency of the implied before motivation strategy as for employees so for ordinary consumers,
- the important question how to build up relationship with new generations and how to bring them to maturity popped up last years.

Studying of deep values of the different generations can be important a reference point to have deal with mentioned issues (Miloradova, Ishkov, 2015). And this generation theory helps to reveal such values. In its turn, it is closely connected with economic cycles of state development. These cycles are growth, stability, decrease, crisis and growth again. Technologies develop, the societies change, demands growth, new professions and industries appear but the cycles are constant and they have a huge impact on shaping values of the whole generations (Strauss, W. & Howe, N., 1992; Shamis, E. & Nikonov E.; 2018;. Kolokolova L., 2017; Soldatova G., Rasskazova E. & Nestik T., 2017; Ozhiganova E.M., 2015),

2. Iterature Review

The issues of the difference between of the generations that were exactly what Americans Neil Howe and William Strauss thought about. These researches created the theory of generation which is built up at the junction of several sciences. And this theory helps to invent a new approach to plural psychological issues that became sharply important to the end of 20th century. N. Howe is the economist and expert in the field of demography, W. Strauss is historian and play writer. At the same time they started research the term "generation". They paid attention that conflict between generations is rooted from the difference of values but not age. If it had based on the age the people after the certain age would have had the same values as their parents. But it never happens. The former kids never become as their parents. N. Howe and W. Strauss studied the period of world history started from 1594 to 1991 and made a forecast up to 2069. They highlighted 5 generations in 20th century and 1 in 21st.

3. Characteristics of the research subject

Let's consider above-mentioned generations and their main differences in values.

The Generation of Winners.

The years of birth are from 1900 to 1923

Their values had been formed before 1933. Political events, built up this generation values, are:
- revolutions 1905 and 1917,
- collectivism and electrification.

The values coming from that time are hardworking, responsibility, almost religious faith in the future, ideology commitment, family and customs, categorical judgments.

The Silent Generation

The years of birth are from 1923 to 1943

They values had been formed before 1953. Political events had a great impact on this generation are:
- Stalinist repression,
- World War2,
- rebuilding a destroyed country,
- antibiotics invention.

The values of that time are devotion, rules' obedience, law abiding, respect to posts and status, honor and patience.

The Baby Boomer Generation

The name of this generation comes from the word «boom» that characterizes the birth spike in the years 1943-1963.

The values had been formed before 1973. There are many events that have a big impact on this generation, such as:
- Soviet Thaw,
- space exploration,
- USSR as a great country,
- «Cold» War,
- the first plastic surgery and the creation of birth control pills,
- uniform standards of education in school and guaranteed medical care.

As a result of all these factors, these generations are the most successful generation with the psychology of the Winners.

The main values of this generation are optimism, interest in personal growth and reward along with collectivism and team spirit and cult of eternal youth and health.

The Unknown Generation

The years of birth from 1963 to 1983.

This generation values had formed before 1993. The events that influenced on this generation are:
- continuation of the «Cold» War,
- Perestroika,
- Drugs and AID,
- Afghanistan War.

Their values include readiness to the changes, opportunity of choice, global awareness, technical literacy, individualism, the desire to learn throughout life, informal views, emotional search, pragmatism, do things on their own and gender equality.

The Generation Y

The years of birth from 1983 to 2003.

The values have been forming up to presence. The influential events are:
- collapse of USSR,
- terrorist attacks and military conflicts,
- SARS,
- Digital technology development.

Mobile phones and internet are habitual part of their life. This is Era of brands.

The values of this generation have much in common with generation that was 80 years ago. The main features are citizen duties, morality and responsibility (Ishkov, Miloradova, Chernyshev, 2015). But the other side of this generation is naivety and ability to obey. Immediate remuneration goes first.

The Generation Z

The years of birth starts from 2003 and will be over in 2023.

We don't know much about this generation as they values even the eldest representatives of generation are still forming. But looking at the whole picture, generation Z will be very similar to «silent» generation that was born before World War 2. It is connected with theory of generation cycles. And if this theory is right generation Z will be very similar to those who lived during World War 2 and after it. They taciturnity can be caused by widespread information and means of communication that help them to make up their minds. That is the reason why the live communication is steadily declining in favor of virtual one. The main events influenced on this generation:

- world finance crisis,
- business consolidation,
- creating of network.

4. Results

On the interim generation boundaries their transition occurs gradually depending on the place where the person lives. As an example, changes happen at higher pace in port cities where a lot of foreigners are. People who were born on the junction of generation belong to transition group including features of both previous and coming generations. Basically, we have three active generations on our labor market: baby boomer, generation X, generation Y.

Marketing

How the marketing approaches

------- the different generations?

It is common for silent generation to buy things in store mostly food. Moreover, this generation spend money for prints, all kinds of products for their kids and grandkids, interior thing and medical supplies at the same time the costs of purchases do not play a big role. Marketing approach to this group of consumers should include standards, expertise ruling by state. Creative media has to convey the feeling of their importance, sharing, caring and attentiveness to their needs and priorities. Information of products or offered service has to describe all advantages and specifications with very affordable language in details. This type of people does shopping in specialized stores or next to their house, using discounts and bonus programs. The fact that the silent generation mostly watches TV and listens to radio should be taking into account while advertising replacement. They use computers for communication with relatives.

The main features of baby boom generation are optimism and cheerfulness. They like to spend a good time, drink good alcohol, eat a nice food and look well. Money for them is a kind of symbol of status. Everything that can prove it will be in their shopping list. This generation has a tendency to buy overpriced thing just to outline their status. That is the reason why advertisement appealing to this people should talk about high status of people who buy given product or use service but without mentioning their age. Product or service benefits should be mentioned along with functions and warranty. Various channels of information work well with this generation including social nets. And this generation has a strong necessity to share what their buy with friends and folks focusing on uniqueness acquired.

While searching a right approach to the generation X love to extreme sports, comfort and desire that outline their individuality and uniqueness should be taking into account. They are pragmatic in purchases and build up their preferences trying new goods and services. Choosing medicine they are driven by fast symptom relief. Fast relief medicine such as, pain relief or reduce the temperature were created exactly for them. They need «a choice» and variety of products that help them to save time and energy. The product quality and its composition play a serious role in making up decision to buy thing but it will not be so efficient if the offered product doesn't have an attractive package. Novelty, bright colors and descriptive images will be highly effective with this group of consumers. Readiness to changes and moving forward gains their loyalty. But they make up all decisions on their own. X generation customers require well-established detailed sales funnel with brief feedback. Generation X rely more on internet then previous generations but they still have a need for security and protection of personal data.

Generation Y wants emotions and exactly right here and right now. That is the reason why marketing approach must be emotional, natural and very spontaneous. This generation is free in their actions and thoughts. They want to live at higher pace. They are sophisticated users of all new gadgets and that is the stimulus for those manufacturers who produce them. Clothes, shoes, accessories, sport outfits are attributes just for pleasure not for necessity. Advertising campaigns targeting at this generation are always multiracial and attracts not only to promoted product but mission as well. Marketers should avoid an image of adults in their advertisings because adults do not perceive younger generation seriously. Independence and self-sufficiency are traits characteristic of the generation Y that facilitate work with them. Social networks, reviews, easy perception of advertising are the main criteria of working with this generation.

Concerning generation Z, it is difficult to say anything about their features as they are still in developing. Some psychologists assert here is a lot of «indigos» with equally developed left and right hemispheres among this generation whom breed X and Y parents. What influenced on their values? Are political and economic misbalance influences on them? Or is it international conflicts? Dividing the educational system on technical and humanitarian education and putting all students through the same state test?

It seems that there should be inheritance of their older generation values because each generation to their best to grow their kids, basically, on their values and ideals. But we observe that it happens in to a very small extent. Situational historical and economic factors have much more influence on needs and motives formation. All these aspects find a reflection on the motivational approach to every generation employees.

Motivation

The problem of motivation roots in orientation to «baby boomer» and X generations. And absolutely unaffected with new generations Y and Z. No doubt, company's motivational system should be united and structured for all age groups. Thanks to the new motivational system named «cafeteria» this approach becomes possible. This motivational system allows all type of employees chose their motivational system or bonus program according their needs. In spite of all differences between generations here are some things in common, such as: the reasonable balance between life and work, well-arrange work place, healthy relationship at work and high corporate social business responsibility. At the same time, it is necessary to take into account the fact the generation Y and Z are highly tech that makes them very different from other generation. Internet has expended the space opening up new opportunities for them. Many of the millennial want to study and work abroad. They are not satisfied with the existing practice of straight dependence of career growth on work experience. They believe that skills and achievements are the determining factor for career growth and aspire to rise on career ladder faster than previous generations. It is very important for them to be immediately paid for done work more than possibility of corporate training. Thus, new generation inconstancy should be taking into account while making up motivation. They main criterion is money and they will leave company to get a better proposal without regrets.

Rock on which we split is relationship between generations. Young generation asserts their opinion not important for elder experts. To understand whether this is true or false we should pay our attention to some objective facts, such as: the educational level, experience and talent. Considering the fact that education became worse for last decades and experience have not been acquired yet by young employees the lack of trust of elder generations are reasonable. The talented employees are not common event in all field of business. Hence the varying complexity between representatives of different generations is taking place.

The work is always fully revealed the values inherent in the family and educational environment. Therefore, nowadays employers have to take into account many different aspects creating the motivational system for all company's employees. The general thing for all generations is the instinct of self-preservation that is adequate and timely response to the physical threat of life and health. Spontaneous unconscious and instant reaction is innate to all humanity. Employees of all companies are also subject to the social norms, morality and the mission of their company regardless of generations. The research of the motives making personnel to act one way or another is the main task of the modern manager.

Motivational examples of different generation employees

Generation «baby boomer»

- friendly relationship with colleagues,
- high corporate culture,
- mutual assistance.

Generation X
- special motivational program,
- decision making process.

Generation Y
- career growth,
- corporate training,
- encouraging innovation,
- call «to overtake competitors».

Social irresponsibility of business

The specifics of Russia is a weakened economy that makes the difference between generation not so obvious compared to Western countries. But in spite of it, the difference between generations is still huge. The freedom of words and choice, life without economic problems gives free rein to all generation features. Thus, motivational model implemented in full scale. The recent trend in Russia is financial motivation for the result regardless generations. Executives are aimed at reducing the fixed part of salary by offering bonus instead of it. What happens with people? It is evidently, that «baby boomer» generation became useless as they pretty conservative to the motivational system and cannot work without stable salary. Moreover, this generation has already have problem with health. Bonus system works well with young generations Y and Z. But, for some reasons, Russian business chose convenient motivational system and implied it everywhere. In this way, the main principle of cooperation between employer and employee is violated. It causes endless flow of changing personnel, low company efficiency, bad reputation company as employer and lack of trust to it. Generation X is transition one. They are easier work under targeted to younger generation motivation but not all representatives can do it. So, Russian business, concerning about their profit only, left the big social group without profit. The lack of social aid to create work place oriented to them inevitably occur social catastrophe.

Interrelationship and difficulties with Y and Z generations

These two generations grew up in freedom, prosperity and love. Generation X is responsible parents for them. And this explain why generation Y is more confident, optimistic and open to world than generation X. They do not have opened fears. But excessive love and caring from their parents' side make them spoiled, calculating, irresponsible and self-loving. That is why, this generation named «I». They need not to survive and they have a choice in their action compared to their parents. Generation Z grew up in the same loving environment. And I can suppose that this generation will get right values. They are not interested in money, know how to have a rest and appreciate life. They are more submerged into themselves than others generations and hardly communicate with each other as they use all kind of gadgets and spend their lives in virtual world. Generation Z is more impudent, selfish and egocentric than others generations and spend their time doing selfi and looking at themselves.

5. Conclusions

Here is a question, how to build relationship with those who never experience political and economic crisis? The experience of communication with new generations revealed that generation Z much easier find a way of productive communication with generation X because these two generations are different and they have nothing to have a conflict between them. Generation Y, trying to delay the period of maturation, often goes into a conflict with generation Z that, in its turn, destroys understanding between them. The concept of eternal youth is a serious problem of generation Y and will later lead to a deep disappointment and depression. For generation X their children Y often seem to have a lack of values, but this is not quite true. Generation Y has a different perception of reality. They understand that hierarchy is a conditional event. As in their time the era of technology got a strong development they created the perfect virtual world according their rules for themselves. So, this generation is very naive and absolutely unaware of the reality. They want to be awarded just for their being what they are. At the same time, they aspire to be versatile. They want to possess of several profession and this is not bad in rapidly changing world. But there is also some risk that some part of this generation will be lost to society due to the inability to adapt to the reality. And they are not the only ones waiting for a painful maturation. Their children of generation Z are presumably only through a strong psychological crisis overcoming narcissism and selfishness will make a serious step to the balanced future. All these problems with Y and Z maturation are other side of the same coin of prosperity. Compensation of generation X for future generations has led them to spoiled, selfishness and inability to work. They huge unreasonable self-esteem, constant self-loving will be a serious obstacle to building healthy relationships with the outside world. And only a big work on yourself will help them to enter real world at full scale where they suppose to live as mature people.

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Problems of 21th Century

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Abstract

This article suggests a comprehensive review of the mental problems faced by nowadays psychologists and their specific traits. The futher attempts to explain why these mental disorders continue growing among modern people and bring a serious reason to be concerned to our society. Understanding what cause such problems opens up a way how to reduce the number of mental disorders, to treat them more effectively and prevent their appearance in the nearest future. New approaches provide an accurate diagnosis of mental disorders. New researches take society to a new level of dealing with mental problem. A deep awareness how a high technology era affects a human brain is a main key to the solution of the existing mental problems. This article appeals to those who desire and more serious understanding of this subject.

Keywords: Nomophobia, Gadgets, Communication means, Mental disorders

1.Introduction

As a matter of fact, 21st century is the high technology age, when everything around us is changing, starting from our imagination of the world to a possibility of establishing online relationships with other users hiding in virtual space. The people became closer thanks to nowadays communication means. On the first sight, it seems that era of swift messages, video chats, instant photographic image delivery make people closer than they have ever been before. But could it be just an illusion? And what else a new high technology age has in store for us? (Verxoturceva E., 2016; Gorodeczkaya I. & Islamgulov I., 2014)

2. Literature Review

This age gave us completely new difficulties. Today's scientists revealed new mental disorders directly arising from high technology development (Corot N. , Pavlov S. & Kozulya I., 2017). Nomophobia (if translated from English, it is a fear of a loss of an access to mobile phones – "no mobile phobia", more particularly a user's fear of being unable to us mobile Internet access) is recently discovered disorder of human behaviour associated with a possession of mobile phones. This behavioristic disorder is seriously considered by doctors as a big problem. It looks like a mobile phone dependency, judged by the outer symptoms. But actually it is completely different disorder in spite of having similar symptoms that characterize just a dependency . In fact, nomophobia is a phobia to be left without a mobile phone, i.e. without a connection with "a great world" through social media networks or Internet resources (Tanatova D.K. & Tairova L. R. 2014). It is not a dependence from being physically close to mobile phone. However, an addiction mobile phone very often speaks about an existence of nomophobia. It is common, these two disorders are interlinked to each other with almost no boarders between them and, in some cases, they can work in unison to form thereby a single composite mental disorder.

3. Method

Let's have a closer look to explore the reasons why so many mental disorders came into being in the new century. One of the reasons is that modern people live in the world in which it is impossible to exist without a mobile phone. This is due to the intense pace of work and the need to be constantly in touch. There is a list of factors that promote cell phone-related mental disorders. One of the main factors is an existence of unresolved personal problems that provoke an appearance of nomophobia. A person has a fear of missing a call from an employer or a jealous spouses, which, in turn, leads to a constant and nervous monitoring of the phone screen. Thus, a full phone dependence forms in such a manner. The phone must always be in sight. It comes to complete absurdity when people with already acquired a phobia take a cell phone to toilet or bathroom. During a conversation with someone they cannot help looking at the mobile phone screen checking messages, browsing somewhere and so on. And it often looks very impolite and does not invite to friendly communication with other people.

Another factor at work here is loneliness. Addiction to non-stop using mobile phones is an attempted covering of serious internal problems that a person refuses to solve. The fear of being alone does not allow a person to leave the Internet to resume life in the real world. The lack of communication skills in real life provokes a formation of dependence on virtual friends. This person does not feel lonely with online friends and it is possible to behave just exactly the way such person's imagination tells. Being online, it is possible to simply change the avatar in order to change the image in social media networks. And if something goes wrong with online chatter, it is very easy to block that user who no longer pleasant to chat with or who could input something offensive on the keyboard. This behavior leads to a complete undermining of the communication skills. Why a conflict situation should be solved if an annoying user can be just blocked?

Well, what happens to these people in the real world? In the reality these people are lonely. They don't know how to live in society. They don't know how to cope with problems arising in the process of communication with other people, whether a colleague, friend or someone else from family's members. Such people are not able to create a family and raise children. They don't know how to build relationships or deliver social skills to the new generation. These people just don't know how to do it.

Another reason that causes of nomophobia is the complete absence of any interests or hobbies in life. You will never meet someone with such disorder, who jogs early in the morning before going for work or goes for cross-country skiing in winter week-end along with family members. Those people who are very busy with profession are also less susceptible to nomophobia. Therefore, all that brings us to logical conclusion that most victums of nomophobia belong to people without any favourite profession, good education and hobbies. Also, it had been found by researchers that the poorest part of society most often suffers from this psychological disorder. For them, an expensive mobile phone is a sham proof of social status or belonging to a particular social group. Although in reality they have a weak relationship to this well-off social group. Posting their decorated photos on social media networks and getting a lot of "like" marks from the like-minded people, they have a feeling of their own importance and attractiveness. And not only a fashionable smartphone helps them to pursue such goal, but also all software applications related to photographic image processing.

4. Results

Much to their disappointment, a real life stores very big problems for this sort of people and these problems solely can be solved by means of learning social skills [Babieva N.S., Grinenko A.V., Shulga T.I., Tkhugo M.M., Zotova L.E., Shukshina L.V., Ishkov A.D. A Psychological Resource of Personality as an Integral Eco-Psychological Characteristic (The Interrelationship of Personal Development and Quality of Human Life) // Ekoloji. 2019. V. 107. Pp. 629-635.]. And, the first of all, the skill of showing due respect for others is a game changer here. Basically, it means showing much attention to your conversation partner.

The main physiological symptoms of nomophobia:

- high rate of heartbeat,
- presence of panic,
- sweating.

How does a person with nomophobia symptoms behave in public? The following behavioristic features easily can betray such an individual exhibiting nomophobia symptoms:

- repeated checks of the smartphone for its charge level as it is very important for an addict infected with nomophobia to stay in touch with those who write, call and send interesting pictures and videos to such person,
- repeated checks to see whether the smart phone gets any new messages, notifications from social media networks or incoming calls, even it is a totally wrong time for such checks,
- a person with nomophobia always holds the smartphone in hands, even needlessly.

An addicted person tends to have a permanent desire to improve martphone, download the latest applications and acquire the newest and expensive phone accessories.

The feeling of a full accessibility, i.e. a possibility to find any required information in any time or an opportunity to buy needed thing as fast as desired is another trap with infective nomophobia. In this case, a smartphone makes a person sure that in time of need any necessary help directly associated with the smartphone can be easily reached.

If we talk about the phone dependence without signs of nomophobia, a crystal clear feature of this is a closeness of a person to smartphone. Even in view of serious reasons, such as answering important calls from work mates, family members or some other callers, a constant desire to be close to the phone turns gradually into a dependence on the gadget, which tends to further grow into a resultant nomophobia in most cases. Plus, some other factors contributing to a growth of nomophobia from just phone detendency are repeated checks of money balance, charge level on the phone and some other things that may block smart phone services for a subscriber.

As it can be seen, nomophobia and a dependence on the phone are very similar to each other. But still there is a significant difference between them. This difference lies not only in the fact that in the first case the cause of phone dependence is still the fear of being without access to the information space and, in the second case, a potential possibility to remain without communication. The difference is also in the age group of users found suffering from one or another disorder related to the phone. If nomophobia is a disorder of mainly the younger generation (a fear of being left without an access to social media networks), an addiction to ~~on~~ the phone hits those people who belongs to older generation. And no matter what the need of the phone is about (work, family and so on), a person becomes absolutely dependent on it.

All of the above signs indicate that a person with the above-said symptoms needs outside psychological help coming from professionals. A person is unlikely to be able to cope with this situation by himself. And a remedy under such a situation is person-to person live conversation and a clear understanding that the world will not collapse if a phone user stops using the phone for a certain time. Phone user family is supposed to see that sometimes everyone may just get tired of the outside world and may become desirous of enjoying a silence without annoying phone calls.

Nomophobia and dependence on the phone can act as a basis for other various mental disorders such as increased anxiety, nervousness and depression. They are catalysts for other mental disorders. It is worth noting that, in general, medical care has improved significantly. The most sensitive methods of examination allow to identify the disorder in early stages and even at the level of predisposition. And every year the methods of medical examination are improved. The paradoxal discovery is that the picture of mental illness also has changed. No fundamental changes had occurred. However, there is an increase in the incidence of new disorders. If a specific disorder was occurring extremely rarely in the past, attracting therefore not much interest of researchers, now a research of a number of disorders became extremely necessary to find a way to cure them in future.

Nomophobic behavior of people can further develop a tendency to social anxiety and dependence on the use of virtual and digital communications as a method of reducing stress caused by social anxiety and social phobia [Ishkov A.D., Magera T.N. Emotional competency in an engineering university: yes or no? // Procedia Engineering. 2015. Vol. 117. Pp. 148-153.]. Those who suffer from various panic disorders can also exhibit similar behavior. They talk about feelings of failure, loneliness, insecurity and low self-esteem. It happens especially, if a person does not often communicate by telephone, using only its extra functions. People with this sort of panic disorder feel much more anxious and depressed as compared to others (Stossel S., 2015) . But, nevertheless, they are less likely, being in condition of panic disorder, to switch voice call mode or silent mode on.

The main types of psychological disorders of the 21st century are:

- depression,
- anxiety,
- psychosomatic illness,
- organic mental disorder,
- asthenia,
- dependence of psychological active substances,
- dependence on computer,
- low frustration tolerance,
- obsessive compulsive disorder,

- personality disorder,
- adjustment disorder,
- bipolar disorder.

Depression.

According to statistics, this type of disorder continues to grow and soon it may overtake cardiovascular morbidity. Especially, mild forms of depressions tend to occur in the latent form without obvious symptoms. Depression prevails among urban population as a result of informational overloads, disturbance of the rhythm of sleep-wakefulness, addiction to alcohol, stimulants and so on.

Anxiety.

Normal healthy anxiety is a response to severe stress that should be activated only at the moment of danger. However, psychologists ascertain an increase in the number of calls for professional help on the part of people with a constant anxious state developing without external causes for anxiety and fear.

Anxiety conditions include panic attacks that mean unreasonable waves of fear with signs of vegetative reactions (the feeling of palpitations, sweating, lack of air and trembling) and simple general anxiety condition. This condition is constantly inadequate in response to the external stress. These two disorders are the most common at present. But people with these disorders rarely look for doctors' help and suffer alone.

Psychosomatic disorders.

Nowadays, diagnostic criteria for many diseases, such as irritable bowel syndrome and neurogenic bladder, bronchial asthma, restless legs syndrome, hypertension obesity and other similar symptoms, are exposed to active reconsideration. In hospitals, separate psychosomatic sections departments tend to appear. Medical institutes begin to provide entire sections for the study of patients with psychosomatic disorders in order to diagnose, prevent the disorders for sake of a proper therapy to those suffering from them.

Such disorder could be referred by doctors 20 years ago to exceptional and rarely occurring cases resulting from lack of permanent employment. But it is now becoming clear that information overload drives people into a real nightmare which activates severe psychological disorders, especially widespread among big city residents. And about 50% of all disorders directly belong to anxiety.

Organic mental disorders.

These diseases of the present include any damage to the brain tissue. The modern high-tech world implies high speeds of transportation in the space of not only the information, but people themselves. Therefore, injuries of brain tissue often occur not only in the process of human's natural aging, but also they may result from car accidents, abrupt stops and simply rough motion of anyone. Any damages of the brain tissue lead to a decrease in memory, emotional instability and impaired thinking. It is often happens that mental disorders occur due to lack of oxygen, that is as a result of hypoxia. And again, this is a problem of a big city where people suffer from limited access to sufficient amount of fresh air.

In addition, organic mental disorder may be provoked by:

- head injuries,
- intoxication (alcohol, low food quality, synthetic food additives),
- infection of the nervous system,
- vascular illnesses (that are widespread in the present),
- impaired metabolism,
- aging-related changes.

Most people of the high-tech century, who aged over 60, suffer from psycoorganic syndrome. Psychologists call this condition encephalopathy. As today's medicine is fit enough to successfully cure major cardiovascular diseases and some other related disorders, a cost of a longer life of human subjects will be much more frequent occurrence of mental disorders, including psychoorganic.

Asthenia

Asthenia is a chronic fatigue syndrome and it is also widespread at present. Fortunately, it is a reversible mental disorder. Almost everyone living in the modern world faces this particular problem. At first glance, it resembles a regular fatigue for its being characterized by the same symptoms. But asthenia has its own causes and development mechanisms. The following symptoms allow to identify asthenia:

- higher irritability,
- fast attention exhaustion ,
- sleep disturbance (from sleeplessness to sleepiness during day time),
- vegetative symptoms (heart palpitations, lack of air, internal tremor, sweating).

Substance dependence

This category is shared by people who usually quietly fall into psychological and often physical dependence on the use of psychoactive substances that mean substances causing pathological dependence. Such substances include all types of drugs, alcohol, tobacco, caffeine and tranquilizers. Moreover, substance dependence phenomenon not necessarily includes a solely one sort of addiction, unlike to the situation of having smokers addicted to tobacco, alcoholics addicted to alcohol, coffee lovers addicted to coffee, nomophobic individuals addicted to smart phones.

Dependency on a substance is accompanied by:
- absolute impossibility to be a sober for a long time,
- a permanent need in doping,
- a constant desire to experience euphoria or relaxation by administration of any accessible psychoactive substance.

These manifestations of the dependence may vary, alternate or mix. However, a long period without such substance use becomes unbearable for an addict. But, if drugs appear in the arsenal of such substances, they “displace” other psychotropic drugs. In this case, drug addiction is formed quickly. And a drug addict will sooner or later will be unavoidably spotted by an expert in narcology and will be subjected to anti-addiction therapy. When non-drug substances are administered, these people–hardly can be spotted by doctors and they are left without therapy. In 20th century, such disorders were not often met and described. But today almost everyone is able to identify easily a person suffering from such addiction.

Dependence on computer

A separate group includes those people who suffer from computer addiction. As found by researches, those PC users who too often use a computer without rest breaks have an increased risk of stress, sleep problems, and depression symptoms. Symptoms of depression are more frequent among female computer addicts, while male computer addicts are more frequently prone to insomnia. Moreover, regular use of a computer at night is associated not only with sleep disorder but also with high stress and depression in both male and female PC users. Excessive co-use of PC and mobile phones only boosts the problem to a clinical size. Therefore, it is very important to explore the existing problem before it transforms into a serious mental disorder.

Separately, it is necessary to mention a group of PC users mostly aged from 5 to 25 years old, who are most frequently involved into excessive gaming. This involvement condition is similar to addiction. When access to gaming PC is denied, withdrawal sickness of a PC game lover is similar to that in case of real drug addiction. Feeling neither hungry nor sleepy at night are pathological conditions per se that lead to breakdown of the nervous system. This is a source for a condition referred as hyperactivity and depression. Hundred of deaths have already been recorded and an accurate diagnosis behind these lethal cases sounds in a suicidal manner as “gaming addiction”. According to statistics, every fourth child suffers from this disorder. And as mentioned above, the poorer the social stratum of the population is, the more susceptible it is to this pathological condition. The lack of spiritual warmth, mutual understanding between parents and children leads to this serious disorder which often provokes a suicide. Therefore, any suicidal statement of a PC gamer should be taken seriously since there may be a good reason for this.

Low frustration tolerance.

Frustration is a completely normal feeling familiar to everyone as things often are not going at all as they expect. Mental problems arise when a state of frustration leads to tension and excessive anxiety. Pathological frustration is a state of constant causeless anxiety. This state further alienates the person from the desired goal. The term frustration comes from Latin word “frustration” that means deception, fail, disorder plans and vain expectation. A person with low frustration tolerance is too sensitive to everything that is unpleasant for him. He does not tolerate discomfort, failure, obstacles and difficulties. Such a person simply does not endure if something delays fulfillment of his desires. He does not tolerate any other feelings or circumstances unpleasant for him. This type of personality is often under stress, anger, anxiety and sadness. He is often offended, likes pretending to be a victim and blame others for everything that happens to him. It is a regular when an adult with a low frustration tolerance surrenders on the way to their goals. But it is pretty normal situation for kids as they have a reduced level of frustration tolerance according to their age. Therefore, it is very important for every person in childhood to learn how to accept a state of frustration, learn how to be persistent and not to give up before the goal. However, such a child needs to be explained that he cannot get everything he desires to have. This will help develop tolerance for frustration, that is, the ability to withstand the state of frustration and control it. As I mentioned before, the frustration is a normal everyday feeling and nothing wrong is in this feeling. But it is bad when a person starts to get angry, becomes obsessed if something is impossible for him. This means the beginning of his problems. Reduced frustration tolerance may even lead to the fact that person already begins to refuse to implement plans or work assigned to him. It begins to seem to him that he will not be able to carry them out exactly as he wants, that is, ideally. According to research intolerance to frustration can easily bring to procrastination. And a person begins constantly postponing urgent important matters with all the ensuing consequences. As if we did not try, we cannot avoid difficulties and disappointments in our life. This is an integral part of the modern world, so it is important to learn how to manage your emotions so that they become more constructive and not poison our lives.

Obsessive compulsive disorder

In other words, this is a state of unwanted thoughts and obsessive actions. People with this disorder are often not sure what they have done. For example, these people check many times whether they locked the door, turn off the light or gas or, probably, they forgot about iron they used 15 minutes before. They knock on wood, succumb to superstition, afraid to step on sewers holes. These people are exaggerated fears to be polluted by contact with other people or household items. Such thoughts are called obsessive and intrusive. Those, who suffer from this disorder, make their fears real. They life becomes nightmare. And the saddest thing is that among famous people are many celebrities who have the same mental illness.

Personality disorder

Here we are talking about a common disorder which is based on an unbalanced behavior. This kind of person can impose his anger on others, have problems with work and in relationships with other people. He often has a change of mood and anxiety. At the same time a person is sufficiently indulgent to himself and constantly finds an excuse for his behavior. Such disorder begins in early youth and lasts a lifetime. Such a patient may be distinguished by high intelligence. And the causes of the disease may be not only modern life or genetics, but also improper upbringing and environment, propaganda of television and internet. Emotional disorders, personality, hysterical behavior belong to this disorder.

Stress response and adjustment disorder

This group of disorders is the result of tragic experiences and abrupt changes in life. There is a response to mental trauma associated with the risk to life. It can occur after a natural disaster, the loss of a close person, serious crime, social upheaval, as an example, terrorist act. The memories of experience events come back again and again to the patient. He is haunted by anxiety, depression and sleep disturbance. The patient has aggressive inclinations and suicidal thoughts sometimes. The modern pace of life often leaves such people unnoticed. And this entails a crime or suicide that could be avoided if the timely assistance was provided.

Bipolar disorder

This disorder is also known as manic depression. It is quite a common disorder with alternating depressive and manic phases that is accompanied by a change of mood. The border between simply changing mood and bipolar disorder is very fine but still exists. The attitude of those who suffer from this disorder constantly moves between two poles: from extreme mood elevation up to its critical decline. This disorder exhausts the person suffering from it and even leads to suicide. The cause of this pathology is unknown, but there is an assumption that it is a shortage in serotonin that is in impaired in the human biochemical process. This disorder has some well-known actors and singers. And this disorder can be recognized by elevated mood, enhanced motor speech activity of the patient. People of this type talk a lot jokes, laughs, tackle a lot of things and then also drastically reduced and cannot concentrate at anything they do. As a result, many of their undertakings do not end. This disorder has become very widespread in the present and, fortunately, can be successfully treated. In Russia, apart from informational overloads, both stress and anxiety are produced by fragile economic situation. This source of stress provokes the onset of symptoms of all the above described disorders. Dysfunctional families, lack of educational environment for personal work, general discriminatory background are often a catalyst of all psychological problems that can turn into more serious mental disorders.

5. Conclusion

As both economic and political situations in Russia are far from any improvements in the short-term it is reasonably to expect that the incidence of such types of disorder will only grow. It is difficult to say exactly for how many decades it will be lasting and how much time it will take to overcome these problems. Resources for treating medically those who already have various mental abnormalities and who need professional medical help are short in supply.It is estimated that about 50% of the total population will be suffering from various disabilities. And it should be, therefore, regretfully admitted that mostly the young generation will be targeted by all these problems. It will be exactly the young generation whose shoulders unavoidably become exposed to having to carry a burden of instability in the country, tough access to free and high quality educational system, unaffordable medical services, and so on. So, the 21st century brought us not only modern technologies to enjoy, but also great problems to overcome in future.

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Development of the Technique of the Universal Social-And-Psychological Competences Formation

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Abstract
Some universal competences, for which formation the development of new training courses is necessary, are being accepted and implemented in the professional education in Russia. The specifics of humanitarian knowledge and its features are considered in the article. The results of the development of a training course on the formation of universal competences of social-and-psychological character "Social, psychological and legal communications in professional activity" for masters are presented.
Keywords: universal competences, social-and-psychological competences, situations of interaction, competence-based approach

1. Introduction

Considering the technique of teaching any training course, we inevitably come up to the idea, that it is necessary to take into account the interests of at least three parties for the organization of effective educational process.

First party is the society, which hidden presence is shown in the requirements of professional standards, state educational standards and contents of general professional educational programmes.

The students who came to the university with a certain intellectual and emotional baggage, with their mental sets and expectations in relation to the educational process in general and to separate training courses in particular, make up the second party.

The teachers, seeking to realize themselves not only as teachers, but also as experts, make up the third party.

There are also some specific customers, such as the professional sphere (employers) (Vlasenko, Pryadko 2016) for which the university trains the expert, and they are not indifferent, what study time is be spent on.

It is also necessary to realize, that the interaction of the interested parties happens in the space of a certain scientific industry, which submits to its logic of development and which sometimes cannot give any irrefragable answers for all the questions of the interested parties, or cannot meet their requirements.

It is not easy to combine the interests of all the parties, especially as they are often in the contradiction. It is especially notable for those training courses, which are not professional majors, for example of social-and-psychological disciplines. But nowadays the responsibility for the formation of universal competences is conferred on these training courses.

The end-to-end development of social competences, which importance for the person living in the modern world is difficult to be overestimated (Magera, 2017) is supposed in the system of higher education. During the development of competence-based approach special attention was paid by the European educational community to "the ability to live in the society" because of the lack of this ability leads to the disaster of mutual destruction (Delor, 2019, SOCRATES-ERASMUS Thematic Network Project, 2006). Special attention is paid by the western science to the matters of social competences (Pryadko, 2015).

The competence providing "ability to live together" is presented in various publications either as social or as social-and-psychological or as social-and-communicative or as social-and-personal. It is necessary to emphasize that these concepts reflect different aspects of participation of a person in the society; therefore, being social by the nature, they, nevertheless, are various according to the semantic saturation and according to the set of competences (Andreyev, Miloradova, 2006, Miloradova, 2016). The social competence is universal, it is the basis of human relationship, providing mastering the social reality, and giving a chance to the person to build his or her behavior in the compliance with the norms and standards, existing in the society at the moment.

The need of inclusion of training courses of humanitarian and social character, into the process of engineers training does not raise any doubts. The reasons of such unanimity are obvious.

Firstly, life of the modern society, in which various cultures, religions, political parties closely intertwined, became so complicated that it is not possible without the social-and-communicative competence, which is understood as the abilities and abilities to carry out the social interaction at the different levels (Leontev, 2018, Magera, 2018, Pryadko, 2015). Russia is one of the most multinational countries in the world. About 200 nationalities live in its territory. Construction like no other sphere, accumulates the representatives of different cultures around itself, and the abilities of social character, are professionally significant (Leontev, 2017, Magera, 2018).

Secondly, it is impossible to refuse the humanitarian knowledge, including values, relations, interests and all the things, which give the unique character to life and which demand understanding and judgment. T A professional, educated in humanities it is able to make decisions, justified humanitarianly (human decisions) during solution of problems, including purely technical problems. That has particular importance in the sphere of construction, the sphere, which creates the habitat for people, has the direct impact on the people activity.

In Russia the list from six universal competences (UC) is accepted for higher education, the social competence include four of them (cited as Federal state educational standard of the higher education. Higher education level. Bachelor degree. Direction of preparation "08.03.01. Construction", 2019). For students, studying in magistracy that is the "ability to organize and direct work of team, developing team strategy for achievement of a goal (UC 3); ability to apply modern communicative technologies, including those in foreign language (languages) for to the academic and professional interaction (UC 4); the ability to analyze and consider various cultures during cross-cultural interaction (UC 5); the ability to define and realize the priorities of their own activity and ways of its improvement on the basis of self-assessment (UC 6).

There are various approaches to the consideration of social competence and the competences and its components, each approach supposes some options of the interpretation of this concept (Ishkov, Miloradova, 2017, Miloradova, 2016, Zinmaya, Zemtsova, 2008, Shchennikov et al. 2006). We suggest to use the following definition of social competence. The social competence of a person is shown in the compliance of his or her individual abilities and skills to the requirements of the following situations of interaction: intra personal, interpersonal, social-and-role, economical-and-legal.

Thus, four situations of interaction, in which the social competence is necessary, are distinguished.

The first situation is the intra personal interaction. Human (person) is a multi-faceted being, the ability to interact with various "Me" is extremely necessary. A person, who is in the condition of the intra personal conflict, will hardly be able to manage himself or herself, hardly able to the adequate behavior in difficult social conditions. Therefore, it is necessary to realize and allocate all the levels of interaction which are closely bound in real life, interdependent, and sometimes opposite, for the development of social competence. The psychology of the personality, which is focused on the formation of the person's ability to define and realize priorities of his or her own activity and the ways of its improvement on the basis of self-assessment, is responsible for ensuring the intra personal level of the social competence, first of all (UC 6).

The second situation is the interpersonal interaction, including business. This interaction can be defined as "Me and another person". Nowadays any person lives in various cross-cultural environments, comes into contact with those, who differ from him or her according to the world outlook views and values, habits and living principles. From the psychological point of view, such interaction demands the manifestation of personal qualities, difficult by the nature and contradictory in fact, from the person: tolerance, on the one hand, assertiveness and self-confidence, on the other hand. The need for special formation of social competence is demonstrated in the situations of interaction of the people, who grew up in different social conditions, especially distinctly (Miloradova, Ishkov, 2018). In this case the ignorance costs much to the person, because it inevitably leads to the destructive conflicts and irreconcilable wars. Such a situation is in the world now. Many industries of knowledge, such as sociology, cultural science, ethnic psychology and others, focused on the development of person's abilities to analyze and consider various cultures within the cross-cultural interaction, are responsible for ensuring the interpersonal level of the social interaction (UK 5).

The third situation is the social-and-role interaction, which can be presented as "Me and society". It is known that the behavior of the person, living in society is a role behavior. The person is guided by "written and unwritten rules" of the social role, he or she realizes the external and internal stereotypes of behavior. Therefore people, various on individual signs, behave equally in similar social circumstances, as if carrying out the role, answering to time to their concrete social status at the moment. The role range of any modern person constantly extends and (that is especially hard to accept for the person) role stereotypes change. Many industries of knowledge, such as sociology, political science, cultural science, social psychology, management and others, focused on the development abilities to organize and direct work of team are responsible for ensuring social and role level of social interaction, developing team strategy for achievement of a goal (UC 3) and for the ability to apply modern communicative technologies, including those in a foreign language (foreign languages), to the academic and professional interaction (UC 4).

The fourth situation the standard-and-legal interaction of a person with authorities, which is carried out on the recorded laws. It is also the zone of responsibility of social competence. The nature of legal interaction "Me and the state" differs depending on the fact in which state the person lives. The legal basis of the interaction constantly develops, gets better and specializes. There are many spheres of activity (for example construction) in which standard-and-legal competence is the integral part of professional competence of the expert. It does not apply to the universal competences, therefore it is formed by a separate training course for bachelors. When training masters separate matters of the general character were included in the training course of social orientation.

Thus, social interaction differs both according to the functioning levels, and according to contents (knowledge and abilities, which are to be mastered). Subject matters of the social-and-humanitarian sphere operate with this contents: psychology, sociology, pedagogics, economy, ethics, jurisprudence, political science, cultural science, management, etc. Each of the disciplines forms the zone of the social competence.

There is one more feature of social competence, which does this competence particularly complex. Its internal structure is a certain mix of emotions, intelligence and personal qualities. That is not a set of rules and algorithms of behavior. That is the readiness and ability to interaction in various social situations, which are not often standard, that is the ability to choose reference points correctly, to place priorities and also the ability to realize the behavior and to bear responsibility "pro se", including the responsibility in unusual situations. Negative experiences (fear, angers, alarm, irritation), which are inevitably arising in some problem situations, where the person has no ways of their permission, known in advance, reduce the possibility of manifestation of the adequate social competence.

The competence-based approach focused on the formation of universal competences, created some problem situations for the social-and-humanitarian disciplines.

The first problem is the following. The development of the social competence requires a very significant list of social-and-humanitarian disciplines and great volume of class periods for their development, if we try to remain within the disciplinary approach. It is impossible to carry out it in the sphere of modern professional education.

The second problem. Competence-based approach is focused on the pragmatical purposes, such as the formation of abilities as the key indicator of competence. Traditional education focused the social-and-humanitarian disciplines on their fact-finding function, on the expansion of cultural space of students. The emphases were placed on the development of theoretical concepts, models, theories and search of answers to the global universal questions "What for?" and "Why?" as well as on the search of some regularities, having general character. From the psychological point of view it is necessary to receive answers to the semantic questions first of all. It is difficult not to agree with that. It is really vital for the person because the answers to them form the semantic space of his or her life, define its purposes and values and also serve as the reliable reference point allowing to distinguish unambiguously something personal and others'. Besides, the problems of development of the ability to a reflection, empathy, tolerance, social responsibility, etc. were assigned to the humanitarian disciplines. As for the question "How?", it is considered to be secondary, simpler, and therefore less significant. Such point of view was reflected in the system of training of which bringing humanitarian knowledge to the level of the abilities and obtaining answers to the question "As" is not characteristic.

The third problem. The way of creation of a training material of disciplines of natural science, social-and-humanitarian and technical cycles is essentially various. The humanitarian essence of knowledge is shown in different aspects.

The first aspect is the polysemy and diversity of knowledge, which can be presented in the form of opinion, point of view, judgment. Therefore, according to the way of giving of the training material, this knowledge is deformed. It cannot be presented as the system of unambiguously recorded rules, laws, principles. Otherwise the human education is impossible. The answer "on sense" cannot be taken in a finished form, because the sense always personal, it is generated by a person, and throughout all his or her life.

The second aspect is the dialogicity, that is this knowledge initially includes another person. The culture of arts education is the culture of dialogue communication, in which there is a search of answers "on sense".

The third aspect, is the creativity. If technical education pushes the person to the search only of a correct decision, the humanitarian knowledge guides the person to finding a set of decisions.

The fourth aspect, is the focus on the subject's reflection. Any knowledge assumes a reflection (understanding) of the object of studying and a way of obtaining this knowledge, and humanitarian knowledge assumes the presence of a thought about a thought, the presence of influence of own features on knowledge acquisition, their character, their importance.

The fifth, is the identity. To live in society, the person needs to appropriate a certain set of social standards; that enters a prerogative of social-and-political sciences. Arts education allows the person to understand the relativity of these standards and their inevitable change, thereby inducing the person to look for the individual (functional) norm.

The fourth problem. The social competence has to be "sewed" into professional activity of the person. Teachers, specialists in communication, can create the necessary ability, but it is necessary to apply it in the interaction not with the teacher, but with the representatives of that professional community, for which training of students is carried out. The system of mutually coherence, embedding of the universal competences to the professional sphere is necessary (Andreyev, Miloradova, 2006, cited as Model of state standards of the higher pedagogical education. Cycle of General professional disciplines. Project, 2004, cited as Federal state educational standard of the higher professional education in the direction of training 270800 Construction (the "bachelor" qualification (degree), 2010, Federal state educational standard of the higher professional education in the direction of training (specialty) 271501 Construction of unique buildings and structures ("expert" qualification (degree), 2010).

It should be noted, that times of constant employment passed and today graduates in job searches pass from one organization into another, changing not only the cities, but also the countries. It is not enough to maintain the competitiveness only in the professional plan. Making decisions on personnel, heads stake on the professionals with well developed social competences, who have the culture of organizational behavior, resistance to constantly changing social, psychological, legal and economic factors (Romanova, 2016).

We faced these problems, when developing new training courses "Principles of social interaction in the construction industry" (Shnyrenkov, Romanova, 2015) for the students of the bachelor degree and "Social, psychological and legal communications in the professional activity" (Romanova, 2017) for students of magistracy.

2. Procedures and Methods

The purpose is the development of a technique of formation of universal competences of social orientation for students of magistracy in the direction of training "Construction".

Tasks.

1. To develop the Working programme and educational-and-methodical materials for the training course "Social, psychological and legal communications in the professional activity":

- integrated contents of the training material personally significant for the students and practice-oriented, but corresponding to its humanitarian essence;
- forms of the giving of the training material, convenient or habitual for students of technical colleges;

- tutorials, adequate to contents and stated purposes.

2. To introduce the developed training course in the educational process.

When developing the training course, we proceeded from the following provisions.

Formation of competences of social orientation demands the creation of a complete training course (not the sum of separate modules) in which the closely related knowledge and abilities, relating to wide spheres of social activity, are united.

Social competences are dependent on the requirements of various professional communities, they demand accounting of specific conditions of work, the professional context of students, to be guided by the relevant knowledge and abilities significant for the employers

Social competences have through character, therefore, during the creation of a training course it is necessary to consider the continuity of training programmes of different levels.

It is only possible to imitate the professional interaction within the educational activity, using active methods of training. Therefore, it is about the educational professional activity within which it is possible to fulfill separate fragments of social interaction.

The achievement indicators which act as the result of education were developed for the universal competences and thus, they represent the starting point for the creation of the programme of training.

Category: team work and leadership:

• Development of the team goals, according to the goals, set by the organization.

• Formation of the team's line-up and determination of functional and role selection criteria for the participants.

• Determining and correcting of the structure of tasks for the team.

• Choice of rules of the team work as the bases of interpersonal interaction.

• The choice of ways of motivation of the members of the team, taking into account the organizational opportunities and personal features of members of the team, including persons with disabilities.

• Choice of management style for the team work, adequate to the situation.

• Presentation of the results of one's own and team activity.

• Assessment of the overall performance of the team.

Category: communication:

• Choice of style of the business communication in relation to the interaction situation, business correspondence.

• Choice of psychological ways of rendering influence and counteraction to influence in the course of the academic and professional interaction.

Category: cross-cultural interaction:

• Definition of the purposes and problems of cross-cultural professional interaction in the conditions of various ethnic, religious valuable systems, identification of possible problem situations.

• Indentification (definition of belonging to a social group) of the personality in the polycultural environment.

• Choice of ways of integration of the workers belonging to different cultures in professional environment.

• Choice of the way of overcoming communicative, educational, ethnic, confessional barriers to cross-cultural interaction at the solution of professional tasks.

• Choice of the way of behavior in a polycultural collective during a conflict situation.

Category: self-organization and self-development.

• Definition of the level of the self-assessment and level of claims as the bases for the choice of priorities of one's own activity.

• Definition of priorities of one's own professional activity and personal development and professional growth.

• The choice of technologies of goal-setting and goal-attainment for the for setting goals of personal development and professional growth.

• Assessment of one's own (personal, situational, temporary) resources, choice of ways of overcoming personal restrictions for the ways of achievement of the goals.

• Assessment of requirements of the labour market and educational services for forming of a trajectory of one's own professional growth.

• Assessment of one's own resource state, choice of means of correction of the resource state.

• Assessment of individual personal potential, choice of the technique of self-organization and self-checking for the realization of one's own activity.

3. Results

According to the requirements to the development of Working programmes, the indicators of achievement were translated into the accepted pedagogical language: knowledge, abilities, skills. According to the curriculum the new training course of 108 class periods (3 test units) was developed for studying at the first year. It includes 16 hours of lecture contents and 16 hours of the practical training. However, as the category "capable" was accurately pointed out in the formulations of competences, the main emphasis was to be made on the knowledge of methods and the ability to use them. Therefore, two training courses for the choice were developed in the form of the psychological training: "Technologies of team building" and "Technologies of self-organization".

According to the forms of organization the training course "Social, psychological and legal communications in the professional activity" consists of lectures, practical training and independent work.

The lecture material was presented by the following types of lectures:

Approximate lecture, which performs motivational and organizational function. Its purposes are to attract interest, to induce to independent thinking and search of answers to issues of interpersonal interaction in the modern world.

Problem lecture, in which the attention is focused on contradictions of real life. Its purposes are the following: on the one hand, to demonstrate the variety of the theoretical concepts, developed within various sciences and the ways of frictionless social interaction offered by them, but on the other hand, to identify the problems of real practice which cannot be solved by the means of any theoretical concepts. The formation of individual readiness to accept the responsibility for the common social problems.

Tool lecture, in which the setting is formed: it is necessary to consider the theoretical concepts, acquired in scientific areas as the instruments of knowledge, allowing to be guided quickly in difficult arranged social world of the interpersonal relations. Besides, there is an acquaintance to the educational technologies for the formation of universal competences of social interaction: design method, business games, method of the analysis of concrete situations and so forth.

Reflexive lecture which is summing up the results of the development of separate sections of the training course and which has the character of a dialogue. Students comprehend the received individual experience, speak about the difficulties, which they faced in the course of development of the training material. The teacher speaks as the carrier of the integrated experience and tools (knowledge means and knowledge modalities of the activity) allowing to organize a reflection.

The development of subject of practical classes did not cause any special difficulties, however, when developing the organizational forms of carrying out practical classes, taking into account modern educational technologies, we faced some serious problems, both theoretical (substantial), and practical. The abilities of social interaction are not formed "on a blank space", each student has his or her own experience, individual opinion, point of view. Therefore, it is impossible "to impose" anything new without the deep reflexive analysis the past; that cannot almost be carried out within the limited educational process.

Collective discussions and individual reflection, leading to understanding of the principles of one's of own existence, social interaction and social purposes of the professional activity act as the adequate means for obtaining the answer to semantic questions. But the students of technical colleges very seldom have these specifically humanitarian abilities. Moreover, they sometimes perceive them as an "idle talk". However, the entry into social-and-psychological reality is difficult without the development of such abilities. Therefore, the content of lecture material was accented on the social aspect of the professional activity.

The workbook for the practical training and independent work was developed taking into account the features of training of students of the technical profile, their aspiration to structuring, unambiguity and simplicity of the training material. The structural framework for all the training session is uniform. The competence which was formed during the session was specified, the purposes of the training session (indicators of the achievement of the results), the corresponding competences were formulated and also the keywords were determined for every session subject. The content of each practical training was created according to the task method of presentation of educational material taking into account the professional context. It were psychological tests, cases, business games. The formalized way of processing of tasks and a uniform graphic form (in the form of drawings, schemes, schedules, tables) fixings of the gained knowledge as a result of individual performance of diagnostic tasks, test questionnaires and collective discussion were used.

Besides the course "Social, Psychological and Legal Communications in the Professional Activity", obligatory for studying, two training courses for choice, supplementing the basic course were developed. They are "Technologies of team building" and "Technologies of self-organization". Both training courses were created in the form of a social-and-psychological training. These training courses were intended to train the appropriate skills.

4. Discussion and Conclusion

Thus, social and humanitarian training courses is the necessary condition of professional education of the person, their presence at any technical university is obligatory. This fact is admitted at the universities by all the participants of the educational process. However, these courses demand special approach, accounting of specifics of humanitarian knowledge. Certainly, subjects have to reflect specifics of professional activity, its social context, but not due to narrowing of own contents. This contents performs the function, form universal values, personal meanings and a civic stand. Social disciplines as separate training courses can have a professional binding and come to the behavioural level, they form the corresponding social-and-professional abilities.

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Digital Education as A Prerequisite for Improving the Institution of Public Hearings

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Abstract

The implementation of new technologies in digital education is one of the most progressive trends in urban planning. Studies show that the significant part of city population and especially students understand the necessity of the transition to digital technology that will improve modern urban process. The article is devoted to the issue of digitalization of the process of public hearings, on the example of which the introduction of new technologies of smart city in the educational process is demonstrated. The authors conducted sociological surveys of different categories of respondents: urban planners, practitioners, students studying in the areas of "Architecture" and "Urban planning", ordinary citizens about their attitude to the existing practice of public hearings, their views and requests for the procedure. According to all categories of respondents, Digital technologies have been recognized as the only right tool for the hearings by all groups of respondents, which will allow involving in the discussion of urban development projects those social groups that do not have the opportunity to attend public hearings in person, to express their opinion and participate in the voting.

Keywords: Digital technologies, Public hearings, Consensus conferences, Sociological survey

1. Introduction

The main purpose of education in the field of urban planning is to ensure the quality of people`s life. Smart sustainable city is an innovative city that uses information and communication technologies to improve living standards, to create a favorable comfortable urban environment, to provide efficient service delivery and, in general, to meet the needs of citizens in economic, social, environmental and aesthetic aspects. The modern trend of smart city is the development of digital technologies and their implementation in urban processes. However, it should be understood that the first step is education, the purpose of which is to explain the value and to teach how to use these technologies in the right purposes.

From our point of view, one of the most relevant are to implement these smart digital technologies is the process of public hearing. Smart city by using this digital technology for automatic city management ensures the smooth functioning of a city that forms a new level of consciousness and responsibility of people for their own environment and harmonious life being. A person in a smart city is involved in the management of the city through city referendums, portals for citizens ' appeals, public discussions and public hearings - his voice must be taken into account and be implemented in the urban development process. The British standard Institute (BSI) describes a smart city as "the effective integration of physical, digital and human systems in an artificially created environment to ensure a sustainable, prosperous and inclusive future for citizens." According to the Russian researcher academician V. Ilyichev, who has been creating the concept of biosphere compatibility as a basis for harmonious human development, a smart city is a socially oriented, compassionate city (Ilyichev V. A., 2011). The technical University of Munich, under the guidance of Professor Thomas Bock, holds a series of conferences on the theme: "International Conference on Smart, Sustainable and Sensual Settlements Transformation (3SSettlements)" (International Conference on Smart, Sustainable and Sensuous Settlements Transformation (3SSettlements) Proceeding, 2018). They discuss the application of smart city technologies for humanitarian purposes: assistance to all categories of citizens, primarily with limited mobility or any other special features. Many questions of the sensitive merciful city are solved together, with the participation of the citizens themselves. These issues are submitted to public hearings or public conferences that should be held with the involvement of smart city digital technologies.

In Russia, the obligation of public hearings on an urban development project is ensured by the Urban planning Code the new version of what was introduced on January 1, 2019. Paragraph 5 of the Code establishes two forms of public hearings: public discussions through the use of digital technologies of information and communication network in Internet and public hearings with public meetings of all interested persons. The problem is that in practice there are a lot of violations on the procedure. In particular, it is difficult to take into account the results of the votes because of big quantity of falsifications, inaccurate vote count and distortion of statistics. Digital education of participants in public hearings is necessary so that they can control the decision-making process and the voting results. Digital education, first of all, should be introduced in schools and universities to prepare competent participants in public hearings.

That`s why that study is very actual and extremely relevant for Russia, especially in comparison with the background of existing practices of public hearings in Europe, North America, where a public opinion is mandatory. There are also similarities with the planning of public hearings in Russia and in these mentioned countries in the use of digital technologies. The main idea is that citizens will feel responsibility for making decisions on the urban development. The involvement of citizens in the management of urban processes will be a big step for Russia towards the development of the country and strengthening the position of a democratic state on the world stage.

2. Literature Review

Nowadays, there are quite a lot of articles devoted to clarifying and expanding the content of the definitions of "Sustainable and smart city". However, we can watch the process of development on this topic. Not long ago the main themes were devoted to the electronic technologies for public transport, energy supply, heating, ventilation and air conditioning of buildings, garbage collection and processing, emergency alert as a main part of smart city technologies. The modern trend is to develop digital technologies expanding and turning directly to a person (Pryadko I., Ivanova Z., 2017). There are distance educational courses, crowd funding projects, public hearings and much more and they all have not only economic but also purely social purpose (Perezolova A.S.,2015; Kamolov S.G., Korneeva A.M., 2018; Vardanyan D.A., Grankin A.M., 2017).

Authors continue to discuss and develop methods and tools for assessing urban sustainability. From the wide range of these indicators, the main role is given to social and environmental indicators that should be implemented into the urban planning process [Rahul B. at al., 2013; Verma Pramit, Raghubanshi A.S., 2018). The importance of sustainable urban development at the present time is determined by the constantly developing and growing environmental awareness of the population (Leontev M.G., 2016; Romanova E., 2016; Macedo Jo., Rodrigues F, Tavares F., 2017). This fact leads to the need to re-evaluate the existing city management systems, giving them more organization and efficiency. A team of authors from Portugal analyses have proposed different methodologies for assessing sustainability and have concluded that there is the need to be complemented to ensure a more balanced distribution of indicators between different aspects of sustainability. Based on the literature review, their study considered four sustainable aspects: environmental, social, economic and cultural, proposed a new system of indicators to assess the sustainability of cities, balanced distribution of indicators in four dimensions, selected more flexible and appropriate indicators (Curiel-Esparza Jo. at al., (2016). Today, the priority should be given to the civil consensus, to the agreement of citizens on the most important issues of the urban environment. Researchers from many countries have devoted their work to make the analysis of the forms of involving citizens in public discussion, to reach agreement and thus to ensure the sustainability of the city (Antunes P., Santos R., Videira N., 2006).

Researchers are developing problems of digital education for schoolchildren and students - future participants in public hearings, based on the requirements of the digital age. [Gerasimov G. A., 2015; Garbar E.B., 2018; Litvinets I.G., 2018). For example, authors from the USA: Moonsun Choi, Michael Glassman, Dean Cristol study the problems of personality formation in the digital reality - in the Internet space. They explore the knowledge, abilities and level of youth participation in the online community (2017).

3. Method

The main methods studying the problems of public hearings and the broad participation of citizens in them were chosen sociological surveys and observations. The main aim was to define an attitude of citizens on the next issues:

- to the social institution of public hearings;
- to the effectiveness of public hearings organization and
- to the determination of violations of human rights in the field of self-government.

This study uses the materials of sociological research conducted in November-December 2018 among residents of Moscow and the Moscow region, employees of The research and design Institute of the General Plan of Moscow and the Research and design Institute of urban planning of the Moscow region, students studying in the areas of "Urban planning «and "Architecture" of the National Research Moscow State University of Civil Construction on the topic "Improving the procedure of public hearings: social and legal aspects".

Among the survey methods we used questionnaire, interview of all focus groups and examination of a procedure of public hearings through participation in them. Interviewing was applied to the experts among deputies of the Moscow city Parliament and active citizens. The monitoring of the public hearings in Mytishchi city, Moscow region was carried out. In this article we present the results of the research concerning the attitude of respondents to the usage of smart city digital technologies are presented in this article.

4. Results

The 42th article of the Constitution of the Russian Federation ensures the right of every citizen to "a favorable environment, reliable information on its condition and compensation for damage to health or property". The urban planning code of the Russian Federation confirms the right of citizens for creation of favorable urban environment and establishes channels of "participation of citizens and their associations in the implementation of urban planning and ensuring the freedom of such participation". One of the most effective channels of municipal democracy is accepted public debate and public hearings (Thailand is developing an electronic voting system on the block chain, 2019).

Federal law No. 455-FZ of 29 December 2017 "on amendments to the Urban planning code of the Russian Federation and certain legislative acts of the Russian Federation" makes some adjustments to the public hearings organization procedure. The law stipulates two forms of holding: public discussions based on information and telecommunication network "Internet" on the regional portal of state and municipal services and public hearings through personal participation of those who wish at public meetings. Both procedures of holding public discussions and public hearings are separated and explained in the law separately from each other. All these changes are fixed in the Urban Planning code of the Russian Federation.

Public discussions and public hearings are held on:

- draft master plans,
- draft land use and development rules,
- land planning projects,
- land surveying projects,
- draft land improvement rules,
- draft decisions on granting permission for a conditionally permitted type of use of a land plot or capital construction object,
- draft decisions on granting permission to deviate from the limit parameters of permitted construction, reconstruction of capital construction objects.

Thus, the list of issues for public discussion is diverse and extensive, and the order of their discussion is explained. It would seem that all the rights of citizens to participate in the formation of their own comfortable living environment are respected.

However the practice shows that despite the broad rights granted to form a comfortable and safe living environment that meets their needs, the inhabitants of the settlements meet serious obstacles.

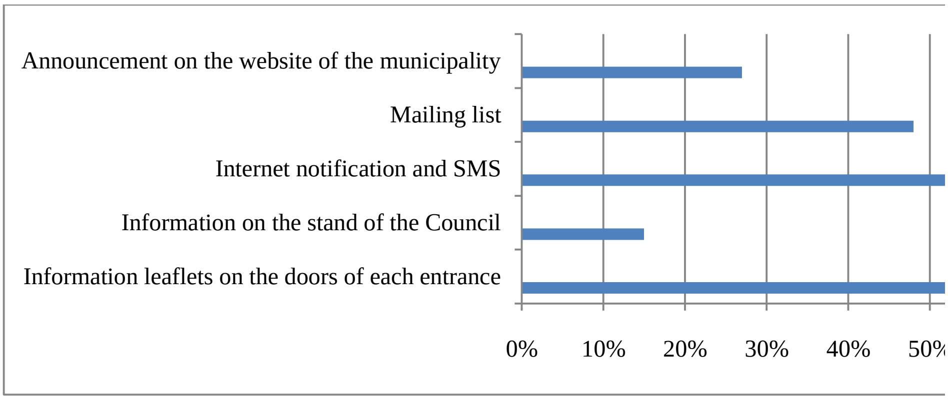
Numerous complaints to the judicial authorities, publications in the media confirm violations: bad information, invitation to hearings of only the "right" people, insufficient elaboration of the regulatory framework for public hearings and the non-necessity of taking into account the results of their conduct in decision-making by state and municipal authorities (The CEC approved the Growth Party's initiative to use block chain in elections, 2019).

Social questionnaires revealed the general opinion of respondents about the serious violations in the organization of public hearings. A significant violation is that fact that the notification of public hearings is organized through channels inaccessible to many categories of citizens. Some public hearings are held in empty and half-empty halls, respondents propose to expand the channels of notification, for example, placement of information on information stands near the entrances, e-mail alerts. In addition, it is proposed to use digital technology: SMS-alerts residents in the areas similar to emergency alerts. The use of digital technologies will make it possible to bring information to every resident of the district in which public hearings are held and to include him or her in this democratic process of self-government.

It is interesting those respondents who are 60 years old and above prefer to place information sheets on the doors of each house, since not everyone actively uses the Internet. Young respondents - students, town planners and citizens offer the use of digital technologies to alert about public hearings. The need arises of teaching the elderly new smart technologies. Training courses for retirees in digital technology are now organized in a lot of cities of Russia.

For example, students studying in the architecture specialization gave preference to digital technologies (Fig. 1)

Fig.1. Preferred channels for notification of public hearings.



The next problem is the organization form of public hearings. All categories of respondents in all focus groups with approval relate to the organization of public discussions on the Internet. After all, as a rule, public hearings are held during working hours and only non-working pensioners and employees of municipalities can attend them (Fig. 2).

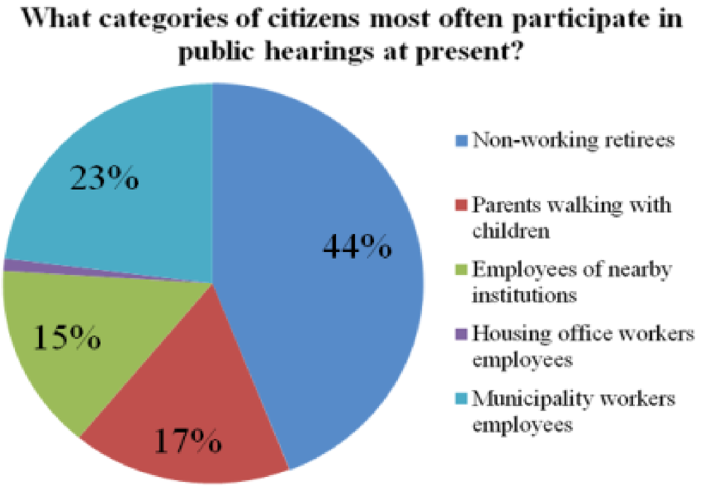


Fig. 2. Categories of citizens participating in the public hearing

The common opinion of all categories of respondents is that the use of digital technologies will allow to engage in the process of discussion those people don`t have access the place of public hearing action and take into account the opinion of those who cannot take part in full-time public hearing (Fig. 3). Fears of falsification of the results of public hearings are the most pronounced problem in the group of urban planners-practitioners directly involved or organizing public hearings. City planners are the group that is well acquainted with the procedure for organizing public hearings, their conduct and decision making features. They know that frauds happen sometimes.

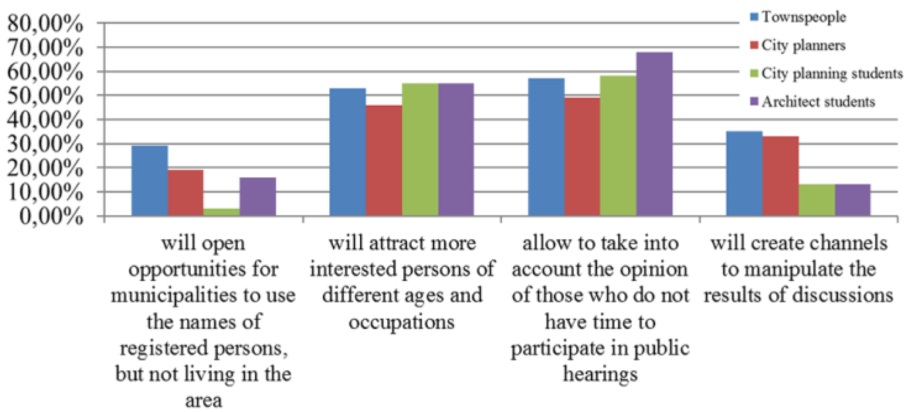


Fig. 3 The opinion of the respondents about the conduct of the hearing using digital technology

Therefore, 33% of surveyed city planners expressed their concerns. City dwellers also do not believe in the transparency of decision making. 34.7% of the surveyed citizens allowed “the possibility of falsifying the results”. 28.5% of the surveyed residents believe that “in this way, municipalities can use the names of residents registered but not residing in a given territory”.

How can you control the results of voting in Internet discussions and avoid the falsifications? Currently, there are technologies that allow making voting transparent. In particular, the Block-chain platform is a resistant to modification of the data distributed on different computers, compiled so that changing one block on one of the computers changes the content of all other blocks of data on all other computers. Such system does not have a centralized server and an operator who has the power to modify the contents of the registry at its discretion without the knowledge of all other computers on the network. Now some countries (for example, Thailand, Australia) are developing voting systems based on this technology [21]. Russia is also introducing a voting system using block chain in elections. Not so long ago, the Central election Committee of the Russian Federation approved such a vote [22]. This method of voting at public hearings will ensure the possibility of voting from anywhere in the world, the transparency of voting, the inability to falsify, the verification of the voter.

Public hearings have long time to be translated into digital form, according to the participants of the Round table held on February 9, 2019 in the youth House of Penza [23]. Thus, it is possible to involve a much larger number of interested people in solving urban problems. It seems that the Federal law of December 29, 2017 № 455-FZ" on amendments to the Urban planning code of the Russian Federation «in a timely manner took into account the needs of citizens in the organization of public hearings in the digital age.

Conclusions

As the results of the article we will summarize the following results. The first result of the survey shows that the population of cities and students understand the need to implement digital technologies in urban processes. This fact confirms the need to introduce modules and disciplines on the digitalization of not only the process of public hearings, but also other areas.

Also there is very interesting result in the attitude of the population to the organization of the process of public hearings in our country. From the results of opinion polls it can be concluded that students would be more interested in holding public hearings in electronic format. Consensus conferences and public discussions with the help of information and communication technologies are held in many European and American cities. For example, 21st Century Town Meeting (USA) has been developed in the United States and it allows for a large-scale discussion of urban issues (from 500 to 5,000 participants) by key stakeholders and the public at large [24]. Participation in public hearings through a video conference is possible in Canadian cities [25]. This form is the way to ensure sustainable development of the city, the harmonious interaction of government and civil society.

The authors are the representatives of educational organization working in the field of urban planning. This research was devoted to the project how to improve the procedure of public hearings in Russia. The conducted sociological studies have given an extensive picture of the attitude of different categories of respondents (by occupation, age, place of residence) to the existing practice of public discussions and public hearings and should be taken into account in the developed model. The use of digital technologies in public hearings is only one part of this model, which will make it possible to turn public hearings into an effective democratic institution. Also, the result of this research underlines the necessity to implement this technologies in educational process.

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Civil Competence in Students and its Development within the Framework of the Educational Process

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Abstract

The author brings forth the problem of civil competence developed in the process of teaching and building the character of young people on their way from school to university. The strategy and methods for building the social stand, independent thinking and responsibility in schoolchildren and students must be completely different; therefore, the author believes that this effort must be accompanied by the ongoing communication and close cooperation between teachers and lecturers to assure the maximal result. The author conducted a research into the social maturity of the first-year master students of the Moscow State University of Civil Engineering, majoring in urban planning and architecture. Future professional activities of the graduates contemplate their interacting with urban residents and taking account of their need for a comfortable urban environment. Public hearings and public discussions of urban planning projects represent one of interaction channels. The author makes a conclusion that students demonstrate a sufficiently high level of civic maturity, they intend to take part in public hearings and to defend the interests of urban residents. However there are concerns in respect of some students; that is why the author focuses on the need to concentrate on social education and personal development.

Keywords: Civic competence, Social position, Personal development,Public hearings

1. Introduction

Civil development is an important constituent of personal development. The notion of civil development comprises a set of interdependent components, including a social position, social skills, a civil engagement, and civil awareness.

A social position comprises cognitive, motivational, and behavioural constituents. In its turn, the cognitive constituent constitutes the development of fundamental value-based orientations, which contemplate a conscientious human attitude towards the social environment. They determine the issues which are most important and significant for a personality, including the personality's attitude towards the requirements set by the society (Miloradova, Ishkov, 2015). Motivational constituents determine a person's attitude towards any events, the society, other people, self, or his/her mindset, and the perception of the society's rules. The behavioural constituent of the civil position characterizes the behaviour of a person, his/her ability to comply with the most important societal rules and to fulfill the main socio-moral responsibilities within the society.

A proactive social position means that a personality has his/her personal opinion, which does not contradict any generally accepted values and norms, rather, it contributes to their strengthening. A person, maintaining a proactive social position, cannot be indifferent to any violations of the law, regulations, and drawbacks of environments. He/she feels responsible for his/her conduct and acts, for his personal and professional development, for the resolution of the problems existing in the society. Social skills rest on civil awareness. They include the ability to express the original opinion, to withstand any influence, manipulative acts, which are contradictory to a person's mindset, views, and convictions. Moreover, a proactive person is open-minded and capable of perceiving other people's views, he/she knows how to build relations with others; how to find original solutions, to formulate goals and outline the roadmaps for their attainment. A mature person is full of initiative, independent, responsible, venturous and creative (Ishkov, Miloradova, 2016). His/her social position finds expression in the set of competences typical for a developing person who is capable of integrating him/herself into the society and of changing its social, cultural and ecological environment (Vlasenko, Pryadko, 2016; Pryadko, Ivanova, 2017).

The development of such a personality is the top-priority trend in the educational policy of the government. Educational institutions, majoring in versatile areas of knowledge and offering degrees of different standards, are focused on teaching, however, they are engaged in instructing young people and they nurture their proactive social position, develop their competences in the area of democratic civil consciousness. A task-oriented process of educating social personalities begins at the kindergarten, it continues at the secondary school and at universities, and it does not stop thereafter. This process can be characterized as "continuous education", similar to lifelong learning, it contemplates the development of an integrated system of efforts that transforms on the way from one educational level to another. To a substantial extent, the state and the society encumber this task on institutions of higher professional education. Therefore, any targeted development of young students contemplates the development of citizens in a democratic society, who enjoy the rights and assume the responsibilities that enable them to develop in the space of a civil society.

2. Literature Review

Numerous works cover the problems that accompany the development of a proactive social position as the most relevant issue of the modern age. The research projects, implemented by various authors, apply to different periods of human growth and development. "Growing democratic citizenship competencies: fostering social studies, understandings through inquiry learning in the preschool garden", this book was written by a team of co-authors (Casey, Di, Kerry, Sheldon, 2019). The co-authors believe that the main skills and mindsets, needed for proactive civic mindedness, should be developed as early as in the kindergarten. Even when a person is three or four years of age, targeted teaching may contribute to the development of democratic competencies in his/her mind. However, the process of personal development accelerates during school years. While attending a kindergarten, an individual merely attempts to enter the society, and later, at school, he/she matures as a proactive personality. During this period, a target-oriented influence may be produced onto a personality through school subjects, extracurricular activities, art studies and music classes, children's public associations and organizations, school self-government, volunteering (Chulkova, 2014). Indeed, a social personality develops during his/her school years, and a secondary school is responsible for every generation. School methodologists develop advanced educational and personal development technologies on the basis of challenges generated in the digital era (Gerasimov, 2015; Garbar; Litvinets). Moreover, problems of personal development in the digital environment (the Internet) are being proactively solved. In the work, presented by the US-based co-authors, they offer a comprehensive digital citizenship scale, based on carefully calibrated, overarching, inclusive components of digital citizenship that can be used to measure abilities, perceptions, and levels of participation of young adults in the Internet based community (Choi, Glassman, Cristol, 2017).

Any bounce of a school girl or a school boy from high school to a university or college should be smooth and organic (Leontev, 2017). An institution of higher education replicates the pedagogical methods applied to children, although they turn more sophisticated. There is a pressing need to consolidate the methodologies applied by school teachers and those used by university lecturers, as their cooperation is necessary to assure a continuous and effective personal development of students. Twenty pre-service teachers, coupled with the two university lecturers and a school teacher changed the traditional idea of a citizenship as the awareness of legal institutions to the idea of a citizenship as the resolution of social problems (Contreras, Aceituno, 2017).

In the present days of rapid alterations and intensive development, an immediate response to changes must be given by school teachers and university lecturers. Therefore, the statement that reads as "learn to teach" remains relevant. Within the framework of a research project implemented at the eleven schools of the Netherlands, the teachers were engaged in the joint development of the curricula based on the knowledge of civil disciplines. The objective of the project was to find out how teachers interpreted the notion of civil education, what they thought about professionalism, needed to teach civic consciousness, and how this professionalism could be developed. The findings of this research demonstrate a high awareness of civic education among school teachers. According to the teachers, who participated in the project, the improvement of teaching skills and practical wisdom were necessary to develop civic competencies in students, it required cooperation and an exchange of ideas between the colleagues employed with schools, colleges and universities (Willemse, Dam, Geijsel, Wessum, Volman, 2015).

Finally, I'd like to focus on an enormous number of research projects which analyze the process of teaching civic competencies within the framework of curricular and extracurricular activities at institutions of higher education (Khazova, Begidova, Akhtaov, 2017; Akimova, Persiyantseva, 2015).

This article also represents a research into school and college-level teaching results demonstrated by master students. This project will enable us to assess the mindset of students commencing their professional activities.

3. Goals and objectives of the research. Methods.

The mission of the research project is to demonstrate the process of developing a social position in the first-year master students of the Moscow State University of Civil Engineering, who major in urban planning and architecture. The research project unveils the students' attitude towards and involvement in the operation of the institution of public hearings. Public discussions and hearings covering urban planning projects represent a type of public involvement in self-government, therefore, these are the very vehicles that help people to demonstrate their civic maturity and responsibility for their lives and the condition of the environment.

Methods of research into public involvement include sociological surveys and observations. They are employed to find out the attitude of urban residents towards this institution, as well as the extent and type of their involvement. These methods also serve to assess the efficiency of hearings, to identify the violations of human rights in the area of self-government. This research project also employed the findings of the sociological surveys launched among first-year master students of the Moscow State University of Civil Engineering on "The Improvement of Public Hearings and Their Procedure: Social and Legal Aspects."

Polling methodologies included questionnaires and focus groups. Focus groups (or group discussions) were conducted among the students who were employed with various urban planning organizations of Moscow and the Moscow Region.

4. Results

The first section of the questionnaire comprised the questions which identified the extent of comfort of the urban environment in Moscow and the ideas proposed by the future urban planners and architects for its improvement. The biggest number of answers dealt with the problems of the capital's public transport. Students criticized the Moscow government for reducing the number of parking lots in the capital, premature renovation (or the demolition of four storey residential buildings), increase in the number of multi-storey buildings, extraction of trees. For example, 44% of the respondents (urban planning students) and 67% of students majoring in architecture answered that "trees are being cut in the capital" and that the ecological situation deteriorated. The top priority actions that they would take at their workplaces include taking care of the urban ecology, giving up the construction of skyscrapers in favour of buildings having a smaller number of floors, reduction in the building density, traffic regulation, development of the infrastructure for cyclists, improvement of green recreation areas. The students' answers demonstrate their target-oriented professional intention to improve the comfort of the urban space and to preserve its ecological environment.

The second section of the questionnaire had questions that served to identify the students who had participated in public hearings. The researchers asked them to provide their assessment of the efficiency of public hearings.

The second section identified few students who had taken part in the public hearings, but every student was aware of this institution and its function. A 5-grade scale was offered to the students; they were to range the efficiency on this scale of five, where five meant "very efficient" and one meant "very inefficient". The majority of students marked three on a scale of five, and a substantial number of students acknowledged that public hearings were inefficient (Fig. 1).

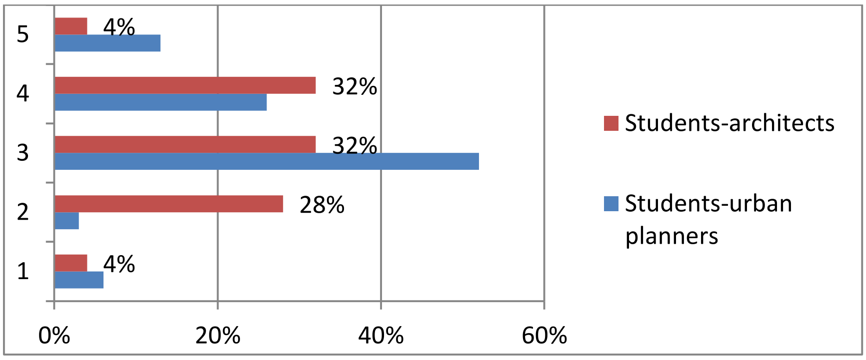

Fig. 1. Evaluation of the effectiveness of public hearings by different groups of respondents.

Many students would like to participate in public hearings. They offer the following questions to be discussed there:

- demolition or reconstruction of monuments of architecture, history, and culture;
- master plans for urban development;
- land use and development plans;
- landscaping of areas; creation and design of leisure areas;
- transportation planning, development of a convenient transportation environment;
- de-installation of industrial facilities;
- development of sports areas, etc.

Students believe that environmental problems are particularly important items of obligatory discussions at public hearings. 94% of the students, majoring in urban planning, and 85% of future architects believe that urban planning projects, that may threaten urban ecology, must be discussed at public hearings.

73% of future urban planners and 61% of students, majoring in architecture, want the opinions, expressed by them in the capacity of architects, urban planners and average folks, to be heard and taken account of. However a substantial percentage of the respondents do not believe in the efficiency of public hearings, because public hearings have no legal force in Russia. 64% of future urban planners, 50% of future architects "do not believe any authorities and think that the authorities will do whatever they want anyway." 25% of future architects think that their involvement in public hearings will make no sense: "no one will hear my opinion anyway." The answers given by 25% of future architects are quite alarming: "I don't care, let them do whatever they want."

Unfortunately, resolutions of any public hearings act as recommendations in Russia. The head of any local administration may accept or decline the resolution of a public hearing. The Urban Planning Code does not oblige them to take account of these resolutions before approving of an urban planning project.

Urban administrations often neglect the ecological condition of the city. The respondents believe that the authorities rely on the economic criteria of urban planning projects, including the project capex, capitalization of the residential and business realty, sales revenues, etc.

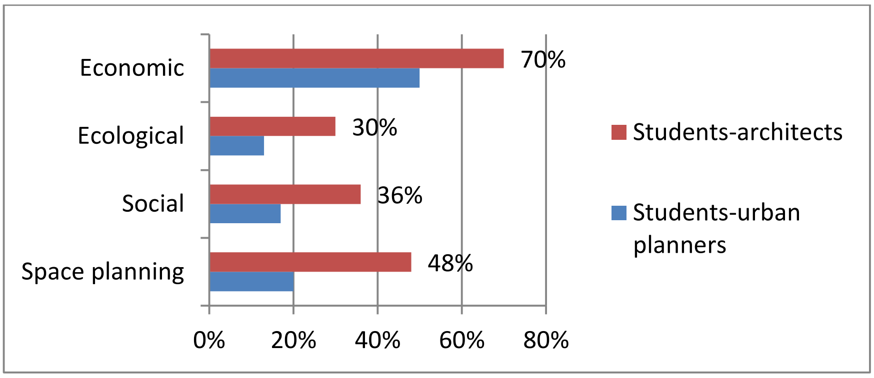

Fig.2. Answers to the question: “What criteria, in your opinion, are taken into account by the municipal authorities when making decisions on the implementation of urban planning projects?”

The overwhelming majority of the respondents recommend changing the legal status of public hearings (Fig. 3). It means that amendments should be entered into the Urban Planning Code of Russia and the Moscow Urban Planning Code. Ecological and social criteria, that generate no immediate revenue, must become the top priority.

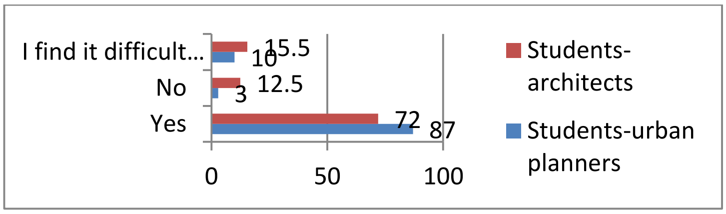

Fig. 3. Answers to the question: “Do you think that the results of public hearings should be taken into account when discussing a city-planning project, and this should be stipulated in the law, which fully implements the citizens' right to self-government?

Students support the introduction of an article requesting the launch of public hearings via Internet into the Urban Planning Code. They think that this type of public involvement will bring in more young people, who cannot take part in any public meetings in person.

In their straight talk, conducted in focus groups, students criticized the current practice of public hearings and expressed their recommendations:

1.The students who maintain employment in the urban planning industry and who are aware of the way public hearings are organized and conducted, have identified the following drawbacks: the insufficient awareness of public hearings, the limitation of the number of local residents authorized to participate in public hearings, the disregard of opinions expressed by ordinary participants of public hearings.

2.In this respect, students made numerous proposals aimed at the improvement of the institution of public hearings and their procedure. In particular, students want to tighten the control over the decision making process, the issuance of the final resolution, in order to make sure that each proposal finds its place in the final document. For example, students want to establish control over participants via their identity check at the “Gosuslugi” (government-provided services) website. Some proposals deal with the improvement of the urban residents’ competence in urban planning and law.

3.All students welcome the introduction of an article, authorizing the provision of public services via Internet, into the Urban Planning Code, as they think that this type of online discussions, applied to urban planning problems, will get more participants involved, particularly, those who are young. Students also pinpointed the negative features that may accompany Internet-based discussions, including the falsification of names of participants and voting results. The control over the course and results of public hearings may require the introduction of the “block chain” technology (a register), that prevents any falsifications in respect of voting results.

4. The respondents identified a set of problems which, to their mind, could be discussed at public hearings and public discussions. The problems include those that may substantially worsen the living environment of urban residents, namely, the development of the areas that are adjacent to residential areas, the development of leisure areas, and the aesthetic environment in the city.

5. Discussion and Conclusion

The results, generated in the course of the analysis of the questionnaires and focus group discussions enable us to conclude that the level of civic maturity and responsibility of master students is quite high. The respondents treated this project with care and responsibility, and they did their best to give well-deliberated and honest answers. However, some of their answers are truly alarming. Some students were indifferent to the content of the questions and did their best to avoid answering them. For example, 25% of the students, majoring in architecture, gave the answer "I don't care, let them do whatever they want" to the question "would you like to participate in public hearings?". Architects are future designers of urban areas, their professional activity will be associated with public hearings of urban planning projects. A responsible architect must proceed from the needs of urban residents and fight for their interests in the course of designing urban projects. Any sustainable urban development depends on the extent of satisfaction or dissatisfaction of urban residents, and any social tension may be caused by the accrual of spatial and residential inequality (Romanova, 2018).

We are surprised to find out the number of students who are insufficiently aware of the government's resolutions made in the area of land and environmental law, the rights of urban residents for "a beneficial environment, true information about its condition and for the reimbursement of any damage inflicted upon the health or property" (RF Constitution), or the "opportunities offered to citizens and their associations to get freely involved in the urban planning activity" (RF Urban Planning Code). The majority of the students also gave a negative answer to the question "Are you familiar with the documents governing and regulating the procedure of public hearings?"

Nevertheless, there were a few students who demonstrated an impressive civic consciousness. They intend to commence their active professional activity for the benefit of their native cities and their residents. Many students are involved in the research projects and prepare their graduation theses covering the future development of their native cities. For example, the roundtable discussion, held on the premises of the Moscow State University of Civil Engineering on April 4, 2018, was focused on "The Socially-oriented Urban Environment: Future-oriented Graduation Theses." In the course of the Roundtable discussion, future urban planners and architects, enrolled with the Moscow State University of Civil Engineering and the Higher School of Urbanism of the Higher School of Economics, presented their environment-focused design projects (Ivanova, Andreev, 2018). According to the contributors, the mission of any urban planning activity was to develop a comfortable environment for the residents of a city, a district or a region. The main features of a comfortable environment include environmental and social safety of residents. Future-oriented design projects, developed by the students, offer technologies for a "smart" biosphere-compatible environment.

The findings of the research project enable us to make the conclusion that master students have demonstrated their high civil consciousness, and manifested itself in their assertions, intentions, and conduct. The proactive involvement of young people in the organizations and institutions of the civil society demonstrates their extent of the civil maturity. Russia has developed no environment appropriate for the involvement in the life of a civil society, as its institutions are being developed. In Denmark, each urban planning project that may comprise any threat to the environment must be discussed by each concerned party, including urban residents (the Danish system of the environmental effect estimation); however, these requirements are unavailable in Russia. A small number of urban activists (demonstrating their high civil responsibility) fight hard against the projects that destroy the natural environment.

The author believes that students, majoring in urban planning and architecture, must be concerned about the social and ecological situation in the capital. They will develop the social and ecological climate there by designing architectural and urban planning projects and having them implemented (Romanova , 2016). Given the need to boost the professional responsibility of future urban planners and architects, the Moscow State University of Civil Engineering has launched new courses in Sociology of Urban Planning, Spatial and Architectural Sociology, Social Interaction in the Framework of Urban Planning and Architectural Activities. These courses analyze the institution of public hearings and comprise morale building elements.

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Development of the "Creative City", "Creative Industry" and "Innovative Clusters" in the Course of Implementation of the State Investment and Construction Program of Renovation of Residential Buildings in Moscow

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Abstract

The article discusses the possibility of building a "creative city", the creation of "creative industry" and the development of "innovative clusters" in conjunction with the state investment and construction program of renovation of residential buildings in Moscow. Moscow's government policy is aimed at creating an intelligent city and, therefore, new innovative approaches are needed to solve the problems of urban development, urban renewal, resettlement of families from dilapidated housing, and providing them with modern housing and infrastructure. To do this, Moscow should create innovation clusters to unite the efforts of the Moscow Government, investors, research institutes and educational institutions of the capital. Abandoned former industrial areas of the city are a huge potential for creative development and creation of innovative clusters. The paper investigates the contradictions of the institutional and economic environment, which objectively hinder the development of the cluster system. Measures are proposed for the successful implementation of the state investment and construction program of renovation in Moscow and its integration into the creation of urban innovation clusters on the way to building a creative city.

Keywords: creative city, creative industry, innovative clusters, renovation

1. Introduction

Since the beginning of the 21st century, the concepts of "creative industry" and "creative city" have been actively implemented in the development of Russian leading research teams and organizations for the planning and development of the urban environment. This experience was taken from developed economic countries, especially the US and the UK, as a socio-economic effective anti-crisis tool. With this tool, you can create a "creative economy" or "creative economy" in the sectors of the economy of post-industrial countries. The founder of the creative economy is the American sociologist and futurist Alvin Toffler (Toffler, 1970, 1980, 1990; Toffler A., Toffler H., 2005, 2006). In his writings, the author reveals the concept of «prosumer»: "prosumer — the one who creates goods, services and experience for their own use or pleasure, and not for sale or exchange. In this case, individuals or groups simultaneously PROduce and conSUME the product — that is prosumer". "The prosumer economy is huge... prosumer will shake up markets, change the role structure of society and change our perceptions of wealth» by Alvin Toffler and Heidi Toffler (2006).

The most important in resolving the economic crisis in Russia at the present time and for the future will be the construction of "creative cities", the creation of a "creative urban environment" and "innovation clusters".

The term "creative industry" is made up of the concepts "creative city" and "creativity industries". The concept of "creative city" was developed at the end of the 20th century by the English scientist for the development of cities and the urban environment, Charles Landry. He wrote such works as "Quality of life and urban environment" (2011), «Culture & Commerce» (2013), «The Art of City Making» (2006), "Revival of cities through culture" (2000), "Creative city" (2000) and others. According to Charles Landry, a "creative city" or a creatively functioning city can adapt to the inevitable historical changes, and to derive some benefit from these changes. The goal of such a city is to create an innovative urban environment, move away from typical concepts and move to non-standard solutions for the development of the city (Pryadko, 2015).

2. Literature Review

The concept of “creative industries” is first mentioned in the documents of the Department of Culture, Media and Sports of the UK Government: “Creative industries are activities based on individual creativity, skill or talent, and which have the potential to create added value and jobs through the production and exploitation of intellectual property " (Zelentsova, Gladkikh, 2010).

Many foreign and domestic scientists have devoted their scientific work to the study of the problems of creative cities and creative industries: D. Throsby, B. Frey, A. Klamer, J. O’Connor, A. Rubinstein, M. Matetskaya, E. Zelentsova and others. The article by M.V. Matetsky "Creative industries through the prism of cultural policy" (2013) notes that culture in general has no generally accepted definition, and the consequences of the difficulty of defining the terms "cultural sector", "cultural industries" or industry are difficulties in shaping cultural policy.

The executive authorities of various countries always strive to evaluate their contribution to the socio-economic development of urban areas. The system of evaluation criteria is discussed: “since the mid-90s. there is an active discussion of the system of indicators that determine the contribution of culture and creative industries to the development of the economy, both at the level of cities and regions, and at the level of states and intergovernmental institutions” by Landry, Charles; Hyams, Jonathan (2012). Therefore, the evaluation of the creative industry in terms of its contribution to the gross domestic product (GDP) is currently popular. However, it is advisable to assess the economic efficiency of “creative industry” based on the results of activity at the level of regions, cities, and sectors of the national economy (Zotova, 2015). That is, an evaluation criterion, a certain index of creativity, is needed.

Italian scientist on economic analysis and evaluation of projects in the field of culture from the company "Eccom Progetti – Ideas for culture" Giulio Stumpo in his work "Evaluation of creative industries: in search of an index of creativity "reasoned:" first, the index should summarize in one numerical indicator the level of development of what we study, so the index is a numerical relationship between two or more parameters; secondly, it should allow to compare two different territories (cities, regions, countries, etc); third, it should allow comparing different territories at different times (for example, Rome and Moscow in 2012 and 2013)" (2012). The calculation of such indicators – indices in different areas would also reveal the effectiveness of the national economy, as well as government decisions in cities, regions and sectors of the economy.

The main goal of the “creative city” is to create an intellectual city, which means such an innovative environment in which creative industries develop. English scientist Charles Landry explained “A creative city is an association within the city and region of creative abilities (creativity) of individuals and communities to form an economically and socially prosperous urban environment” (2000). Charles Landry believed that innovation is the implementation in practice of a new idea, which was obtained through the creative thinking of the creative class. The creative class or creative people are considered by the author not as a group of representatives of certain “bohemian” professions, but as a class of representatives of completely different professions, consisting of talented, flexible and energetic people, capable of free and creative thinking, going far beyond the ordinary (Magera, 2017). “Creative people work on the border of their competence zone, and not at its center” (Landry, 2000). Creative city will always be attractive for investors, as it can be implemented innovative developments. "The interaction of art-related industries with computer networks and their mutual fertilization through digital technologies has made them the engine of the new economy" (Landry, 2000).

English scientist John Hawkins conducted research 15 clusters of creative industries in his work " Creative economy "and showed that adopted by the British government program" Creative Britain " justified itself and brought income (Hawkins, 2011). An example of investment activity can be such post-industrial cities as Berlin, London, Tokyo, Shanghai.

The main decisions on the development of the creative industry are taken by the local authorities of cities, regions and subjects of the country. Timely and effective decisions of the Executive authorities of cities, regions and subjects of the country should lead to the transformation of the urban environment and the creation of truly "creative cities" in our country.

On this occasion, on February 12, 2019 in Tatarstan, Innopolis, an extended meeting of the Presidium of the State Council on the work of the Executive authorities of the Russian Federation to improve the living conditions of the population and the formation of a favorable urban environment was held.

The city of Innopolis was founded on June 9, 2015, designed to become a catalyst for the development of the domestic information technology industry. The master plan of the city was developed by the Singapore architect Liu tai Ker, implemented by a group of architects of the Republic of Tatarstan. The core of the city is Innopolis University. The University specializes in education and research in the field of information technology and robotics. The University operates on a unique model for Russia, combining education, science and business. The city has created a special economic zone with preferences and tax benefits for investors and residents from high-tech industries.

More than 4500 people work in the city every day, 3200 people live permanently. They have access to a comfortable infrastructure: educational, medical, sports, entertainment. Technopark them. A. S. Popova- the Central building of the special economic zone "Innopolis" and the city as a whole, designed as a domestic center of innovation, is a key link between basic research and mass production.

3. Method

The goal to turn Moscow into a "creative city" with the "creative industries" and asked the authorities of the capital, knowing that currently and in the future the need for new innovative approaches to the solution of problems of resettlement of families from emergency housing, provision of comfortable housing, services, leisure activities, creating a safe nurturing environment. In 2017 the decree of the Government of Moscow from August 1, 2017 No. 497-PP, after the approval of the majority of the population living in houses of the first period of industrial housing was adopted the program of renovation of the housing stock in the city of Moscow (on the basis of the results of voting and results held General meetings of owners of premises in apartment houses, announced in the manner prescribed by resolution of the Government of Moscow from may 2, 2017 N 245-PP "About accounting of opinion of the population on the project of renovation of the housing stock in the city of Moscow"). "The coordinators of the state programs of the city of Moscow, when updating the state programs of the city of Moscow, ensure the introduction of changes in the relevant state programs of the city of Moscow in order to implement the program of renovation, including for the purpose of priority provision of territories intended for the construction of apartment buildings for the resettlement of citizens, objects of social, transport infrastructure, improvement of such territories and other measures aimed at creating a comfortable environment for citizens." The program is approved for the period up to 2032, and is aimed at preventing an emergency situation in the city in the next 15 years, eliminating the accumulated imbalances in the development of the city and creating a "creative urban environment", and, therefore, "creative city". This normative-legal act was the first to introduce a new term "renovation", providing not only the reconstruction of the emergency houses, but also the reconstruction of the entire residential development of the first period of industrial housing construction (Kolobova, 2018). "Renovation of the housing stock in the city of Moscow is a set of measures aimed at updating the living environment and creating favorable living conditions for citizens, public space in order to prevent the growth of emergency housing stock in the city of Moscow, ensuring the development of residential areas and their improvement." (Annex to the decree of the Government of Moscow of August 1, 2017 № 497-PP "on the program of renovation of housing in Moscow"). It should be noted that the renovation was the second stage of the complex reconstruction of the panel five-storey buildings in Moscow. The first stage of renovation of residential buildings in Moscow was a program of comprehensive reconstruction of residential areas of the first period of industrial housing.

Users of the Moscow portal "Active citizen" voted for the most significant achievements of Moscow in 2018 in 10 categories: "International and Russian recognition", "Urban environment", "Culture", "Social protection", "Education", "Transport", "City services", "Sport", "health Care" and "Construction". In the field of" Construction "23.42 percent of the votes of" active citizens " called the program of housing renovation.

At the beginning of 2019, the number of launch sites for the construction of residential houses for the resettlement of residents reached 318 and about 4.6 million square meters of living space was designed and built on them. 10 new sites are located in eight districts of Moscow: in the North-Eastern, South-Eastern, Western and North-Western districts of the capital. It is planned to build 138 thousand square meters of housing and settle 22 houses, which is 1970 apartments, thus improving the living conditions of five thousand Muscovites.

"This year we will create planning projects and specific plans for the development of entire districts. By and large, we are talking in General about the renovation of Moscow" - said the mayor of Moscow Sergei Sobyanin in his report on the work of the city Construction complex, dedicated to the results of activities and tasks for the coming years (Sobyanin, 2019).

According to Deputy Mayor of Moscow Marat Khusnullin, the task of the renovation program is to create not only new housing, but also a completely new way of life. "The task is to improve the quality of the urban environment around, create new jobs, create additional convenient transport links. We are working very actively on this task. In the staff on a daily basis" by the official website of the Mayor of Moscow (The complex of urban policy and construction of the city of Moscow, 2019).

On the way to creating a "creative city" with a "creative industry", the Moscow Government will initiate the creation of an innovation cluster (IC), which will combine all existing innovation infrastructure, human resources and production potential of Moscow into a single system. The operator of the cluster will be the Fund "Innovation cluster of Moscow", established by the Government of Moscow. The Supervisory Board of the innovation cluster together with representatives of the capital Government and the President of Russia will include heads of state corporations, leading scientific institutions — head of the Russian Academy of Sciences, rector of the Moscow state University named after M. V. Lomonosov, President of the Kurchatov Institute.

Cluster in urban planning is a territorial entity within the metropolis, which is a relatively Autonomous unit and provides its residents with a full set of urban functions (residential, administrative, business, shopping and entertainment, recreational). The concept of cluster is given in the works of foreign economists, such as A. Marshall, A. Lesh, W. Eisardt and others, who studied the processes of concentration of production in the 1890s-1950s (1990, 2002). Continuing the research of leading economists Michael Porter argued:" national prosperity is not inherited-it is created" and "the only reasonable concept of competitiveness at the national level is labor productivity". A cluster is a group of geographically concentrated companies and organizations that are involved in related activities and interact on the basis of common identity and complementarity (Porter, 2002). He also with the concept of "cluster" created the concept of diamond national competitive advantage (Diamond model), which is the most famous among all studies on national and regional competitiveness, as well as the triple helix Model (Porter, 1990). Triple helix Model between the state, business and science should create an integral effect of collaboration, that is, continuous innovation activity in the ecosystem, leading to a continuous increase in productivity and the emergence of special external effects (externalities), improving the competitive opportunities of the surrounding area.

The successful development of clusters in Russia will depend on the quality of the economic environment in the territory, on the perfection of the model of organization and management in the cluster and on the effectiveness of the coordinating activities of the cluster organization. There are a number of problems hindering the development and functioning of clusters. So, according to scientists, it is: insufficient number of different participants for the development of real collaboration; the Directive of the government to create a cluster without objective market requirements; lack of motivation for companies to invest their own funds in a joint cluster; "focal model" of the cluster organization, which does not allow participants to acquire cross-links, leaving participants depending on a large state Corporation; poor quality management; limited access of participants to the resources of local and global markets (Smorodinskaya , Katukov, Malygin , 2011, 2012).

Russian scientists are studying the possibility of removing obstacles and implementing the experience of cluster development in our country. In Moscow there is a production, scientific, technical and investment potential for the creation of clusters and the development of the "creative industry" and "creative city": about twenty thousand innovative organizations, including 719 research organizations, 173 educational institutions, more than 450 certification centers and testing laboratories, more than 15 thousand IT companies, more than 7 thousand manufacturing enterprises.

In connection with the adopted state investment and construction program of renovation in 2017, there is a direct link between the increase in the number of residents in residential buildings in the areas after renovation and the need to create jobs for them, as well as the necessary infrastructure for a growing built-up area (Romanova, 2018). New jobs and infrastructure will be created in abandoned and newly developed industrial areas. This will undoubtedly give a new impetus to the economic and creative "creative" development of long-abandoned territories.

4. Results

The opportunity to use innovations (Ishkov , Mishlanova, Grabovyi, 2016) in abandoned former industrial areas is being developed by research centers in Moscow. The state Autonomous institution "Research and design Institute of Urban planning of the city of Moscow" under the Committee on architecture and urban planning of the city of Moscow (GAU "NIiPI urban PLAN of the city of Moscow) is currently assessing the urban development potential of the city of Moscow, with a total area of 60 thousand 500 hectares, including industrial zones of the capital with thirty-one production area. NIiPI GRADPLAN is part of the Urban development complex of the Moscow Government. In 2017, NIiPI GRADPLAN (Institute) on the instructions of the Moscow architecture developed guidelines for assessing the economic efficiency of measures for the integrated development of territories. With the help of methodological recommendations, optimal decisions will be made on territorial planning and planning of territories.

The Institute participates in the development of land planning projects for the implementation of the state investment and construction program of renovation of residential buildings in Moscow. To this end, modern hardware and software system for urban planning with a modern corporate information system, software and information management systems by the official website GAU "NIiPI urban PLAN of the city of Moscow.

According to the state Autonomous institution "Scientific-research and design Institute of Urban planning of the city of Moscow" with the Committee for architecture and urban development the size of the production areas is 15086,6 hectares, the area of industrial zones is equal to 7839,7 hectares (209 industrial zones) and the area subject to reorganization of industrial zones 708,0 ha. The total area of the capital is 107 287.0 hectares. thus, revitalization becomes very important for Moscow, that is, the approach to the development of industrial zones, involving a balance between the areas of commercial and residential use, as well as public spaces, focuses on the identity, design and communication of space, focusing as a result on the creation of a multifunctional space integrated into the urban environment.

Currently, in order to preserve the scientific and industrial potential of the city of Moscow, work has been carried out to form the territories of industrial zones within the boundaries of production zones and approved by the government of Moscow of 24.10.2006 № 836-PP "on the territories of industrial zones of the city of Moscow" (first stage) and from 01.04.2008 № 247-PP "on the territories of industrial zones of the city of Moscow (second stage)".

Approximately 72.2 % of the industrial territories are Federal property, 19% are owned by the city of Moscow and 8.8% are owned by private companies that bought land from the state with abandoned production in the post-Soviet period.

The territories of production zones that are not involved in the industrial zones of the city, and have a high potential for development, will be subject to reorganization. These potential resources will be needed for the creation of clusters, "creative industry" and "creative urban environment", including the construction of residential, social and business, industrial, cultural and entertainment complexes.

Under the reorganization falls 4.3 thousand hectares of industrial areas. The main task of the Moscow Government on the redevelopment of industrial zones is to create innovative industrial clusters. Building density should not exceed 25 thousand square meters per hectare, with half of the future volume of real estate should fall on residential development, and half - on jobs. The main areas of reorganization - Rublevo-Arkhangelsk, Moscow, Lower Mnevniki, Moscow city, ZIL, Simonovskaya embankment, river Park (a former shipyard). The main activities include: the creation of new areas and pedestrian spaces on the transport embankments; improvement of embankments in areas of complex reorganization of the territory; the development of inland water transport, including the creation of new tourist routes and the organization of passenger traffic (from Dolgoprudny and Rublevo-Arkhangelsk to the city, from Lytkarino to Taganskaya, from Spartak metro station to Alma-ATA metro station); the allocation of Bicycle paths; the creation of new berths.

5. Discussion

Thus, instead of abandoned and practically non-functioning industrial areas, new points of development will arise and a comfortable urban environment will be created by the official website of the complex of urban policy and construction of the city of Moscow.

A typical example of revitalization in Moscow, the creation of creative urban space is the project of reorganization of the former industrial zone of the automobile plant named after Lenin Komsomol " Moskvich "(AZLK), conveniently located near the metro station" Volgograd Avenue "and the station" Ugreshskaya " of the Moscow Central ring.

Recently, at the investment forum in Sochi, the government of Moscow and Renault Russia signed an agreement on the extension of benefits for land lease. As the Moscow mayor Sergei Sobyanin noted, this will allow the company to attract investment in new technologies, equipment, the creation of industrial unmanned vehicles, as well as continue to supply cars for export. Moscow mayor argues that the automotive cluster in Moscow allows you to create new jobs for residents of the capital. On the site of the industrial zone "South port", an area of 900 hectares, during the revitalization will be built about 7.5 million square meters. meters of real estate for various purposes. About 60 thousand citizens will be able to live in new buildings and work up to 80 thousand people. Deputy mayor of Moscow for urban policy and construction Marat Khusnullin explained that to solve these problems the territory of the industrial zone will be divided into squares. On the embankment of the Moscow river will build residential buildings, the second zone will be a continuation of the Technopolis "Moscow", which will include production sites. The office square will be built up to 6 million square meters of commercial real estate. The public area will have pedestrian zones, parks, Bicycle paths. To improve transport accessibility, the leaders provide for the construction of a new metro station on the Lublin-Dmitrov branch. Financing of works will be carried out at the expense of investors.

Group "Metropol" Michael Slipenchuk purchased from the Metropolitan municipality of 23 hectares, belonged to AZLK, in 2006, to build housing and related infrastructure. Nearby is the Technopolis "Moscow", with a total area of 32 hectares and the production site"Renault Russia".In 2007, the group announced plans to build 1.5 million square meters of old workshops on the site, but the project was frozen due to the crisis. In 2013, Metropol announced new parameters, reducing the volume to 640 thousand square meters of residential, commercial and office space. In the project of construction of the residential complex MR Group will act as a fee-developer and responsible for concept development, construction management and sales. Near the future LCD is a production site "Renault Russia "and Technopolis"Moscow". According to the mayor of Moscow Sergey Sobyanin, Technopolis "Moscow" is a specialized territory for the development of innovative production and is implemented under his personal control. The project, created under the "Stroyexpo", supervised by the Department of science, industrial policy and entrepreneurship of Moscow government. Technopolis has created all the necessary infrastructure for young innovative companies. "We have an example of successful reorganization of the industrial zone – Technopolis "Moscow". A few years ago it was a completely unsettled area where stray dogs lived, and today there are innovative production, including Western companies", – said the mayor. According to him, "the southern port" is hundreds of hectares of the industrial territories which are in a deplorable state. While they do not bring almost no profit, but can replenish the city budget. In the near future, the development of the automotive cluster will continue. According to Sergei Sobyanin, the South port industrial zone is known to residents of the capital thanks to the AZLK plant, which for many years produced cars of the Moskvich brand.

If their interests coincide with the plans of the authorities, an additional station will appear on the stretch between Kozhukhovskaya and Pechatniki stations. In addition, a network of local roads is planned directly on the territory of the industrial zone, which will be integrated into the citywide and connected with the TTK and Volgograd Avenue. At the end of last year, the mayor of Moscow has already opened a road overpass through the Kursk direction of MZHD on Yuzhnoportovaya street, which provided convenient transport links between the areas of Pechatniki and Yuzhnoportovy. One of the main problems of this industrial zone, as explained in the Department of science, industrial policy and entrepreneurship, is the presence of a large number of owners – more than 200 of them. In order to organize the redevelopment process, the authorities will first need to agree on which companies will participate in the development of the territory and on what terms, and then coordinate their interaction. All production and industrial zones of the city in its old borders occupy 17 thousand hectares, which is 17% of its territory. The Moscow authorities do not seek to withdraw enterprises from the territory of Moscow. The goal is another-to preserve and develop high-tech production, information technology, food, pharmaceutical and other industries. But it is necessary to make these areas of the city and the enterprises themselves modern, safe, comfortable, it is important to streamline their placement in the capital. The city is often approached by representatives of various manufacturing companies that are interested in modernization and expansion. Recent such appeals were announced by the leadership of one of the bakeries, champagne factory, enterprise for the production of cognac. In the industrial territories existing in the city, and there are 208 of them, there are many enterprises of the military sphere, including research institutes, so-called mailboxes and production associations that will retain their profile. In the near future, technoparks, including children's parks, can receive great development. For the industrial development of the city to continue, a course was taken for the development of professional education, training of personnel who will be able to work at new enterprises and in modern laboratories of the capital. The city will start to reorganize industrial zones if they are not used effectively. This process has already begun, a good example of such a reorganization can be considered the district of MIBC "Moscow city". The center appeared on the site of Presnensky machine-building plant. And there will be more and more such examples. A new impetus to the development was the territory of ZIL, where the transformation has already begun, as well as" Novopodrezkovo"," Northern Ochakovo"," Grayvoronovo"," Nagatinsky Zaton"," Degunino-Likhobory " and others are included in 22.36% of the production areas of the city, where the transformation has already begun. In 2017 have undergone the process of approval of eight more industrial zones in 454,44 hectares Total area of new construction will make 6,5 million square meters. These include the areas of industrial zones "Red Builder" in South and "Beskudnikovo" in the North-East. Several similar examples are related to other districts. It has already been determined that 3.8 million square meters of housing and 2.7 million square meters of non-residential real estate will appear on the allocated plots. At the moment, Moscow architecture is considering the development of 11 industrial areas located on 436.1 hectares in different districts. Federal and city legislation provides that 47 plots with an area of 10-20 hectares will be developed on the principle of integrated development of territories. To start the process, three sites were selected – in Brattsev, Biryulev and Korovin, where, according to the General plan of the city development, multifunctional public and industrial zones will appear.

The economic development of the creative city is also to attract tourism investment through their individual, creative, creative solutions.

It will also be important to create conditions in the creative city for the work of domestic progressive specialists for the implementation of their creative projects, thus constraining their departure abroad.

There will be an increase in the General level of culture in society. The creation of cognitive (Zelentsova, Gladkikh., 2010), that is," the creation of opportunities for intellectual activity and creative self-realization involves a rich cultural life, a variety of forms of leisure, as well as the development of creative businesses (creative industries) and interactive cultural platforms "(Melville, 2013).

Two different cluster programmes have already been adopted in Russia in 2010: one on the initiative of the Ministry of economic development and the other on the initiative of the Ministry of industry and trade. For these two programs, Federal budget subsidies were provided to cluster organizations. However, Russian innovation clusters are still in their infancy and do not meet all the necessary requirements of advanced international innovation clusters. The fragmentation and disunity of cluster organizations does not contribute to the creation of these innovative industrial clusters.

6. Conclusion

Started the renovation process of the city of Moscow will be continued, so as to replace the old five-story building, which was built about 25 million square meters of total area in the period 1951-1985 years , 15-20 years, will come the renovation of the panel 9-12-14-16 – storey panel houses, which were built in Moscow, about 58 million sq m of total area in the period 1965-1995 years (scientific report of GUP MNIITEP of Moscow on the topic: "Lessons learned from the reconstruction and operation of industrial 5-9-12- storey panel houses of typical series", 2002). By 2032, the first results of the renovation program in the capital will be summed up and problems identified. But, obviously, the next stage of renovation will inevitably come with its creative innovative approach to the formation of a creative urban environment. The renovation process will be accompanied by the development of innovative technologies, their implementation in the life of the city. The process of renovation of Moscow will take place in conjunction with the renovation of industrial areas of the city, as the construction of housing and transport and communal infrastructure will be carried out, including at the vacated industrial sites. Must be created and to function effectively in the capital of innovation clusters, uniting in himself the Government of Moscow, Fund "Innovation cluster of the city of Moscow", as the operator of the cluster, and the platform of information technology. On the basis of the platform, research and educational institutions, industrial enterprises, business structures, innovative companies, IT companies, centers for supporting innovative creativity should actively cooperate.

Continuing research in the field of cluster formations (Smorodinskaya, Katukov, 2016) the following conclusions should be drawn.

In our country, there are currently a number of contradictions between the institutional and economic environment, which hinders the development of the cluster system:

- contradictions at the inter-regional, inter-sectoral and inter-production levels;
- the monopolization of the market of goods and services, the lack of a real competitive environment;
- low motivation and unwillingness of investors to create cluster structures due to uncertainty in the future and high risk of losing investments, not making a profit and even losing;
- dependence on government orders to prevent the development of cross-ties and innovation;
- cooperation between companies is not developing, large state-owned companies prevail, small and medium-sized businesses are at a disadvantage.

For the successful implementation of the state investment and construction program of renovation in Moscow and its integration into the creation of urban innovation clusters on the way to building a creative city, the city Government must comply with the following requirements:

- to promote the cluster initiative, without exception, all companies and not only cutting-edge companies and large public corporations;
- develop collaboration between participants to achieve and increase innovation effect;
- support cluster organizations only with triple helix: state-investors (business) - science (innovation) until they become financially independent;
- to promote and stimulate self-education of triple helices in the sectors of the national economy through open dialogue;
- support cluster projects designed not only for the national but also for the foreign market;
- improve the competitiveness of clusters;
- to develop inter-cluster cooperation to create new sectors and territories of innovative development;
- to extend the experience of self-government of cluster organizations to the whole city;
- to carry out cluster-network economic reform in conjunction with other types of economic policy: regional, innovative, industrial.

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Using Shell Programs in Educational and Methodological Support for Learning Foreign Language

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Abstract

The article deals with the question of the actuality of language e-learning in the conditions of the educational process taking place in a qualitatively new environment characterized by active introduction and use of tools of information and communication technologies (ICT). Continuous monitoring of the quality of the learning process, and results of education are particularly vital in terms of renovation of educational content, growing problems of availability of educational material and organization of feedback. The article defines essential requirements to modern electronic means of educational issues: manageability, availability, feedback, automated monitoring of progress, current methodological support, etc. Emphasis is placed on the methodological aspects of the automated control in the form of testing in a foreign language in the conditions of the use of e-learning technologies. Methodical recommendations of using shell programs are given. Methodical recommendations on the content are given. The question of language, speech and linguocultural selection of educational material is examined. The content of control materials contained in the electronic means of educational appointment is determined to improve all kinds of speech activity. Recommendations for the qualitative feedback are given. The issues of self-work are touched to succeed in a a process of learning. The role of a teacher is viewed.

Keywords: foreign language educational process, information and communication technologies, principle of student activity, interactivity, e-learning form of education, didactic tasks, instrumental software, shell program, self-study activities.

Introduction

With the increasing integration of the world community in the field of culture, science and technology, technology and production, one of the main requirements for graduates of all areas of training and specialties of the university, along with professional competence and ability to use a personal computer, is a foreign language proficiency. Competent knowledge of a foreign language ensures the implementation of intercultural communication and information activities in joint production and scientific work and the study and creative understanding of foreign experience in the majors and related fields of science and technology. [1]

Among the most important circumstances testifying in favor of the demand for a foreign language in modern Russia include: the globalization of social integration processes; interstate integration in education; access to experience and knowledge in the world, to a great wealth of information, to quality education in the country and abroad. Cultural, socio-political and economic realities of social development affect the status of a foreign language and the functions it performs in society. [2] In a generalized plan, these functions can be formulated as follows: the establishment of mutual understanding between peoples - carriers of different languages and cultures; providing access to the diversity of world politics and culture, including through the means of information and communication technologies. Consequently, language education in a foreign language in particular act as an important tool for successful human life in a multicultural and multilingual community of people.

The main purpose of the training is to form students' foreign language communicative competence, sufficient for further educational activities, providing the opportunity to participate in intercultural communication and professionally-oriented activities, allowing them to realize their professional plans and aspirations.

Today it is possible to single out one of the powerful modern factors influencing the linguistic personality, which contributes to the speedy mastery of the new language. [3] The formation of a secondary linguistic personality in modern conditions of the educational process takes place in a qualitatively new environment, characterized by the active introduction and use of information and communication technology (ICT) tools.

Methology

In the conditions of the foreign language educational process with the use of tools of information and communication technologies (ICT), the principle of student activity is transformed into the principle of interactivity that is specific to the e-learning form of education. [4] The main thing for which teachers around the world turned to ICT is the interactivity provided by the speed of information transfer to both sides. In the educational process using ICT tools, interactivity is a key concept. An interactive dialogue is a user interaction with a software system that is different from a dialogue that involves exchanging text commands (requests) and responses (invitations) by implementing more advanced means of conducting dialogue (for example, the ability to ask questions in an involuntary form using limited set of symbols), while providing the ability to select options for the content of educational material, mode of operation.

Interactivity, when working with any electronic learning tool or any information, opens up the possibility of solving such didactic tasks as:

• differentiation of training (the possibility of creating and structuring a course of study, an electronic textbook taking into account different levels of student's knowledge. This can be one program, one course, but thanks to hypertext technologies, which allow one student to gain more in-depth knowledge of a particular issue, another one needs clarification based on the same basic text, depending on the success of the proposed task);

• activization of students' activities at the level of interaction with the program (network course, electronic textbook, etc., the ability to perform tasks of various complexity, obtain additional information, perform creative activities, etc.); at the level of comprehension, mastering new knowledge, formation of skills; in the process of testing and monitoring (the program either reports the correctness of the assignment, or refers to additional material for the correction of knowledge and skills);

• use in its cognitive language activity of various information resources of the network, including graphic, sound, to replenish basic knowledge, the formation of an independent point of view on the phenomena studied;

• self-study work with the text: the creation of the main text, the secondary text, their editing, formatting, structuring, processing the finished product of an independent creative, intellectual activity;

• self-study activities to eliminate gaps in the knowledge, abilities and skills (KAS) then deepen previously acquired knowledge, form and improve the necessary KAS;

• illustrating basic theoretical knowledge using multimedia tools to help solve the problem of visibility in the presentation of new material;

• forming a culture of mental labor on the basis of access to the necessary reference materials, dictionaries, thesauri, encyclopedias, etc. [5, 6]

In the course of communication with partners in the learning process (teacher, other students), interactivity provides the opportunity to solve such didactic tasks as:

• joint activity of students in the process of communicating with partners in small groups of cooperation, which allows using mutual assistance in the process of working a small group, assigning roles in the course of performing a single task, developing various intellectual abilities and skills, working with information, using various problem methods in the learning process requiring constant interaction with partners;

• exchange of opinions, on-line or off-line discussions with all students of not only a small, but also a general group (chat rooms, newsgroups);

• control and management of students' learning activities by the teacher;

• consultations of the teacher in the course of educational activity;

• contacts with external partners who are not direct participants in this educational process; joint activities with project partners in other regions, countries. [7]

Activation of educational and cognitive activity, stimulation and continuation of creative activity of both students and teachers is based on the capabilities of a variety of software tools, including modeling programs, search, intelligent tutoring, expert systems, programs for conducting business games. In fact, all modern electronic textbooks emphasize the development of creative thinking. Toward this end, the questions are put in the textbooks on which it is impossible to give a definite answer. ICTs make it possible to put into practice new methods that activate creativity and activity of teachers and students.

Students can join in the discussions that are held not only in the classroom, but also virtually, for example, on the websites of periodicals, training centers. One of these incentives is the possibility of access to electronic libraries (scientific, technical, methodological, reference, etc.), interactive databases of cultural, scientific and information centers, encyclopedias, and dictionaries on the Internet. [8, 9] Through the Internet, a student can ask a question about a problem that interests him not only to his teacher, but also to bring it up for discussion in an electronic conference or chat. The variety of information offered in an educational environment integrated into the global information space helps the teacher to lead the student to look for his own view on the essence of the problem being studied.

The development of creativity and curiosity of students, instilling interest in search and cognitive activity also helps the opportunity to work in virtual scientific laboratories. The implementation of the technology of virtual reality in the educational process contributes to the formation of skills and abilities to carry out activities on the design and modeling of the objective world; development of visual-creative thinking. The greatest popularity of virtual reality is obtained by such means of disseminating cultural, regional and educational information, such as virtual museums and galleries. The information resources of the global Internet provide today unique opportunities to make virtual trips to the world-famous treasuries of fine art, to see the brilliant creations of great artists. [10] Knowledge of the virtual world, inside of which the student enters while working with the system, develops imagination and figurative, abstract thinking, helps to understand and realize the essence of the most unique phenomena and processes.

In the modern educational process, both abroad and in home country, instrumental programs are constantly being developed and put into practice, aimed at creating training courses and testing systems in various academic disciplines for use in autonomous learning modes, in local and global networks. Since the teacher’s participation in the development of computer-aided educational tools and programs is not always possible, there is a need for special software that would allow the teacher to create computer-based learning materials or to make the necessary changes to the materials used independently, without the help of a programmer. Among such programs, the main place is occupied by instrumental software – software (set of software) intended for designing software (systems) for educational purposes, preparing or generating teaching-methodical and organizational materials, creating graphic or musical inclusions, and service add-ons program. [11, 12]

Filling the instrumental software with subject content allows you to create different types of PS for educational purposes or instrumental programs of mixed purposes. (The application program is a computer program: problem-oriented, subject-oriented, object-oriented; functional; realizing the solution of a problem a user needs). The most common types of IPSs are shell programs that allow teachers to create their own training courses and tasks based on the training scenarios provided by the program and the means to implement them. Among these shells are many network developments that allow you to create and use tasks in the on-line mode.

To organize the work of students with Internet resources, there are also special tools that allow the teacher to prepare their own tasks and post them on the Internet. [13] The programs of this type can offer formats of students' search activity on the Internet:

• a systematic list of links to resources on a particular topic;

• a systematic list of links to multimedia resources in a specific pattern;

• a list of links to resources on a particular topic with questions and tasks focused on the individual perception of the information received and the expression of personal attitude to the problems being studied;

• a list of links to resources that allow a student to answer specific questions on the topic being studied;

• web quest - problem task based on Internet information resources.

Meanwhile, language training has such specific tasks that attempts to adapt shells designed for other disciplines in order to create teaching materials for language learning give positive results when using. For example, on the basis of the multimedia program «Reward Intern@tive», business courses in English and German languages, multimedia textbooks in chemistry and physics have been created.

Shell programs allow you to fill with new content exercises in a given format. You can enter not only texts into shell programs, but also images, audio and video materials.

The programs offer tools to create the most common in the practice of language learning training and controlling exercises in various languages. [14, 15]

With the help of shell programs a teacher can create different types of exercises: text reconstruction; filling out gaps; establishment of correspondences (various types of tasks); multiple choice tasks; tasks with an open type response; selection of the title to the text; lexical tasks (various types). A shell program usually consists of two blocks: the instrumental block (Teacher program) and the block of training (Student program). The toolbox allows the teacher to enter the text material of the assignments (enter using the keyboard or copy texts from existing files), include the necessary comments, hints in the form of text, graphics, sound and video, as well as create a glossary and set preferences for future work. [16]Students perform tasks in the training unit and can choose the mode of operation – training or supervising. In training mode, a student can use help, a multi-level help system (the number of letters in a word or phrase; the first letter of a word; definition; graphic, audio and video information; the correct answer) and get information about the mistakes made and the final grade. In the control mode, information about the results of work can be obtained only after the exercise. The exercises created can be used to work offline and on a local network. [17]

A shell program provides an opportunity to prepare exercises for use in the global and local networks, as well as offline: filling in gaps; matching; the creation of crosswords; questions with input and choice of answer; restoration of the sequence (sentences in the text, sequences of letters in the word). The program allows a teacher to include in the tasks the necessary textual and graphical information, edit the wording of the tasks and feedback, the type of presentation on the screen, as well as view the resulting version of the exercise and, if necessary, make changes to it. The created exercises can be automatically combined into lessons and training courses.

In addition to the described programs, there are shells that allow you to create certain types of exercises for language learning – crossword puzzles, quizzes, etc. Application programs are widely used as tools for creating educational materials for learning a language. In a limited way, a text editor can be used in this way. To create exercises that require filling gaps, or transformational exercises, the teacher needs to prepare files with appropriately decorated texts. Students will complete assignments either by typing text using the keyboard, or using the Find and Replace or Thesaurus functions. The function of checking the correctness of the assignments in this case is assumed by the built-in spelling, grammar and style checkers. [18]

Text editors stimulate work on the implementation of various written tasks in a foreign language: essays, abstracts, etc. They facilitate their initial design and subsequent changes and additions. Working with such a program, on the one hand, instills in students the purely technical skills of electronic typing and text design. On the other hand, it is a powerful tool that motivates students to improve the initial results. If the work is done on a computer connected to the network, then there is also the possibility of the teacher and the student working together – making the teacher their comments directly to the text in the course of its creation. A modern text editor allows documents to use various graphic images prepared by a student or teacher using a scanner or special programs taken from graphic libraries distributed on CDs or the Internet. Thy are color or black-and-white illustrations, maps, charts, graphics.

The use of graphic editors takes students to a qualitatively new, professional level of design of creative works, contributes to the possibility of students' self-expression, motivates them to perform the work itself.

Computer tools, programs for developing web pages, templates for general and specialized educational purposes, as well as a number of other application programs can be used as tools. [19]

Results

For the implementation of the use of ICT tools for the development of foreign language skills in the process of learning a foreign language, one of the fundamental factors is the professional competence of a foreign language teacher in the field of general computer literacy and computational linguistics. ICT competence of a teacher is understood as

• teaching an academic subject using ICT tools,

• implementation of information activities and information interaction between the participants of the educational and cognitive process,

• expert assessment of the psychological and pedagogical, substantive and methodological significance of applied tools and electronic educational tools,

• prevention of possible negative consequences of using ICT facilities in the educational process,

• automation of the ICT-based learning process, in the management of which the teacher should be knowledgeable.

It is believed that the requirements for a foreign language teacher in the use of ICT tools are higher than for teachers of other subject disciplines, since the software and methodological support for language training includes a very wide range of software and training materials focused on different levels, stages, aspects, types of speech activity and training profiles. [20]

Thus, the development of the intellectual potential of a teacher of foreign languages and the activation of the educational and cognitive activity of students using applied tools is manifested in the possibility of participation in the work of students, the teacher and ICT tools as equal partners in solving learning tasks and means the creative role of the teacher, the conscious activity of the student, supported by computer management activities.

Conclusion

Thus, the use of shell programs are considered as one of the means of ensuring the quality of training and the level of students in learning a foreign language. For the successful use of shell programs, it is important to study questions about the nature and theoretical foundations of the content-methodical content of the content. The use of ICT tools is becoming especially relevant in the context of updating the content of education, problems of access to educational material, feedback, normalization of the teaching load of students and teachers, and improvement of the learning process.

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Integration of the Educational and Didactic Systems in the Training of Future Teachers

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Abstract

The article presents an integrative approach as the main organizational and constructive component of the professional training of a future teacher-musician, which is undoubtedly relevant at the present stage of the development of education. Professional training of future teachers-musicians is considered as a sequence of actions in the unity of its components, such as theoretical, practical, methodological and cultural studies. The author considers the implementation of an integrative approach in such areas as interdisciplinary integration, integration of activity in educational, professional, research, socio-cultural activities, integration of educational and didactic systems. Interdisciplinary integration provides for the establishment of interdisciplinary connections, which activates mental activity, increases the scientific level of education, develops cognitive interest, ensures the perception of a holistic picture. Integration of activity in educational, professional, research, socio-cultural activities allows you to activate creative abilities, to realize all the functions of learning. The integration of educational and didactic systems allows influencing the professional training of future teachers-musicians both as a pedagogical factor and as a social factor.

Keywords: integration, integrative approach, professional training of the future teacher-musician, interdisciplinary integration, integration of activism, integration of educational and didactic systems.

Introduction

In modern conditions of development of higher education and the introduction of federal state standards of the third generation (FGS 3 ++), the focus remains on the need to form a creative personality of a teacher-musician, the main purpose of which is to organize effective work with students in accordance with the intellectual needs of society. This is possible when building professional training of a future teacher-musician based on an integrative approach.

It is well known that the integrative approach (M.N. Berulava [1], A.Ya. Danilyuk [2], N.Yu. Postalyuk [3], etc.) plays an important role in the professional training of future teachers-musicians, which provides effective conditions for in-depth study of disciplines and professional development. The results of the implementation of the integrative approach are the systematization of knowledge, the integrated application of knowledge, skills and possessions, the strengthening of the cognitive activity of students, the achievement of the goal, performance.

Therefore, the study of the integrative approach as the main organizational and constructive component of the professional training of the future teacher-musician is relevant at the present stage of development of education.

Methodology

Integration and the possibilities of an integrative approach to increasing the effectiveness of professional training of specialists have recently increasingly attracted the attention of researchers. So, V.N. Maximova believes that integration is a multi-level, holistic study and means of human development, individuality [4].

M.A. Nikolaeva, considering the integrative approach in the process of forming professional competence of students - future advertising specialists, notes that it is important to present integration as a means of obtaining new quality of training through reflection in the substantive multidimensionality and polyfunctionality of the professional's future tasks [5]. The researcher stresses that the use of an integrative approach increases the effectiveness of students' training, given the interdisciplinary, intradisciplinary, interpersonal and intrapersonal levels of integration [5].
Of interest is the study of the integration of the disciplines of the humanitarian cycle as a way of forming general cultural competencies. In this case, we are talking about different ways of integration, such as the establishment of interdisciplinary connections in the course of studying one topic, the creation of interdisciplinary cases, etc. [6].

V.D. Purin made a significant scientific contribution to the development of problems in the professional preparation of a music teacher based on the application of the principle of integration in the pedagogical process, noting that the principle of integration in pedagogy should be understood as scientifically grounded, organic interpenetration of various fields of knowledge in the form of individual (point integration), several (block integration), many in the aggregate (integrated integration) - associations, symbols, categories, etc. [7].

A.V. Nasedkina and O.A. Kornilov considers the large role of interdisciplinary integration in the development of the professionalism of the future teacher-musician. They believe that the relevance of the integration of musical theoretical knowledge, psychological and pedagogical knowledge and performing skills is due to the need to form a holistic perception among students of the entire system of professional knowledge and skills [8].

Based on the works of scientists who consider the use of an integration and integrative approach in the pedagogical system of vocational education, it can be noted that the implementation of an integrative approach makes it possible to combine science and culture as the basis for obtaining new knowledge, giving birth to personal and cultural meanings. In this case, according to A.F. Malyshevsky, the educational process should be built on artistic models, where the image of a person is connected with culture, intuition with logic, knowledge with experience [9].

Let us turn to the next aspect of the problem under study and consider the main components of the professional training of future teachers-musicians: theoretical, practical, methodological, culturological.
In the opinion of researchers, the division of vocational training into various types is advisory in nature, since they are all interconnected. For example, it is too difficult to separate methodological and theoretical training, since the basis of theoretical training is methodological and one cannot exist without the other. Practical training is impossible without a methodical one, since it involves the use of methods of cooperation in the conditions of school work.
Very important in the aspect of the problem being analyzed is the addition made by N. B. Krylova. She believes that the professional training of future teachers should be strengthened through cultural studies, the purpose of which is the formation of values and various types of student experience [10].
Theoretical training is the process of mastering knowledge and expanding the range of interests of students. Theoretical training of future music teachers involves mastering such knowledge as knowledge of the essence of the processes of training and education, their driving forces and laws, principles, methods and forms of their organization, etc.
In practical training, the whole complex of knowledge is gathered and the formation of skills and knowledge of the basics of professional activity in the process of real pedagogical activity of students in educational institutions is carried out.

Methodological training is one of the most important tasks of professional training of a future teacher-musician. It is not enough for a modern music teacher to have practical experience and theoretical knowledge gained in his student years, the teacher needs to turn to scientific theoretical knowledge, to master the methods of scientific and pedagogical research.
Methodological knowledge, knowledge of the logic and methods of scientific and pedagogical research, basic research approaches and skills is the fundamental basis that throughout the whole pedagogical activity helps the future specialist to understand various innovations, concepts, new educational technologies,

programs for the development of educational institutions in a huge number of proposed him for implementation in professional activities.

Thus, the professional and pedagogical training of the future teacher-musician is a multi-component system that includes, on the one hand, autonomous, and on the other, interrelated types of training. The autonomy of the types of training determines their substantive component, and the common goal, principles, unity of internal organization, active interaction between themselves and the external environment gives them integrative integrity.

Results

The purpose of this article is to identify the main ways of implementing an integrative approach in the professional training of future teachers-musicians, aimed at achieving a high level of readiness of future teachers-musicians for professional activities. To achieve this goal, it is important to analyze the latest research on the topic chosen by us, identify the features of the organization of the process of training future teachers-musicians and determine the main ways of implementing an integrative approach.

We consider the implementation of an integrative approach in such areas as interdisciplinary integration, integration of activity in educational, professional, research, socio-cultural activities, integration of educational and didactic systems.

Interdisciplinary integration provides for the establishment of interdisciplinary relationships, which allows to study different disciplines agreed and activates mental activity, increases the scientific level of education, develops cognitive interest, ensures the perception of a holistic picture. All this contributes to the deepening of the relationship between the disciplines.

The implementation of an integrative approach in the pedagogical orientation of subjects consists of special knowledge of aesthetics, psychology, pedagogy, physiology, performance skills and teaching methods. The core in the work of a teacher-musician is the implementation of musical and aesthetic education by means of organizing the musical and educational activities of the teacher himself and the educational and professional activities of schoolchildren.

The use of knowledge of various subjects helps the process of integrating education, improving the quality of vocational training through mastering the artistic and scientific picture of the modern world. This helps future music teachers to comprehensively use the knowledge gained and adequately evaluate the phenomena being studied.

For this, the teacher-musician must use innovative methods and techniques, as well as select thematic material that has educational value.

Integration of activity in educational, professional, research, socio-cultural activities as a second direction allows you to activate creative abilities, to realize all the functions of educational - educational and professional teaching; developmental - research; educational - socio-cultural activities that are in constant relationship.

The use of an integrative approach contributes to the systematization of educational and professional activities, strengthening the research focus, which forms the dynamism of thinking, the creative activity of future teachers and musicians.

Socio-cultural orientation is also important in the training process, because it helps future music educators understand their place in the education system in the field of culture and art. This is an important goal of the entire system of vocational training and enrichment of students with a system of general cultural values and attitudes (NB Krylova [10], LN Stolovich [11], etc.).

The next direction for the implementation of an integrative approach, we consider the integration of educational and didactic systems. These concepts are now becoming more common. Education can be represented as the management of the process of personal development through the creation of conditions necessary for this. At the same time, the educational system is not limited only to the pedagogical system. This system is both psychological and pedagogical, and social and pedagogical, i.e. it influences others not only as a pedagogical factor, but also as a social factor (through inclusion in the environment, through the relations that develop between children, teachers, parents, leaders, through the psychological climate that allows uniting children and adults).

In the process of working on the problem and relying on the works of V.I. Zagvyazinsky [12], V.V. Kraevsky [13], V.A. Slastenin [14], we have identified various principles of integrative learning that can be applied to the process of students' training, and become the basis for the organization of the process of the development of training for future teachers-musicians.

The principle of integrity is defined by the very basis of integration, which is aimed at achieving unity between the components of the pedagogical process and the formation of an integrated pedagogical training system through the formation and strengthening of the interrelations of various activities of future teachers-musicians in the process of professional training.

The principle of the correlation of integration and differentiation is determined by the fact that these processes are closely linked. So the process of integration, as the process of interpenetration and interconnection, is expressed through unity with the process of differentiation - separation.

Recent studies (TS Borodina [15], E.Yu. Sizganov [16], and others) emphasize that as a result of the processes of integration and differentiation, an integrated educational system is taking shape. At the same time, differentiations determine the tasks and functions of each component (in our study, the professional training of future teachers-musicians), and integration does not simply unite all tasks and functions into a single whole, but fills them with new qualitative features. Integration and differentiation are closely interrelated and interdependent [15].

The principle of multilevelness is based on the fact that in its development the integration process goes through several levels, which represent the emergence of previously unrelated constructs of new integrative blocks, which are characterized by increased orderliness, deepening of their interconnections, unity of parts, and the emergence of new system properties [17].

For the professional training of future music teachers, we have identified the following principles of preparation: the general didactic principles of teaching (the principle of systematicity and consistency); reflecting the specifics of vocational education and special organizational and pedagogical principles (orientation and science) that act as normative requirements for the organization of the vocational training process (the principle of unity of training and education of the personality of a professional).

Identifying features of the organization of professional training of future music teachers, it is important to note its main forms and methods.

The following forms are most effective in professional training of future music teachers for professional activities: individual (independent work, consultations, creative projects); group (seminars, workshops, creative workshops, scientific circles, master classes, colloquiums, conferences); frontal (Olympiads, performing competitions, concerts, festivals). An individual lesson occupies one of the central places in the process of professional preparation of a future teacher-musician and solves the problem of technical difficulties, theoretical preparedness and practical training, which cover a long period. Such classes include a discussion of a variety of practical materials developed by students (arrangements, selection of musical works, instrumentation, notes), analysis of teachers' work plans, solving pedagogical problems, creating and solving pedagogical and artistic-creative situations. All forms of teaching in pedagogy are interrelated and interdependent.

Also in the course of professional training of a future teacher-musician such forms as excursion, competition, festival, concert, club, club, music room, exhibition, expedition, round table, forum, symposium and others can be used. These forms are not provided by the curriculum and are mainly voluntary for students. But both research scientists and practicing teachers note that they significantly increase professional interest and cognitive activity, create conditions for the growth of positive professional motivation [17].

A feature of the professional training of the future teacher-musician is also the use of both general teaching methods and methods of art pedagogy [20].

In the scientific literature (V.V. Kraevsky [13], I.Ya. Lerner [18], MN Skatkin [19], etc.), teaching methods that are quite universal and are applicable in teaching various academic disciplines are considered as general didactic. . The central place in teaching at the university is occupied by the research method,

which involves building the learning process like a research process, carrying out the main stages of the research process in a simplified and accessible form.
Methods of art pedagogy developed in the development of artistic pedagogy. They differ from general-edictic ones and are characterized by direct contact with reality. Such methods include the methods of play, dramatization, theatricalization, emotional drama, polyphonic activity, creative tasks, artistic-figurative situations, etc.

Improving the level of training on the basis of an integrative approach will be more effective if the unity of external, internal and integrative conditions is observed. At the same time, the external conditions include the expansion of the framework of the professional educational space, which allows for self-development through the interaction of future teachers-musicians with other subjects of educational activity and taking into account their individual emotional and creative capabilities, which are the main designer of the development of an active and cognitive personality. Internal conditions are presented by us as the focus of subjects on vocational training and the implementation of the creative activity of students in the process of vocational training. Integrative condition we define as the formation of professional experience of future teachers-musicians.

Conclusion

The use of an integrative approach in the professional training of a future teacher-musician plays an important role in the modern competence paradigm of education, since makes it possible to combine all components of vocational training into a single whole, which complements and expands the capabilities of each component of the overall system. This allows you to use all the possibilities of vocational training, introduce special courses and training on the basis of the principle of integration into the programs of university education, the inclusion of future teachers-musicians in pedagogical and cultural-creative activities that allow them to gain practical experience in all areas of their future work on the use of all components of an integrative approach in the professional training of future teachers-musicians.

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Professional forms of Employment in the Russian Federation: Problems and Challenges

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Abstract

Women have to keep in focus a lot of factors that need to be coordinated with professional self-realization. At the present stage of economic development, the labor market offers women the possibility of professional self-realization in various forms of employment. In relation to professional activities, women manifest certain expectations, plans and ideas, which can change over the course of their life as they develop in professional and personal terms. In women, a career should be in balance with family life. In this regard, they choose the form of employment that will be optimal for the prevailing circumstances and lifestyle. The article analyzes the professional preferences of employment forms, taking into account the relevant selection criteria using the Analytic Hierarchy Process method. The study identified women's preferences in terms of employment, such as wage employment, freelancing, and their own business. In accordance with the purpose of the study, the selection criteria were defined: free time for oneself, the opportunity to "make a career", unguaranteed monthly income, stable monthly income, rationed working day, the ability not to perform work at home. The results also showed the high importance of professional activities in the life of a woman. The choice of a woman is not between alternatives to "work" or "not to work", but between alternative forms of employment and criteria for choosing a job.

Key words: female career, women's careers, gender, forms of employment, female professional activity, labor market, female.

Introduction

The choice of a professional path is one of the most important decisions in the life of every person. His social status, material well-being and satisfaction with life in general will depend on the choice made. The professional choice made is coordinated with the types and forms of employment in the labor market. At the present stage of development of the economy, the labor market offers the possibility of professional self-realization in various forms of employment. This question is especially relevant for women. In relation to professional activities, women manifest certain expectations, plans and ideas, which can change over the course of their lives as they develop, both professionally and personally.

Women make a choice in favor of one or another professional activity in accordance with the formed values and ideas about career. In women, unlike men, a career must fit into life plans along with family and children. In this regard, they also choose the form of employment that will be optimal for the prevailing circumstances and lifestyle. The authors consider the topic of professional preferences in the framework of the developed concept of female professional mentality [1].

According to the Federal State Statistics Service of the Russian Federation for 2017, the employment rate of women in the Russian Federation is 63.8%, and the share of women in the total number of employed is 53.8% 2. In the Samara region, these figures are 64% and 49.8%, respectively (according to the Federal State Statistics Service of the Russian Federation in the Samara Region) [3]. Of the total number of women employed, 94.6% are employed; 0.9% - employers, business owners; 4.1% - self-employed (not registered as individual entrepreneurs and not using hired labor) [2].

A systematic psychological study of all aspects of women's professional activity is connected with the need to more fully realize women's labor potential. Given the preferences of women in the form of employment, it is possible to form and develop social programs to support women's employment.

Methodology

Currently, there is a tendency for researchers to increase interest in numerous aspects of women's professional activities. This is an area that can be explored from a psychological point of view, considering motivation, goals and values from an economic point of view, considering the contribution of women to the economy and the development of the country's labor potential.

The question of preferred forms of employment is indirectly addressed in studies of women's career issues. One way or another, it is reflected in studies devoted to the study of the desire and opportunity to "make a career", to occupy a managerial position, working conditions, satisfaction with wages and total family income.

In foreign literature, much attention is paid to the problems of women's career. A huge number of works of foreign authors is devoted to gender discrimination in professional activities in all its forms and manifestations. Manzi F. determined the difference between the criteria for choosing a career for men and women, one of which was the availability of free time "for oneself" [4]. Chung H., van der Horst M. determined that flexible hours and telework would solve the problem of work-life balance and identified features of women's professional development strategies taking into account the type and / or form of employment [5]. Singh R .; Zhang Y .; Wan Min proved the need for women's employment on the part of the organizations themselves and the strong connection of women's professional activities with the general life path of [6]. Frear, KA, Paustian-Underdahl SC, Heabletad ED, Walker LS determined that working time, career orientation, having an unemployed spouse and working mainly in women's work are unequal attributes that explain gender differences in career success of [7].

In our country, interest in issues of women's professional activities is also steadily growing. Research Semenova F.O. [8], Darenskikh S.S., Ippolitova E.A., Gurova OS [9], Orlova L.V. [10], Dzagurova N.Kh. [11] are devoted to individual psychological characteristics of women, the relationship of personal qualities and career success in professional activities. Mikhailova O.V. [12], Orudzheva, T.R. [13], P. Yu. Smirnov [14], Bergis T.A. [15] determined that the professional choice of a woman, including the form of employment, determines, besides professional interests, marital status, peculiarities of marital relations, situations related to pregnancy and children. Silaste G.G. and E. Sanakina write about changes in social mobility and economic behavior of women in different social contexts [16]. Petrenko V.F., Mitina O.V. [17], A. Busygina, D. B. Shtrikova [1] describe gender stereotypes and their influence on the professional growth of women.

Results

We conducted an analysis of occupational preferences according to employment forms, taking into account the relevant selection criteria using the T.Saati [18] hierarchy analysis method.

Three groups of women took part in the study: 1) 8 women who had already taken place in the profession (average age 38 years), 2) 8 students of 3-5 courses of Samara State Technical University at the age of 20-22 years without work experience, 3) 7 students 3-5 courses of Samara State Technical University at the age of 20-22 years with experience.

The research procedure was to conduct a written survey in accordance with the methodology for analyzing hierarchies T. Saati. In addition to mathematics, it is also based on psychological aspects. The main tool for data collection, due to which the method has practically no analogues when working with high-quality information, is the procedure of pairwise comparisons. The hierarchy analysis method (MAI) is used to analyze systems containing dissimilar subjective and objective factors of varying degrees of importance. MAI is also successfully used in economics, management, sociology and psychology for forecasting, making management decisions, and analyzing preferences.

As part of the study, we will define the preferences of women according to the forms of employment, such as employment, freelancing (when a company hires a person for a certain period of time or to solve a specific task, without transferring him to the staff) and his business. In accordance with the purpose of the study we define the selection criteria. Women have to keep in focus a lot of factors that need to be coordinated with professional self-realization. Taking into account these factors, women choose appropriate forms of employment.

When choosing a form of employment, women are guided by a number of criteria. As part of the study, six criteria were selected:

1. Free time for yourself
2. The ability to "make a career", to achieve a high official position
3. Non-guaranteed monthly income (possible fluctuations from zero to infinity)
4. Stable monthly income (certain guaranteed amount)
5. Normalized working day (for example, Monday-Friday from 8.00-17.00)
6. The ability not to take (not perform) work home (at home).

Imagine the structure of the task in the form of a hierarchy (Fig. 1).

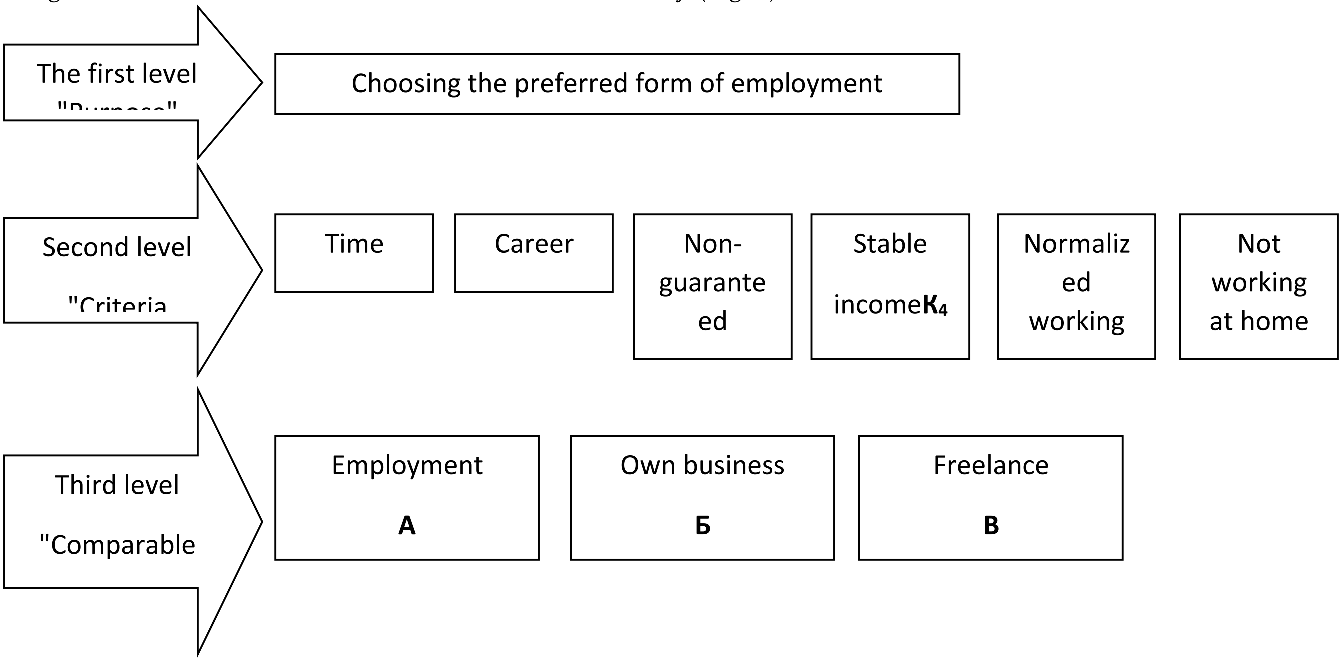

fig. 1 representation of the assessment task in the form of a hierarchy.

At the first stage, experts carry out a pair-wise comparison of the criteria of the second level with respect to a common goal. The results of the identified preferences of the first group (women who have already taken place in the profession) are given in table 1.

Table 1 - Comparison matrix of evaluation criteria for group number 1.

Table 1.

Evaluation Criteria		Time K1	Career K2	Non-guaranteed income K3	Stable income K4	Normalized working day K5	Not working at home K6	The average geometrical	Rated estimates	λ max
Time	K1	1,00	0,11	0,11	0,11	0,11	1,00	0,23	0,03	1,12
Career	K2	9,00	1,00	1,00	1,00	1,00	0,11	1,00	**0,13**	1,68
Non-quaranteed income	K3	9,00	1,00	1,00	0,11	0,11	1,00	0,69	0,09	1,87
Stable income	K4	9,00	1,00	9,00	1,00	9,00	1,00	3,00	**0,38**	1,28
Normalized working day	K5	9,00	1,00	9,00	0,11	1,00	1,00	1,44	**0,18**	0,02
Not working at home	K6	1,00	9,00	1,00	1,00	1,00	1,00	1,44	**0,18**	0,94
Σ		38,00	13,11	21,11	3,33	12,22	5,11	7,81	1,00	6,92

In the first group of experts (women with work experience already held in the profession) the dominance of the “stable monthly income” criterion (0.44) over the criterion “opportunity to make a career” (0.30) and free time for yourself (0.11). The criteria “Normalized working day” (0.07), “Ability not to take work at home” (0.07), and the lowest rating received “non-guaranteed income” (0.02) received fairly low weight.

The results of the identified preferences of the second group (students with no work experience) are given in table 2.

Table 2 - Comparison matrix of evaluation criteria for group №2.

Table 2.

Evaluation Criteria		Time K1	Career K2	Non-guaranteed income K3	Stable income K4	Normalized working day K5	Not working at home K6	The average geometrical	Rated estimates	λ max
Time	K1	1,00	0,11	0,11	0,11	0,11	1,00	0,23	0,03	1,12
Career	K2	9,00	1,00	1,00	1,00	1,00	0,11	1,00	**0,13**	1,68
Non-quaranteed income	K3	9,00	1,00	1,00	0,11	0,11	1,00	0,69	0,09	1,87
Stable income	K4	9,00	1,00	9,00	1,00	9,00	1,00	3,00	**0,38**	1,28
Normalized working day	K5	9,00	1,00	9,00	0,11	1,00	1,00	1,44	**0,18**	0,02
Not working at home	K6	1,00	9,00	1,00	1,00	1,00	1,00	1,44	**0,18**	0,94
Σ		38,00	13,11	21,11	3,33	12,22	5,11	7,81	1,00	6,92

In the second group of experts (students without work experience), the domination of the “stable monthly income” criterion (0.38) was also revealed. Equal ratings were given the criteria “Normalized working day” (0.18) and “The possibility not to take work at home” (0.18). When choosing a job, the opportunity to make a career received a rather low score - 0.13, non-guaranteed income - 0.09, time for yourself - 0.03. The low indicator of the significance of the “time for oneself” criterion is probably related to the fact that students at this life stage have a lot of free time, and they have little idea what could be different.

The results of the identified preferences of the third group (students with work experience) are given in table 3.

Table 3 - Matrix of comparison of evaluation criteria for group No. 3.

Table 3.

Evaluation Criteria		Time	Career	Non-guaranteed income	Stable income	Normalized working day	Not working at home	The average geometrical	Rated estimates	λ max
		K1	K2	K3	K4	K5	K6			
Time	K1	1,00	0,14	9,00	0,11	0,14	0,20	0,40	0,04	1,28
Career	K2	7,00	1,00	9,00	1,00	5,00	0,20	1,99	**0,22**	1,63
Non-quaranteed income	K3	0,11	0,11	1,00	0,11	0,11	0,20	0,18	0,02	0,82
Stable income	K4	9,00	1,00	9,00	1,00	7,00	5,00	3,76	**0,41**	1,06
Normalized working day	K5	7,00	0,20	9,00	0,14	1,00	7,00	1,53	**0,17**	0,01
Not working at home	K6	5,00	5,00	5,00	0,20	0,14	1,00	1,24	0,14	1,85
Σ		29,11	7,45	42,00	2,57	13,40	13,60	9,10	1,00	6,65

In the third group of experts (students with work experience), the domination of the criterion "stable monthly income" (0.41) over the criterion "opportunity to make a career" (0.22), normalized working day (0.17) and the possibility not to take work at home (0.14). Sufficiently low weight received the criteria "Time for yourself" and the lowest rating received "non-guaranteed income" (0.02).

After pair-wise comparison of the second-level criteria with respect to the overall goal, the experts carry out a pair-wise comparison of each alternative variant at the third level with respect to the second-level criteria. Thus, we received estimates from three groups of experts. The results of the identified preferences are given in table 4.

Preferences by criteria of the third level of decomposition

Table 4.

№	Second Level Criteria	Level 3 criteria	Absolute Weights, k		
			Ladies with experience	Female students without work experience	Female students with experience
1	Time	Employment	0,29	0,32	0,06
		Own business	0,05	0,22	**0,74**
		Freelance	**0,66**	**0,46**	0,21
2	Career	Employment	**0,47**	**0,70**	**0,74**
		Own business	**0,47**	0,20	0,21
		Freelance	0,05	0,10	0,06
3	Non-quaranteed income	Employment	0,05	0,05	0,05
		Own business	**0,64**	0,31	0,31
		Freelance	0,31	**0,64**	**0,64**
4	Stable income	Employment	**0,80**	**0,64**	**0,81**
		Own business	0,14	0,05	0,13
		Freelance	0,06	0,31	0,06
5	Normalized working day	Employment	**0,82**	**0,81**	**0,80**
		Own business	0,09	0,13	0,10
		Freelance	0,09	0,06	0,10
6	Not working at home	Employment	**0,47**	**0,64**	**0,45**
		Own business	0,05	0,05	0,06
		Freelance	**0,47**	0,31	**0,49**

Regarding the criterion of "free time for themselves," experts from the first and second groups believe that it is more for those who work as a freelancer (0.66 and 0.46). Students with work experience believe that more free time for women who are engaged in entrepreneurship.

Students from both groups agreed that it is possible to build a career and achieve a high social position if you are employed (0.70 and 0.74). Ladies with work experience believe that this can be implemented in the same way, either by working for hire (0.47) or by building your own business (0.47).

Non-guaranteed monthly income, when there is the possibility of not earning anything, and the experts associate rather high income with their own business (0.64), and students of both groups - with freelancing.

All expert groups believe that a steady income (0.80; 0.64 and 0.81) and a normalized working day (0.80; 0.81 and 0.80) are possible subject to employment.

The opportunity not to take (not perform) work home (at home) exists for those who are employed. So I think all three groups of experts (0.47; 0.64: 0.45). Freelancers also have this opportunity. So consider the first (0.47) and the third (0.49) expert group.

Note that the assessment of the consistency of expert judgments in each group at each level of assessment ranged from 0% to 18%, which is within the normal range.

According to the expert estimates obtained in the three expert groups, as a result of the application of the hierarchy analysis method, the following preferences were obtained for the forms of employment (Table 5).

Table 5 - Synthesis of global priorities.
Table 5.

Compared preferences by type of employment	Ladies with experience		Female students without work experience		Female students with experience	
	Global priorities	Rate	Global priorities	Rate	Global priorities	Rate
Employment	0,61	1	0,45	1	0,69	1
Own business	0,23	2	0,13	3	0,17	2
Freelance	0,16	3	0,42	2	0,14	3
Σ	1		1		1	

When choosing forms of employment, the priorities of the two groups of experts (women and students with work experience) were similar. Both groups of experts put their work in the first place (0.61 and 0.69, respectively), their business (0.23 and 0.17) and the freelance (0.16 and 0.14) - the third. Students

without work experience also highlighted the priority of employment (0.45), second place was freelance (0.42), and third place was their own business (0.13).
Thus, the synthesis of global priorities showed preferences for forms of employment. In all three groups, the highest rank received employment.
Also in the questionnaire there were two additional questions about professional preferences. The first question was as follows: “In my opinion: a) a woman should work and make a career; b) a woman should combine work and family responsibilities; c) a woman should take care only of the house, children and not work. ”
Note that the additional question about the relationship between work and family responsibilities, none of the experts noted that a woman should only care about the house, children, and not work. The answers were as follows: 12.5% from the first group and 25% from the second group expressed their opinion that a woman should work and make a career. 87.5% of the respondents in the first group, 75% in the second group, and 100% of the respondents in the third group expressed the opinion that a woman should combine work and family responsibilities. To the second question: “If the income of my husband allowed me not to work, then I would: a) work; b) did not work "100% of respondents answered that they would still work.
Such results show the high importance of professional activities in the life of a woman. The choice of a woman is not between alternatives to “work” or “not to work”, but between alternative forms of employment and criteria for choosing a job.

Conclusion

The problem of self-realization of women in their professional activities lies in the existing differences in the assessment of the criteria for choosing a form of employment for men and women across society or within individual professional communities. Due to their nature, women, when choosing a job, have to take into account a greater number of factors with varying degrees of importance. When developing social programs to support women's employment, it is necessary to take into account the selection criteria and priorities of women in their professional activities.
Realization of women's labor potential is possible with the constructive participation of the state and business circles. At the state level, the realization of women's labor potential will contribute to an increase in economic growth rates and the development of innovations. At the business level, the introduction of different forms of employment for women, taking into account their preferences, will increase the effectiveness of the organization.

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To the use of English Words When Learning Programming, Information Systems and Technologies

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Abstract

The training of bachelors of applied informatics in technical disciplines, such as "Programming", "Designing Information Systems", "Information Systems and Technologies" is associated with a number of well-known organizational, technical and methodological problems. These include the selection and licensing of the necessary software, the selection of adequate literature, the organization of students' work in a variety of virtual and real operating environments. Less frequently, issues of the indefinite, replete with anglicisms and jargon of the subject area thesaurus are discussed, although it is often the lack of the necessary vocabulary that causes academic failure, an obstacle to effective self-education on the part of students. Discussing the advantages and disadvantages of the existing methodological approaches to solving this problem, an attempt is made to generalize and systematize the best practices and adapt them to the conditions of regional universities. A number of practical examples demonstrate that it is necessary and possible to include visual elements of technical documentation in the original language (English), independent work of students with English-speaking sources, testing in English (as a means of preparing for certification testing of the initial level).

Keywords: education, bachelor degree, thesaurus, applied informatics, methods of studying programming, technical documentation, terminology.

Introduction

The training of bachelors of applied informatics in technical disciplines, such as "Programming", "Designing Information Systems", "Information Systems and Technologies" is associated with a number of well-known organizational, technical and methodological problems. Among them, the selection and licensing of the necessary software [1], the selection of adequate literature, the organization of the work of students in a variety of virtual and real operating environments [2-10]. Less frequently, issues of the indefinite, abundant in English and jargon of the subject area thesaurus are discussed, although it is often the lack of the necessary vocabulary that causes academic failure, an obstacle to effective self-education on the part of students.

Methodology

The theoretical aspects of this problem were investigated in linguistic [11] and pedagogical literature. So, D.A. Gubanov, A.V. Makarenko, D.A. Novikov considered methods for analyzing the terminological structure of the subject area [12], E.A. Eremin - building mental maps for a computer science textbook [13], the links between the terms of the designer's thesaurus were analyzed in [14]. Modern approaches to the development of thesauri are presented in many works [15-19]. However, the application of the presented results in the daily activities of a teacher of professional disciplines in the field of Applied Informatics is quite difficult.

The purpose of this work is to consider the advantages and disadvantages of existing methodological approaches to the formation of a thesaurus of professional vocabulary for bachelors in Applied Informatics and the adaptation of best practices (leading universities and mass open online courses) to conditions of regional universities with limited resources.

Results

Standards FSES3 + [20] and FSES 3 ++ [21] provide universities with a wide choice of the spectrum, scope and content of the subjects taught. A significant part of them is invariant for most universities both through continuity in the higher education system, and for purely pragmatic reasons (student mobility, availability of training, teaching aids approved by the Ministry, established structures of the regions and branches of scientific knowledge). The traditional invariants, in addition to the modules fixed in the standard (“History”, “Philosophy”, “Foreign Language”, “Life Safety”, “Physical Education”) often include courses in the educational area “Mathematics”: “Mathematical Analysis”, “Mathematical Logic "," Mathematical Logic (and Theory of Algorithms) "," Analytical Geometry "," Discrete Mathematics ".

The disciplines “Algorithmization and programming”, “Information systems (and technologies)” have a rather peculiar position in this context. On the one hand, the disciplines of the same name are present in almost all curricula of Applied Informatics, often in the basic (obligatory) part. On the other hand, their content varies widely depending on the specific objects of study (programming languages, information systems, software products), as well as formed competencies.

According to the draft basic educational program for the direction of training 09.03.03 "Applied Informatics" (FSES 3 ++) [20] the process of studying the discipline "Programming" is aimed at the formation of the following competencies - EPC-2, EPC-3, EPC-4, EPC -5, EPC-7. In the context of our research, the following competences are of particular interest:

EPC-2. Able to use modern information technologies and software, including domestic production, in solving problems of professional activity

EPC-3. Able to solve standard tasks of professional activity on the basis of information and bibliographic culture using information and communication technologies and taking into account the basic requirements of information security

EPC-7. Able to develop algorithms and programs suitable for practical use.

The formation of these competencies among bachelors of the “Applied Informatics” direction in the context of regional universities is associated with a number of problems.

First, among the universities leading the training of information technology specialists, there is an active struggle for the entrant. Graduates participating in programming olympiads who pass the exam on computer science, as a rule, are guided by leading universities in Moscow, St. Petersburg, Novosibirsk, Kazan. Other regional universities take applicants, "interested in computer science" and scored 60-70 points on the exam in mathematics, which indicates a very average level of their preparation. Another factor negatively affecting the quality of education is the lack of targeted career guidance — the graduate vaguely imagines his future career and is often not ready to conduct active independent work, to engage in self-study in the direction of his future profession.

Secondly, the qualitative organization of the educational process in the direction of “Applied Informatics” presupposes the availability of modern hardware and a wide range of software. Often, the computer classes of the university are not adequate to the technical requirements of the software in terms of their technical characteristics, and technical support services are not able to provide students with the opportunity to work directly (without using virtualization [22]) with the server part of the software. Here we can state the conflict between the hardware and software components in conditions of limited resources: the reference subsystem, methodical support for training courses are usually better for commercial software products (Microsoft, 1C), and the requirements for saving finance and import substitution force universities to choose free software, information about features whose work has to be collected "bit by bit".

Thirdly, the potential inherent in FSES 3+ and 3 ++, in terms of cooperation with employers, is far from being fully explored. The concentration of IT enterprises in the capitals and technopolises leaves for the regions of the company to support accounting programs, web studios, branches of large structures with their own training systems. The former do not have the resources, the latter - the desire to cooperate with more than one base university. In the case of state and municipal management, there are no problems with formal cooperation, but students often perform routine, operator work in automated document management systems. Formation of competences remains on a constantly decreasing share of university disciplines.

This context determines the particular importance of the correct choice of languages and programming tools in the framework of academic disciplines. The requirement of “suitable for practical use” forces us to abandon the option of using educational programming languages (Pascal, Basic) or at least complement them with modern development tools. So in the manual [19] "Introduction to programming" "for students enrolled in the direction of training 09.03.03" Applied Informatics "", which "systematizes the knowledge of basic algorithmic constructions obtained in the school course of informatics, but formalizes and deepens them, creating a solid foundation for the further systematic study of the course of programming in accordance with the requirements of the FSES of Higher Education "a bunch of Pascal-C is used, there are other options.
An important role in the choice of languages and environments is played by the availability of educational and methodical literature, which is briefly characterized as follows:

- a lot of methodical, educational literature on classical (C) or educational (Pascal, VB) programming languages;
- there are practically no educational and methodical literature on modern languages and instrumental development environments (C ++, C #, Java, Python), but there are electronic textbooks, video lectures, mass open online courses, documentation with examples in open access;
- textbooks are not available in university libraries, the price is very high.

Thus, when choosing a modern programming language, teachers and students have to focus on sources of information that are different from teaching and methodological manuals. And most of them are in English. English terminology prevails in the methodological developments of leading firms and universities (Figures 1, 2).

Figure 1- Video lecture of the project "Technosphere" (https://www.youtube.com/watch?v=Ok81Ue2mu0A)

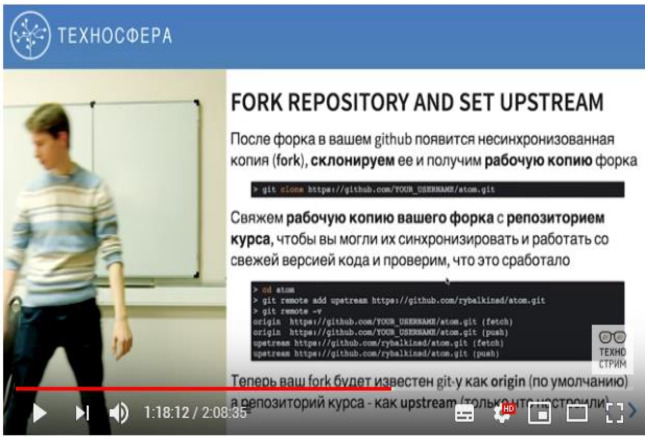


Figure 2 - Video lecture of the "Technosphere" project

As Figure 2 shows, even the Russian text is replete with untranslated terminology, without an understanding of which successful student learning is impossible.

Strictly speaking, the modern level of development of automated translation software allows us not to consider the latter as a significant difficulty. The following is a fragment of Java technical documentation in machine translation.

“The core collection of interfaces encapsulate different types of collections, which are shown in the figure below. Of their representation. Core collection interfaces are the foundation of the Java Collections Framework. As you can see it is a hierarchy.

“The basic collection interfaces encapsulate the various types of collections that are shown in the figure below. These interfaces allow you to manipulate collections regardless of the details of their presentation. Core collection interfaces are the foundation of the Java Collections Framework. As you can see in the following figure, the main collection interfaces form a hierarchy ”(Google Translate).

“The core collection interfaces encapsulate various types of collections, which are shown in the figure below. These interfaces allow you to manage collections regardless of the details of their presentation. Core collection interfaces are the foundation of the Java Collections platform. As can be seen in the following figure, the interfaces of the main collection form a hierarchy ”(Yandex-translator)

The resulting translation is quite accurate, and some of the nuances are easy to catch by comparing two versions of the translation. The accompanying Figure 3 does not require translation at all - the English words in it are the names of the interfaces.

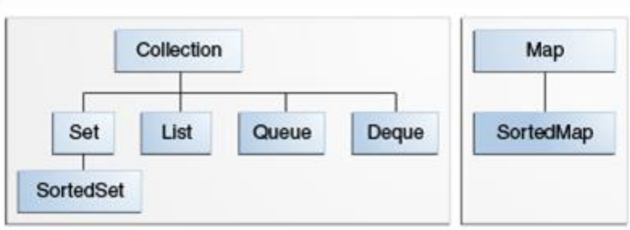
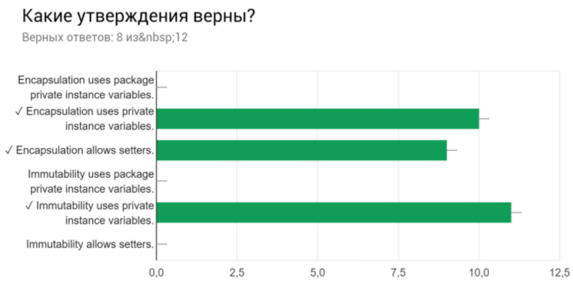


Figure 3 - The hierarchy of Java collection interfaces
(Source: https://docs.oracle.com/javase/tutorial/collections/interfaces/index.html)

The pedagogical experiment conducted in the Samara State Socio-Pedagogical University showed that the use of documentation in English in the process of studying programming (Java language) helps to master the necessary terminology and also forms the readiness of students for professional certification of the initial level, which is clearly presented in Figure 4 (question taken from materials preparing for certification). Of the 12 students surveyed, no one chose the wrong statements, 67% answered fully correctly, another 33% gave a partially correct answer.

Figure 4 - Answers to the test question of 1st year students (2nd semester) directions "Applied Informatics"



Conclusion

Thus, a number of practical examples illustrate the need and possibility of including visual elements of technical documentation in the original language (English), independent work of students with English-language sources, testing in English (as a means of preparing for certification testing of the initial level). Further work is planned in two directions: the development of an extended bilingual thesaurus on object-oriented programming with examples in Java and the formation of a set of educational materials on preparing students for the initial level of certification in English.

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