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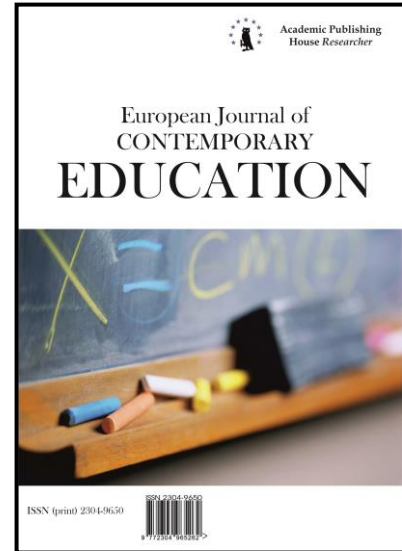
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The Problems of Contemporary Education

Improving the Universal Competence of Intercultural Interaction among University Students by Means of Fine Arts: Case Study

Irina V. Alekseeva ^{a,*}, Anna S. Frolikova ^a, Helen A. Koltsova ^a, Natalia A. Tereshchenko ^b

^a Moscow International University, Russian Federation

^b Southern Federal University, Russian Federation

Abstract

In this article the authors are substantiation the significance of the universal competence of intercultural interaction by means of the fine arts in the formation of the personality of students of the university. They are proving the urgency of the problem of this study. This problem is due to the versatility of the phenomenon of culture and art and the potential of its influence on the diverse spheres life of human. The development of intercultural interaction of students by means of the fine arts actively influences the self-determination of their personality. This allows students on the basis of cultural, spiritual, moral values to impose responsibility on themselves in decision-making in all spheres of life. This allows students to lay responsibility on themselves in making decisions in all spheres of life based on cultural, spiritual, moral values. Peculiarities of international cultures as a phenomenon of intercultural interaction are revealed through the fine arts, through artistic images. Theoretical research of intercultural interaction showed the lack of knowledge of the scientific and theoretical foundations of intercultural interaction as a universal competence by resources of fine arts. A chain of interrelated categories of intercultural interaction of the students' personality by means of the fine arts are determining by the authors of this article. The theoretical and experimental studies that were carried out convincingly prove the need for further to development and introduce into the educational process an innovative model of forming the universal competence of intercultural interaction of students of the university by resources of visual arts.

Keywords: universal competence, intercultural interaction, fine arts, students, university.

* Corresponding author

E-mail addresses: 89282715159@mail.ru (I.V. Alekseeva), agneshka90@yandex.ru (A.S. Frolikova), Elen112008@yandex.ru (H.A. Koltsova), tereshchenko68@mail.ru (N.A. Tereshchenko)

1. Introduction

Today, education is one of the most dynamic industries in Russia. Accordingly, the provision a variety of solutions for all participants in the learning process is the basic requirements for the field of education. The federal law "On Education in the Russian Federation" defines the main areas of education. In the context of this study, the authors focus on the following paragraphs of the law. In the context of this study, the authors are focusing on the following paragraphs of the law. First, it is the overcoming of ethnocentrism and various social conflicts by means of equality of national cultures. Secondly – the development of intercultural cooperation and the expansion of the scale of cultural interaction in the educational environment of Russia. The modern Russian system of higher education determines the need for a dynamic increase in the requirements for the quality of professional training of university students, which is necessary in the digital economy. Competence is an indicator of the quality of the formation of both the personality of the student and his professional possession the knowledge and the skills, which was acquiring in the learning process.

Many scientists, such as Yu.D. Artamonova, A.L. Demchuk, N.R. Kamynin, I.B. Kotlobovsky (2015), M.A. Ivanova (2018) and others, conclude on the importance and necessity of the competence approach in the transition of Russian education to a multilevel system of education with the inclusion of postgraduate studies as a third level of higher education ([Artamonova et al., 2015](#); [Ivanova, 2018](#)).

The new federal state educational standards 3 ++ indicate the necessary results of the university training of specialists in the form of universal, general professional and professional competencies. In this case, the educational standard is based on the basic requirements of professional standards developed by the Ministry of Labor and Social Protection of the Russian Federation and on the Appendix Tables to the Order of the Ministry of Labor and Social Protection of the Russian Federation of September 29, 2014 N 667n "On the Register of Professional Standards (list of professional activities)" ([Tablitsa k Prikaz Ministerstva truda i soczashhity..., 2014](#)).

V.S. Sheinbaum (2017) in its scientific research proves the need to introduce innovations in the system of universities according to professional standards (PS) in the development of a fundamental regulatory document of the university – FSES (federal state educational standard) ([Sheinbaum, 2017](#)).

Modern educational standards are aimed at the fact that graduates of higher educational institutions after graduation can carry out their professional activities in various other fields or fields. Scientists in the field of higher education pedagogy, such as V.A. Prokhorov (2018), V.S. Senashenko (2017), D.P. Danilaev, N.N. Malivanov (2017), propose to develop a new generation of standards at the principle of vocational guidance ([Prokhorov, 2018](#); [Senashenko, 2017](#); [Danilaev, Malevanov, 2017](#)).

They argue that education at the undergraduate level should be oriented towards universality in accordance with the changing social world with the harmonious interaction of universities, students and employers. At the same time, G.E. Zborovsky, P.A. Ambarov (2017) argue that the need for changes in the system of higher education is associated with the transformation of the age structure in the direction of "growing up" students, which confirms the need to appeal the FSES to professional standards. ([Zborovsky, Ambarova, 2017](#)).

Naturally, a condition under which a university graduate will be able to correspond to the level of education and the obtained Competencies of the qualification of an employee's was also defined. Cary J. Green (2015) is evidencing, that the formation of universal competencies of university graduates is one of the results of metasubject theoretical and practical knowledge, skills and abilities ([Green, 2015](#)).

This fact is directing the personality to the realization of their potential in selected him areas of future professional activity, and also it will be allows you to quickly adapt to the changing world and the conditions of interaction with society. Exactly the meta objective character of universal competencies is aimed at the ensuring of successful human life in society and the professional field of activity. The universal competencies are forming by the means of incorporating into the educational process an innovative model of their formation and development.

Higher education is aimed at meeting the demands of society for the formation and development of graduates the universal competencies of personal and socially significant which are

based on the general cultural qualities necessary for a wide range of activities. On is assumed that the universal competences of the new educational standards should be the basis for professional competencies, so they are united according to the levels of education for all areas, such they are metasubjects. It should be noted that UK-5 is forms and develops the basics of mastering the ability of intercultural interactions. The development of these abilities is influencing actively for the self-determination of the personality of students. It allows them on the basis of cultural, spiritual, moral values, which they have formed, to take responsibility on themselves for decision-making by them. Confirmation of this we are found in the article by E.O. Ivanova (2018) "Formation of the universal competences of students in the process of research activity" (Ivanova, 2018).

The FSES of the new generation 3 ++ are states that a graduate of the undergraduate level in the process of studying at a university should form the ability to perceive the intercultural diversity of society in a sociohistorical, ethical, and philosophical context. Undergraduates at the end of the university must possess the ability to analyze and take into account the diversity of cultures in the process of intercultural interaction. Thus, the universal competence of the category of intercultural interaction is formed not by the means of teaching a meaningful level, but when addressing integration of its innovative model developed on the basis of the communicative features of the visual arts as a nonverbal communication language into the integral educational process. Additional opportunities for the spiritual and moral development of a creative personality, the formation of aesthetic culture, the deepening of knowledge of national traditions, international artistic culture and the dissemination of the cultural experience of its people, are arising in the process of intercultural interaction, that is, free cooperation and communication between students of different nations and nationalities.

The relevance of the formation of students' universal competence of intercultural interaction is due to the diversity of the phenomenon of culture, the potential of its impact on various spheres of human life. Multifaceted national cultures of the modern world are able to exchange and interact through the artistic values of fine art in the modern multipolar world. Possession of skills of intercultural dialogue and cooperation through communicative features of fine arts form the basis of intercultural interaction of different peoples in a multicultural society.

The purpose of this article is the need to identify the value of the category of intercultural interaction as a universal competence in the formation of the personality of students by means of fine arts for quality training of graduates of higher educational institutions of Russia. It is through intercultural interaction that the process of formation of self-determination of the personality of students takes place, which allows them to develop the ability to make decisions based on their cultural and moral values. The degree of interaction between ethnic cultures is associated with the degree of universal understanding of the language of fine arts. The artist through his work conveys the features of cultural paradigms and reflects his view on the various settings available in the culture of his people, taking into account modern artistic and cultural realities.

To achieve the purpose of the study, it is proposed to consider a chain of interrelated categories that will lead to the formation of intercultural interaction of the individual by means of fine arts: from the definition of national culture, through the types of fine arts to the dialogue of cultures through the disclosure of the artistic image to a universal understanding of the non-verbal language of fine arts, which has a special impact on the very determination of the individual (Figure 1).



Fig. 1. Chain of interrelated categories of intercultural interaction of personality by means of fine arts

The theory of intercultural interaction as communication by means of fine arts is widely used in the field of art studies, cultural studies, psychology of perception, psychology of creativity, sociology, but we note that it has not previously fallen into the sphere of educational interests.

The hypothesis of this study is the following assumption. The development of intercultural interaction as a universal competence in a student multicultural group will be effective if:

- to decide on the concepts of "intercultural interaction", "fine arts»;
- to define theoretical and methodological approaches to intercultural interaction as a universal competence;
- to identify the most significant problems in the multi-ethnic team of the student group, creating obstacles to their intercultural interaction;
- to identify from the various arts, the most effective and accessible for a better understanding of culture and traditions, both their own and other people;
- to determine the importance of the universal competence of intercultural interaction in the formation of the personality of students.

The relevance of the research emphasizes the need to disclose and substantiate the value of the universal competence of intercultural interaction in the formation of students' personality by means of fine arts.

2. Materials and Methods

Theoretical studies of intercultural interaction as a universal competence by means of fine arts. The degree of knowledge of the problem.

The theory of "dialogue of cultures" presented by M. M. Bakhtin and further developed by V.S. Bibler serves as a philosophical methodological basis for the study of intercultural interaction in the context of this study. The philosophical concept of the theory is the continuous interaction between different cultures of the world, which are in interpersonal and intercultural dialogue. The theory of V.S. Bibler (1991) is also relevant in the XXI century, as all the decisive events of life and consciousness of people are imbued with the phenomenon of culture (Bibler, 1991).

"Dialogue of cultures" by M.M. Bakhtin and V.S. Bibler is a methodological basis for the formation of a harmonious personality in the process of integration study of world art culture, where "dialogue" is presented as a form of being that determines the existence of man and makes it human. N.K. Ikonnikova (1995) was studied a number of models for the analysis of communication and interaction in a multicultural environment, which are based on methodological traditions in anthropology and sociology of culture of different peoples: positivist-behaviorist and hermeneutic (Ikonnikova, 1995). And also reveals the mechanisms of intercultural perception from the point of view of sociological research. The issue of ethno-cultural interaction of the peoples of the North Caucasus in the context of globalization is considered by S. Yu. Ivanov (2001). Yatsenko E. (1999) expanded the scope of the study of cultures of East and West, and analyzed their interaction (Ivanova, 2001; Yatsenko, 1999).

The problem of the emergence, development and interaction of cultures under the influence of other peoples, in particular the influence of the culture of the East, attracts the attention of foreign scientists. Note the work of A. Pekerti & David Thomas (2003) Communication In Intercultural Interaction. The authors were studied communicative sociocentric styles of behavior of East Asians and idiocentric styles of Anglo-European new Zealanders (Pakeha) in intercultural interactions. According to the results of the study, they concluded that the basis of intercultural interaction and the degree of moderation of these interactions is the process of communication between different cultures. A. Pekerti and D. Thomas (2003) recommend to increase intercultural business interaction of the peoples of the East and Asia by means of adaptation of one culture to another (Pekerti, Thomas, 2003). Lee & Gudykunst (2001) argue that respondents perceive cultural similarities more qualitatively than their differences, which in turn contributes to a positive attitude towards representatives of other cultures (Lee, Gudykunst, 2001).

Such domestic scientists as H.A. Avseenko, V.R. Messenger, J.A. Verkhovskaya and V.V. Glukhov, A.I. Kravchenko, S.G. Popov, S.P. Samygin, Y.P. Tan, E. Utkin, V.E. Chernikova, N.I. Yankina and others have considered the concept of the nature of cultural features and national characteristics of different peoples, the methods and principles of social and intercultural communication, interethnic contacts as the basis of managing people. A similar problem was investigated by foreign scientists: R. Akoff, K. Bowman, P. Draker, T. Peters, R. Penton, W. Ouchi, R. Watman and others. The development of conceptual models of intercultural relationships was provided by foreign researchers: F. K. Bock, W. Gudykunst, I. Kim, Kurogi, Spitzberg B., Ting-Toomey. Intercultural interaction was considered as a system of mutual exchange of concepts that reveal the uniqueness of the culture of different peoples. Also noted is the awareness of the personality of the uniqueness of the culture of their own ethnic group. The emergence of socio-

cultural phenomenon as an intercultural dialogue taking place in the conditions of interaction between peoples and ethnic groups of different countries, develops the process of intercultural interaction. Intercultural dialogue provides an opportunity to learn other values and cultures aimed at the formation of a system of multicultural contacts and interactions. But the semantics of the word "interaction" means not only the perception of another culture of another ethnic group, but also the transfer of national traditions and culture of their people. History has proved that closed from the world culture, aimed only at the absorption of information and cultural values from the outside is rejected by the world community.

The category of interaction is generic with respect to national cultures and the concept of "interaction". Interaction takes place in the process of intensive development of relations between different cultures. In the context of this study, it is assumed that intercultural interaction allows to understanding the process of development of national cultures to specific aspects of reality and artistic images, different in quality cultural formations, original and unique in content. Intercultural interaction leads to the synthesis of cultures, that is, to the combination and connection of various elements into a single whole of a new cultural phenomenon, but qualitatively different from the totality of their components.

It should be noted that the authors of the article are inclined to the theory that intercultural interaction is a comprehensive category in comparison with the concept of intercultural communication, since it is characterized not only by ethnic composition, but also by space with time and the era of this intercultural interaction.

Although there is a different view of the problem of interaction as communication. Modern Russian science pays special attention to this, which is reflected in the works of V.I. Sharkov "Fundamentals of communication theory", G.G. Pocheptsov "Theory of communication", A.V. Sokolov "Introduction to the theory of social communication" and others.

However, the issues related to the interaction of means of fine art in the presented works are given little attention and are not disclosed in the complex. The study of intercultural interaction of students by means of fine arts in the formation of their personality includes a psychological aspect, as it is associated with the result of the perception of national culture and its artistic values. A special role in the study of intercultural interaction and artistic communication by means of art belongs to research in the field of psychology of creativity. Theoretical conclusions contained in the works of D.A. Leontiev "Introduction to the psychology of art", R. Arnheim "New essays on the psychology of art", L.S. Vygotsky "Psychology of art", E.P. Krupnik "Psychological impact of art", V.S. Kuzina "Psychology of painting" reveal the nature of art and its essence, considering fine art as one of the ways of emotional expression or representation, which causes aesthetic pleasure. Psychologists reveal such a key function of artistic communication as catharsis. According to scientists S. H. Rappoport, V.E. Semenov and others, it is fine art that contributes to the creation of emotions on the part of the author and their perception by the viewer, which serves as the basis of artistic communication. The communicative potential of art in the works of M. Heidegger is revealed in the context of his General language theory, which allows us to understand the ability to translate the world of "sensory manifestation" and "hidden essence". According to the presented theory, the intercultural interaction of the work of fine art and the viewer allows the latter to touch the open space of the essence of being of a certain ethnic group at a certain time.

Knowledge of the psychology of creativity, as well as the psychology of art, are the basis for a comprehensive understanding of the value of intercultural interaction by means of fine arts in the formation of the personality of University students. Intercultural interactions and interrelations are based on individual, specific worldviews of each nation.

It is necessary to take into account the specifics of the national consciousness of representatives of different ethnic groups and cultures, which reveals the problem of intercultural interaction. It is these national features that often create obstacles and barriers to intercultural interactions, which is emphasized by I.I. Tolstikova (2009) in the article "Communicative contexts of intercultural interaction" (Tolstikova, 2009).

The possibility of contact and dialogue between different cultures is linked to the unity of their structure. This emphasizes the main role of fine arts in the sphere of rapprochement of international cultures. For this research the works of I.A. Mankevich (2005) "The Phenomenon of artistic communication in the context of cultural knowledge" and V.E. Semenov (1995) "Art as interpersonal communication" are relevant (Mankevich, 2005; Semenov, 1995).

They present artistic and communication processes and reveal the features of artistic communication in various fields of art – literature, music and others. Visual art is both a process and a result of the expression of the artist's inner world through the artistic images created by him, which reflect his emotions and feelings. Considering art through the prism of its cultural analysis, T.F. Kuznetsova (1995) comes to the conclusion that the specificity of art is to identify the typology of socio-cultural meanings and their dynamics, taking into account the integrity of cultural space and interaction with cultural phenomena (Kuznetsova, 1995).

Art in the evolution of aesthetic norms and social assessments began to be called activity, which is aimed at creating expressiveness and aesthetics of forms according to ideals. Fine art allows the artist to convey his ideas, emotions, moods, impressions, feelings, messages to humanity by non-verbal means when using a wide range of different symbols, shapes, colors, textures, etc. Through images with symbolic meanings as a set of artifacts, art serves as a means of non-verbal communication. Cross-cultural interaction by means of fine arts implies the existence of an integral system consisting of objects of forms and structures aimed is at identifying the fine art language.

Semantic information and emotional shade in the painting conveys the colour, light and shadow, form, atmospheric perspective, expression of the stroke, etc. But it should be noted that different interethnic cultures have different non-verbal means of information exchange. In the course of the study, the authors focused on education as a mechanism for the exchange of intercultural values, as a universal competence. To date, not only students, but even University entrants in the opinion of Z. Zhu (2004) should have the ability to plan, acquire knowledge and possess the skills to manage them (Zhu, 2004).

In connection with necessity of formation and development in the learning process of students of ethnic, national, religious tolerance, expanding horizons in promoting intercultural interaction will allow them to abandon stereotypes and to acquire socio-cultural skills of communication, Lustig Myron W., Koester Jolene (2010) (Lustig Myron, Koester Jolene, 2010).

Universal competencies are metasubject in nature, which allows graduates to achieve success and high quality of life in their chosen professional field and the relevant society. We find confirmation of this in articles R. Nelson-Jones (2002) and Sharma Prashant (2018). N.S. Valeyeva, E.R. Valeyeva, R. Kupriyanov (2017) in their research focus on the fact that the means of development of universal competences of students achieved meta-subject results and forms of their activities. A.V. Kupavtseva (2018) in the article on thematic clusters in education emphasizes that it is aimed at joint scientific and educational activities of students and teachers to achieve a common educational goal (Nelson-Jones, 2002; Prashant Sharma, 2018; Valeyeva et al., 2017; Kupavtsev, 2018).

In the course of studying the problem of research, the authors used General scientific methods of categorical research: analysis, synthesis, questioning, deduction, induction, experiment. As well as the method of philosophical and art criticism analysis of works of art of various interethnic cultures.

In the formations course of sampling, strategies were used to attract real multi-ethnic groups of students of the first and second courses of the University as experimental and control groups to conduct a natural experiment, which was carried out in the usual environment for the test.

In the course of experimental research in the work with students of the experimental group used an innovative blaze-method aimed at the development of creative thinking of the individual, so as the universal competence of the criminal code-5, aimed at the development of mental operations in the field of intercultural interaction. Features and technologies of the innovative blaze-method application in the educational process of University students are described in the scientific study I.V. Alekseeva, N.I. Barsukova, V.I. Pallotta, N.A. Skovorodnikova (2017) (Alekseeva et al., 2017).

It should also be noted the use of the Fisher angular transformation method in the course of processing the results of the experiment. Fisher angular transformation method was used as a method of statistical analysis.

The analysis of scientific theoretical research and the degree of scientific development of this problem allows us to conclude that, despite the abundance of publications on various aspects of the dialogue of cultures, intercultural communication, psychology of perception of fine arts and features of universal competencies, the problem of intercultural interaction of University students

by means of fine arts is currently not solved. Although the practice of interaction of cultures is most optimally carried out through the function of fine arts.

3. Results

In this article, the authors presented the results of the research on the problem of formation of universal competence of intercultural interaction of University students by means of fine arts in educational and professional contexts.

The authors conducted an ascertaining stage of the experiment on the basis of ANOVO "Moscow International University" which has the necessary conditions for its organization and conduct, including a survey of students. It involves the identification of the problem and its diagnosis, confirmation or refutation of the need for further development of a model for the formation of universal competence of intercultural interaction of University students by means of fine arts. The formative and constructive stages of the experiment in the future will cover a wider range of different universities and possibly not only Russian. In the modern world, a significant problem for other countries, as well as for Russia, is the national migration of peoples of different countries. For the Russian Federation, the issue of "pendulum" migration from the countries of the "near" abroad: Ukraine, Kazakhstan, Uzbekistan, Tajikistan and others is relevant. Pendulum migration involves the regular movement of the population associated with work or study. Student groups studying at the MIU ("Moscow International University"), consist of the peoples of the near abroad: Kazakhstan, Uzbekistan, Ukraine, Georgia, etc. it should be noted and students from different ethnic regions of Russia, such as Dagestan, North Ossetia-Alania, Chechen Republic, etc.

The purpose of the ascertaining stage of the pilot study was:

- the need to determine the real state of intercultural relations in student groups and at the University;
- in the determining the most complex cross-cultural relationships and identify problems for their further solution;
- in the development of pedagogical conditions for the formation of universal competence of intercultural interaction in the development of students' personality by means of fine arts.

To determine the real state of intercultural interaction in student groups, a questionnaire and individual interviews were conducted. Our task was to identify the most significant problems in the multiethnic team of the group and the University as a whole, creating obstacles to intercultural interaction of students of different nationalities.

It should be noted that the most multi-ethnic groups of students of the first and second courses were chosen. A total of 53 people (100 %) participated in the sample. Of these, 21 students from Kazakhstan (39.6 %), 8 from Uzbekistan (15 %), 3 from Dagestan (5.6 %), 2 from the Chechen Republic (3.8 %) and 19 people of Slavic nationality (36 %). Thus, we can speak about the representativeness of the sample, since polyethnicity is revealed in the percentage of Slavs (36 %) to other nationalities (64 %) with different traditions and different culture (Figure 2)

In these conditions, it is possible the emergence of misunderstanding and the emergence of various prejudices against fellow students of a different religion, nationality and culture, respectively. One of the questions in the questionnaire was connected with the clarification of the terms of adaptation in the multiethnic staff of the student group. It was necessary to answer from 5 – less than one month to 1 – more than six months.

Data processing has led to the following results. Due to the lack of a language barrier between the respondents of Kazakh and Slavic nationality, as well as the peoples of the North Caucasus, the period of adaptation was within one to two months. While students from Uzbekistan, who are not fluent in Russian, have adapted longer period, from six months to a year.



Fig. 2. National composition of students of primary courses of “Moscow International University”

The next question was related to the problems of intercultural interaction and inter-ethnic communication. What are the difficulties of misunderstanding faced by students, being in a foreign cultural environment by representatives of other nationalities, if this happens. And what factors this is due to: ignorance of the mentality of another people, the differences in national temperaments, ignorance of the peculiarities of the national traditions of other cultures, ignorance of religious characteristics of another nation, the lack of format (points of contact) intercultural interaction.

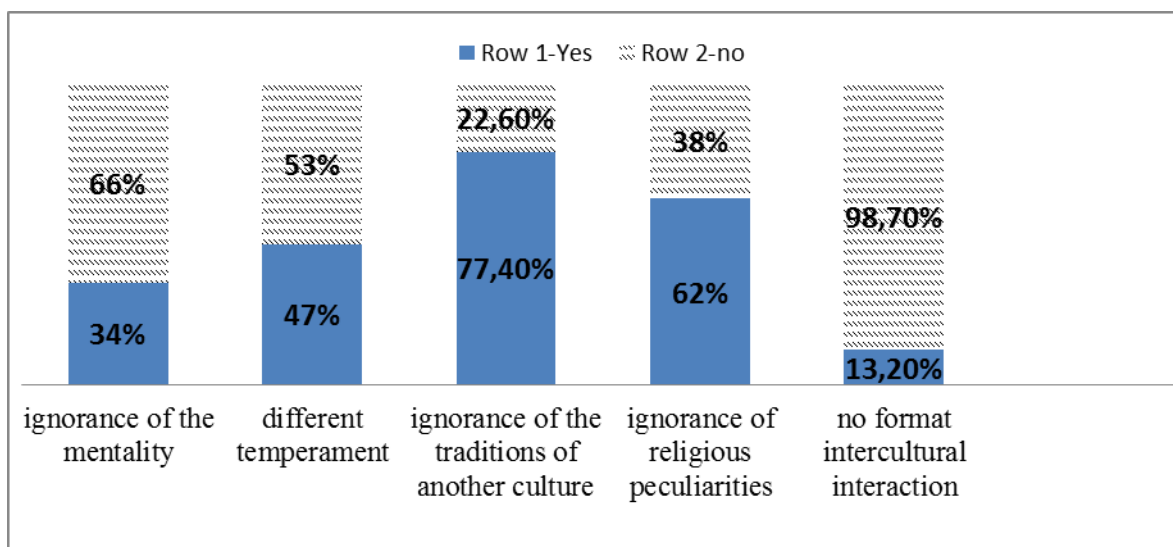


Fig. 3. Critical factors in the emergence of the difficulties of intercultural communication in the multiethnic group of students

The authors obtained the following results presented in [Figure 3](#) and they accentuate on two main indicators. The first indicator, which causes difficulties of intercultural interaction in a multi-ethnic group of students, was noted by 77.4 % of respondents. This is ignorance of the peculiarities of national traditions of another culture. The lack of knowledge in this area justifies the need to develop a model aimed at the development of universal competence of intercultural interaction of students, which forms the skills of their cognitive and creative activity in the future profession, based on national traditions of cultural positions.

The use of such an innovative model in the educational process will help to cope with the difficulties of misunderstanding of students who find themselves in a foreign cultural environment on the part of representatives of other nationalities. It should be noted that the indicator of ignorance of religious features of another nation, defined in 62 %, is somewhat interrelated with the peculiarities of national traditions of both their own and other cultures. The indicator of 13.2 %, which characterizes the lack of points of contact of intercultural interaction of students in a foreign

cultural environment, looks optimistic. This emphasizes the respondents' optimistic view of 86.8 % on the desire to establish friendly contacts, be ready for a dialogue of cultures and build intercultural interaction in the group. Thus, the relevance of this problem of the research of intercultural interaction is confirmed. From the above data there is a need to identify different types of arts as a means of intercultural interaction.

Students are asked to answer the question: "What kinds of art are closer to you for a better understanding of the culture and traditions of your and other people: literature, cinema, theater, fine arts and crafts." Respondents in the number of 53 students had to choose a single art form from the four presented or choose "other", if not satisfied with the proposed options. Respondents' answers are presented graphically in the diagram in Figure 4.

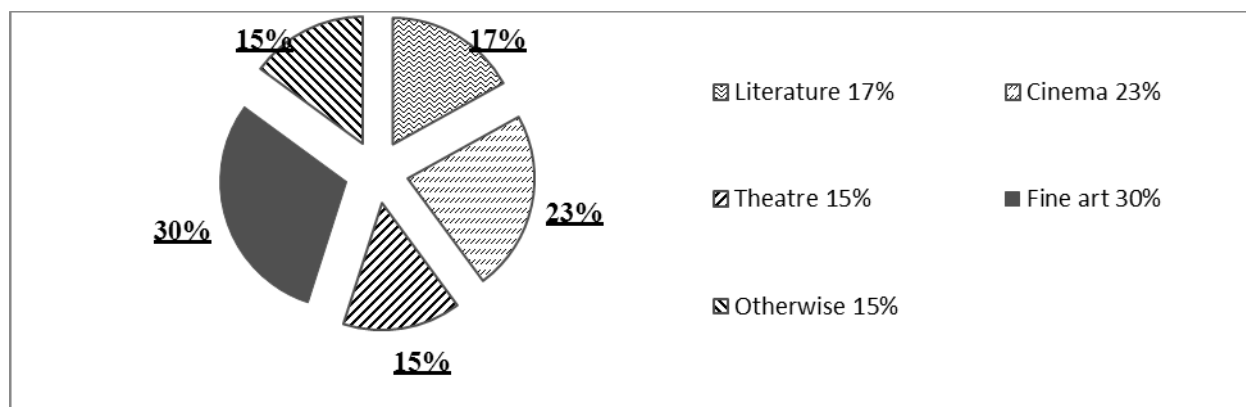


Fig. 4. Data of respondents' answers to the question: "What kinds of art are closer to you for a better understanding of the culture and traditions of your and other nation?"

The authors identified the following indicators. The art of cinema was chosen by 23 % of students, the art of literature – 17 %, 15 % – theater and "other". And the largest sample of 30 % corresponds to the fine arts, which includes monumental art, which is most accessible to the understanding of culture and tradition, both their own and other nation. In conversation it became clear that feature films and documentaries of gaming films or are far from transfer of cultural traditions of their people or not fully reflect the real reality. The same attitude is to the theater.

As for literature, the modern youth is more interested in the fantasy, not novels describing the traditions and culture of peoples. The study revealed that the artistic image of works of fine art, whether graphics or painting, monumental art and others are the most accessible means of intercultural interaction of students. It is through the works of fine art of their own and other people by the recipient understand the meaning of intercultural dialogue and cooperation by means of the results of fine art.

The skills of intercultural dialogue and cooperation through the communicative features of fine arts are the basis of interaction between different Nations in a multicultural society. This is due to the peculiarities of visual communication as figurative. The artistic image created by the artist is presented to the viewer to read the necessary information. Thus, artistic and figurative communication takes place as a form of intercultural exchange, which is transmitted by the artist to the viewer and the viewer back to the world around them. This present exchange becomes an aesthetic intercultural interaction.

Students' perception of different cultures of different nations in a multicultural society is carried out by means of comparing the national elements of the traditions of another nation in the visual arts. It is during the period of comparison that the process of thinking and understanding of the national features of another culture takes place.

Knowledge of the fine arts and culture of another nation is based on the emotional and intellectual activity of the viewer, which allows you to systematically accumulate knowledge about the cultural values that are necessary for building intercultural interaction. Scientists have found that knowledge is absorbed better and faster in the process of creative, educational or practical activities. Accordingly, the study of national culture in a multicultural society the assimilation and

understanding of the new takes place on the basis of creative thought processes associated with the non-verbal language of fine art. The degree of significance is determined by the level of understanding of the non-verbal language of fine arts as a sphere of cultural, artistic and creative communication, as a way of implementing the information communication between the sending artist and the receiving viewer. Qualities of perception of the picture pictures are integrity, decorative, “stylizowane”, expressiveness, “arhitektonicznost” and others. The language of fine art, as the richness of the artistic image consists of the components of clarity, emotional and semantic load, visual perception and persuasiveness for the viewer perceiving it. Color in the visual arts reveals the essence of the visual work and serves as his most specific quality.

But there are some nuances. The process of national-cultural interactions depends on the degree of involvement of the national treasures of the past to contemporary conditions of life. Intercultural interaction has a bilateral character, as it is a bilateral interdependent process, which mutually affects the changes in the content, state, function of one culture to another. In other words, there is an interaction between the two cultures. Fine art has been and remains the main means of establishing a dialogue of cultures in the development of intercultural relations. For thousands of years there has been a complementarity and mutual enrichment of cultures of different peoples and religions, which allows us to see the unique mosaic of our civilization as it is now. The process of interaction is not always uniform and positive. There are inter-ethnic tensions and clashes between different cultures, which greatly limit the nature of intercultural interaction.

The authors at the beginning of the study asked the following question to respondents of different nationalities: “What emotions do you feel when contemplating a work of art that reflects the national traditions of its people and the other?”. At the same time, three answers were given: positive (delight and admiration), negative (irritation, anxiety, envy), no what (indifference, nothing touched my soul).

The results of the degree of emotional perception of works of fine art by respondents of different nationalities are shown in the diagram in [Figure 5](#). Positive emotions experienced 71.7 % of students, contemplating works of art with pronounced national traditions of their people.

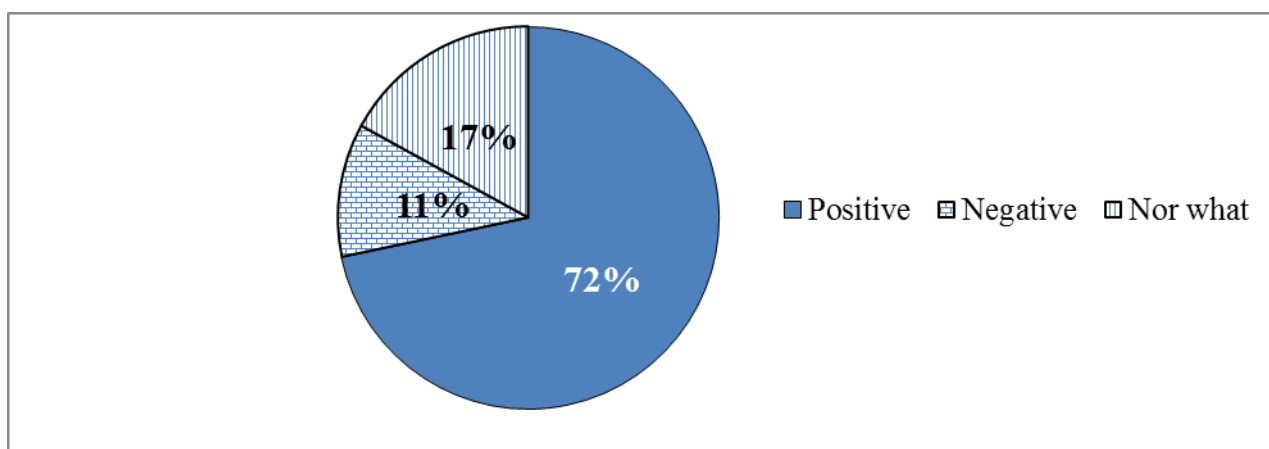


Fig. 5. Results of the degree of emotional perception of works of fine art by respondents of different nationalities

11,3 % of respondents experienced negative emotions when contemplating creative visual works with national characteristics, explaining the oversaturation of the perception of traditional national culture. 17 % of students remained indifferent, which is not a barrier to intercultural interactions. Because they are convinced that the national art is yesterday and we must move with the times, that is, to contemplate contemporary art or at least abstract art. It is what makes a person think and reflect on the content of a work of art.

These data confirm the need to include in the educational process of the University innovative technologies of formation of universal competence of intercultural interaction by means of fine arts students as a factor in the formation of their personality. Universal competence of the

UC-5 belongs to the category of intercultural interactions according to the Federal state educational standard of the new generation 3++.

The authors developed indicators of achievement of this universal competence of intercultural interactions:

- 1) The level of knowledge in the field of intercultural national traditions and art of modern society and its diversity;
- 2) The level of skills to navigate in intercultural traditions and artistic values, to build professional interaction taking into account the General culture and artistic and aesthetic values of representatives of different social groups, Nations, religions and ethnic groups; perception of intercultural diversity of society in the art, spiritual, moral, ethical, national contexts;
- 3) The level of possession of the ability to initiate creative multinational and interethnic interaction, perception of cultural diversity of the country and the peoples of other States.

Table 1. Indicators of achievement of are levels of formation of universal competence of intercultural interaction of University students

Levels UC-5	Indicators of achievement	Score in points
Low UC-5.1	correlates with the level of basic knowledge gained by students in the field of intercultural national traditions and art of modern society and its diversity	1-50
Medium UC-5.2	correlates with the level of students ' skills to navigate the intercultural traditions and artistic values, to build professional interaction taking into account the General culture and artistic and aesthetic values of representatives of different social groups, Nations, faiths and ethnic groups; the ability to perceive the intercultural diversity of society in the art, spiritual, moral, ethical, national contexts	51-80
High UC-5.3	it is correlated with the level of ownership of the ability to initiate creative multinational and interethnic interaction; the ability to adequately perceive the cultural diversity of their own and other people; the ability to establish an interethnic dialogue of cultures as a way of transferring intercultural traditions and artistic values in professional interaction.	81-100

At the beginning of the experimental study, the results of the formation of the universal competence of intercultural interaction by means of fine arts in the development of the personality of University students were mainly of low level. The experiment is conducted in are combined control and experimental polyethnic groups of approximately the same composition of students. There are 28 students in the control group and 25 in the experimental group. Students of the international group showed minimal knowledge about the culture and art of their people, which is insufficient for the organization of the process of intercultural interaction among students in a multicultural group. The data are presented in [Table 2](#).

The authors, using the Fisher angular transformation method, came to the conclusion. Upon [Figure 6](#) graphically shows the axis of importance of students' perception of international culture in a multicultural society at the beginning of the experiment.

Table 2. Results at the beginning of the experiment to assess the levels of universal competence of intercultural interaction of University students

Group	"There is an effect UC-5": the problem is solved	"No effect UC-5": the problem is not solved
	Number of test subject	Number of test subject
1 the experimental group 25 person (100 %)	8 (32 %)	17 (68 %)
2 control group 28 people (100 %)	10 (35,7 %)	18 (64,3 %)

The above indicators at the beginning of the experimental study are in the zone of insignificance, according to the results of the empirical value $\varphi^* = 0.287$, which is in the zone indicated by the hatching on the axis of significance of Figure 6 and is rejected by H1.

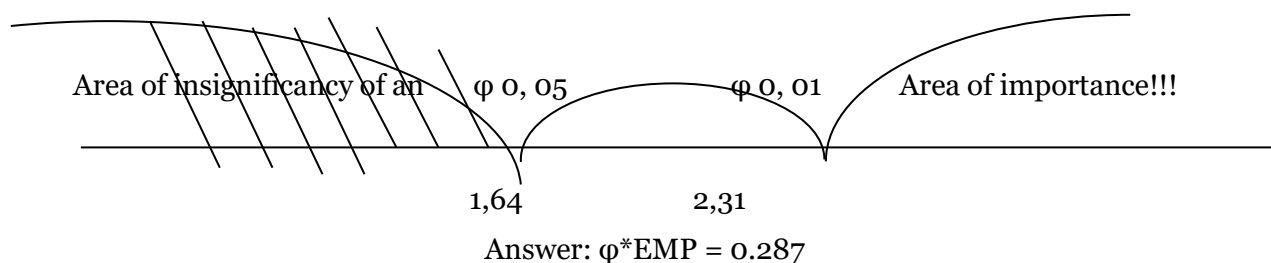


Fig. 6. The Axis of significance of the perception of the students of international culture in a multicultural society student group at the beginning of the experiment

During the year, the authors during the training of students of the experimental group in the disciplines of art history, history of fine arts, the basics of self-education, professional ethics were included topics on folk art, fine arts of different times and peoples with an emphasis on the creativity of peoples whose students are trained in a multi-ethnic group. In addition to the content, a variety of forms, methods, principles were used, as well as effective conditions for the training of students of an international group were identified. At the end of the school year, a control slice was carried out according to the criteria noted in Table 1.

Table 3. The result of the control stage to assess the levels of universal competence of intercultural interaction of University students

Group	"There is an effect UC-5": the problem is solved	"No effect UC-5": the problem is not solved
	Number of test subject	Number of test subject
1 the experimental group 25 person (100%)	15 (60 %)	10 (40 %)
2 control group 28 people (100%)	12 (42,8 %)	16 (57,2 %)

The results of the control stage to assess the levels of universal competence of intercultural interaction of University students are presented in Table 3. The result of 60 % (relative to 32 % initially) showed the effectiveness (28 %) of the formation of universal competence of intercultural

interaction by means of fine arts in the development of the personality of students of the experimental group.

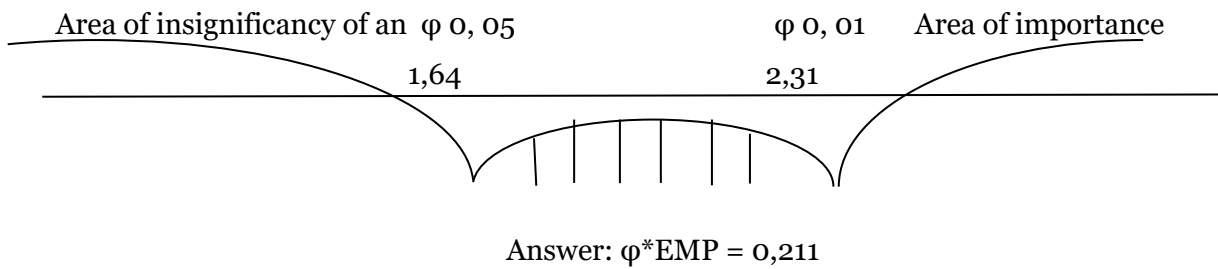


Fig. 7. Significance axis the formations of the universal competence of intercultural interactions through art in the personality development of the students

Although the obtained empirical value φ^*EMP is in the uncertainty zone and is equal to 0.211. The hypothesis is accepted: H_0 is rejected, which is noted on the significance axis of figure 6., where the proportion of students who show the studied effect in sample 1 is not greater than in sample 2. This is clearly reflected in [Figures 6 and 7](#).

This fact further emphasizes the significance of the universal competence of intercultural interaction by means of fine arts in the formation of the personality of university students and the novelty of this study. The question of the importance of intercultural interaction in the formation of the personality of University students is currently relevant both at the theoretical and practical level. Cross-cultural interaction is optimally produced by means of fine arts as available for each non-verbal language.

4. Discussion

The authors' research confirmed the initial hypothesis of the need for the development of intercultural interaction as a universal competence in the student multicultural group by means of fine arts. The results of the study led to the following conclusions. The theoretical study of intercultural interaction showed that this problem has a significant scientific basis and is considered from different points of view of humanitarian knowledge. However, the scientific and theoretical foundations of intercultural interaction as a universal competence by means of fine arts have not been sufficiently studied. The authors define a chain of interrelated categories of intercultural interaction of students' personality by means of fine arts.

In general, in the ANOVA "Moscow International University" I have developed the necessary conditions for intercultural interaction by means of fine art. This is confirmed by the students' interest in national traditions and culture of other Nations, awareness of the need to study the theory and history of art as a language of non-verbal communication.

The test results revealed the problems in the student multi-ethnic group, creating obstacles to their intercultural interaction, which are: – in ignorance of the national traditions of another culture; – in ignorance of the religious characteristics of another nation; – in the difference of national temperaments; – in the lack of understanding of the mentality of another people. The test results prove that the most effective and accessible for a better understanding of the culture and traditions of both their own and other people from different arts is the visual arts as a language of non-verbal communication.

Indicators of achievement of level of formation of universal competence of intercultural interaction of students of higher education institution are developed.

5. Conclusion

The results of theoretical and experimental research convincingly prove the need to develop and implement in the educational process of the University an innovative model of formation of universal competence of intercultural interaction of students by means of fine arts.

All the above mentioned conclusions of this study emphasize the importance of the universal competence of intercultural interaction by means of fine arts in the formation of the personality of students of a multi-ethnic group.

References

- [Alekseeva et al., 2017](#) – *Alekseeva, I.V., Barsukova, N.I., Pallotta, V.I., Skovorodnikova, N.A.* (2017). The innovation blaze-method of development professional thinking designers in the modern higher education. *European Journal of Contemporary Education*, 6(4): 615-626.
- [Artamonova et al., 2015](#) – *Artamonova, Yu.D., Demchuk, A.L., Kamynina, N.R., Kotlobovskii, I.B.* (2015). Rossijskaya sistema vysshego obrazovaniya v Bolonskom processe (po materialam Nacional'nogo doklada Rossijskoj Federacii dlya ministerskoj konferencii EAES) [Russian Higher Education System in the Bologna Process (On the Materials of the Russian Federation National Report for the EHEA Ministerial Conference)]. *Vysshee obrazovanie v Rossii*, 8/9: 46-53. [in Russian]
- [Bibler, 1991](#) – *Bibler, V.S.* (1991). Ot naukoucheniya – k logike kul'tury: Dva filosofskih vvedeniya v dvadcat' pervyj vek [From science – to the logic of culture: Two philosophical introduction to the twenty-first century]. M.: Politizdat, 413 p. [in Russian]
- [Green, 2015](#) – *Cary J. Green* (2015). Leadership and Soft Skills for Students: Empowered to Succeed in High School, College, and Beyond. Smith Publicity, Dog Ear Publishing, P. 164.
- [Danilaev, Malevanov 2017](#) – *Danilaev D. P., Malevanov N. N.* (2017). Sovremennye usloviya i struktura vzaimodejstviya vuzov, studentov i rabotodatelej [The modern conditions and the structure of interaction between universities, students and employers]. *Higher education in Russia*, 6 (213): 29-35. [in Russian]
- [Ikonnikova, 1995](#) – *Ikonnikova, N.K.* (1995). Mekhanizmy mezhkul'turnogo vospriyatiya [The mechanisms of intercultural perception]. *Sociologicheskie issledovaniya*, 11: 26-34. [in Russian]
- [Ivanova, 2001](#) – *Ivanova, S.Yu.* (2001). K voprosu ob etnokul'turnom vzaimodejstvii. Severnyj Kavkaz v usloviyah globalizacii [On the issue of ethno-cultural interaction. The North Caucasus in the context of globalization]. Rostov-na-Donu, pp. 140-144. [in Russian]
- [Ivanova, 2018](#) – *Ivanova, E.O.* (2018). Formirovanie universal'nyh kompetencij studentov v processe nauchno-issledovatel'skoj deyatel'nosti [Formation of universal competences of students in the process of research activities]. *Yaroslavskij pedagogicheskij vestnik*, 5: 146-156. [in Russian]
- [Ivanova, 2018](#) – *Ivanova, M.A.* (2018). Bolonskij process i samostoyatel'nost' studentov: rossijskaya specifika [Bologna process and independence of students: Russian specificity]. *Vysshee obrazovanie v Rossii*, 27/3:48-58. [in Russian]
- [Kupavtsev, 2018](#) – *Kupavtsev, A.V.* (2018). Tematicheskie klasteri v obrazovanii [Thematic clusters in education]. *Vysshee obrazovanie v Rossii*, 27/11: 85-89. [in Russian]
- [Kuznetsova, 1995](#) – *Kuznetsova, T.F.* (1995). Kul'tura: teoriya i problemy [Culture: theory and problems]. M.: Znanie, P. 52. [in Russian]
- [Lee, Gudykunst, 2001](#) – *Lee, C.M., Gudykunst, W.B.* (2001). Attraction in initial interethnic interactions. *International Journal of Intercultural Relations*, 25: 373-387.
- [Lustig Myron, Koester Jolene, 2010](#) – *Lustig, Myron W., Koester, Jolene* (2010). Intercultural Competence: Interpersonal Communication. Across Cultures Pearson, Boston, 6th Edition: 400.
- [Mankevich, 2005](#) – *Mankevich, I.A.* (2005). Fenomen hudozhestvennoj kommunikacii v kontekste kul'turologicheskogo znaniya: opyt postroeniya konceptual'noj modeli [The Phenomenon of artistic communication in the context of cultural knowledge: the experience of building a conceptual model]. *Sovremennye problemy mezhkul'turnyh kommunikacij: sb. statei*. SPb.: SPbGUKI, 68-75. [in Russian]
- [Nelson-Jones, 2002](#) – *Nelson-Jones, R.* (2002). Are there universal human being skills? *Counselling Psychology*, 15(2): 115-119.
- [Pekerti, Thomas, 2003](#) – *Pekerti, A., Thomas, David* (2003). Communication In Intercultural Interaction. *Journal of Cross-cultural Psychology – J CROSS-CULT PSYCHOL*, 34: 139-154.
- [Prashant Sharma, 2018](#) – *Prashant Sharma* (2018). Soft Skills-Personality Development For Life Success. *BPB publications*: 236.

[Prokhorov, 2018](#) – *Prokhorov, V.A.* (2018). Professional'nyj standart i FGOS bakalavriata [Professional standard and baccalaureate GEF]. *Vysshee obrazovanie v Rossii*, 1/219: 31-36. [in Russian]

[Semenov, 1995](#) – *Semenov, V.E.* (1995). Iskusstvo kak mezhlichnostnaya kommunikaciya (Social'no-psihologicheskaya koncepciya) [Art as interpersonal communication (Socio-psychological concept)]. SPb: Izd-vo SPbGU, 200 p. [in Russian]

[Senashenko, 2017](#) – *Senashenko, V.S.* (2017). O reformirovanii otechestvennoj sistemy vysshego obrazovaniya: nekotorye itogi [On the reform of the national system of higher education: some results]. *Vysshee obrazovanie v Rossii*, 6: 5-15. [in Russian]

[Sheinbaum, 2017](#) – *Sheinbaum, V.S.* (2017). Mezhdisciplinarnoe deyatel'nostnoe obuchenie v virtual'noj srede inzhenernoj deyatel'nosti: sostoyanie i perspektivy [Interdisciplinary activity training in the virtual environment of engineering activity: state and prospects]. *Vysshee obrazovanie v Rossii*, 11/217: 61-68. [in Russian]

[Tablitsa k Prikaz Ministerstva truda i soczashhity..., 2014](#) – Tablitsa prilozheniya k prikazu Ministerstva truda i social'noj zashchity Rossijskoj Federacii ot 29 sentyabrya 2014 g. N 667n "O reestre professional'nyh standartov (perechne vidov professional'noj deyatel'nosti)" [Table of Appendix to the order of the Ministry of labour and social protection of the Russian Federation of September 29, 2014 N 667n "About the register of professional standards (the list of types of professional activity)"]. [in Russian]

[Tolstikova, 2009](#) – *Tolstikova, I.I.* (2009). Kommunikativnye konteksty mezhkul'turnogo vzaimodejstviya [Communicative contexts of intercultural interaction]. *Trudy Sankt-Peterburgskogo kongressa «Professional'noe obrazovanie, nauka, innovacii v XXI veke»*. SPb: 111-115. [in Russian]

[Valeyeva et al., 2017](#) – *Valeyeva, N.S., Valeyeva, E.R., Kupriyanov, R.* (2017). Metakognitivnye i metakognitivnye navyki: tekhnologiya razvitiya intellektual'nyh navykov [Metacognition and metacognitive skills: intellectual skills development technology]. *metakognitivnye i uspeshnye strategii obucheniya v vysshem obrazovanii*: 63-84. [in Russian]

[Yatsenko, 1999](#) – *Yatsenko, E.* (1999). Vostok i zapad: vzaimodejstvie kul'tur [East and West: interaction of cultures]. M.: *Kul'tura v sovremennom mire: opyt. problemy. resheniya. Vyp. 1*, 32-37. [in Russian]

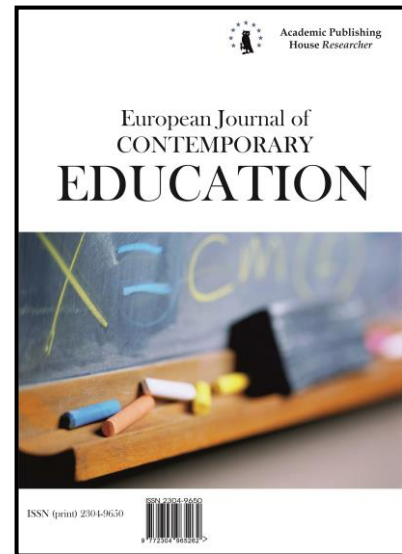
[Zborovsky, Ambarova 2017](#) – *Zborovsky, G.E., Ambarova, P.A.* (2017). «Vzroslenie» studenchestva kak fenomen menyayushchegosya vysshego obrazovaniya ["Growing up" of students as a phenomenon of changing higher education]. *Vysshee obrazovanie v Rossii*, 4(211): 38-49. [in Russian]

[Zhu, 2004](#) – *Zhu, Z.* (2004). Knowledge management: towards a universal concept or cross-cultural contexts? *Knowledge Management Research & Practice*, 2: 67-79.



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Approaching CLIL from the Periphery: Integration of Content and Language in Russian Higher Education Institution

Natalia S. Godzhaeva ^a, Timur A. Logunov ^{a,*}, Marina S. Lokteva ^a, Svetlana A. Zolotareva ^b

^aInstitute of History and International Relations, Kemerovo State University, Kemerovo, Russian Federation

^bKemerovo State Institute of Culture, Kemerovo, Russian Federation

Abstract

One of the reasons for failure of education system to form developed FL skills in its graduates consists in the lack of L2 immersion and low motivation of learners. Integration of Content and Language (CLIL) in teaching content subjects is believed to be an efficient way of improving the situation. However, introducing CLIL techniques and approaches can by itself pose a new great challenge for a university. Our study shows a stable interest in both students and teachers coupled with a high degree of doubts and lack of preparedness when it comes to the actual prospect of their involvement in CLIL courses. In addition, the introduction of CLIL requires systematic changes in academic and administrative policies of Russian universities. The authors suggest that in such environment, the optimal solution would be a gradual introduction of CLIL elements focusing elaborated preparatory techniques. The paper presents the design of pilot project of step-by-step introduction of CLIL format studies in a Russian university and summarizes the results of pre- and post-experimental surveys among university students and teachers revealing their expectations, causes for their uncertainty and showing the need for specific FL learning activities which form a support system provided by language teachers to boost learners' linguistic confidence. This introductory period calls for a special attention to the role of FL teachers and closer coordination of efforts between a content teacher and a language teacher.

Keywords: university training, CLIL, exposure, language skills development, preparedness.

1. Introduction

According to the Russian Federal governmental programme "Education Development for 2013–2020" one of the priorities in the field of vocational education is the internationalization of

* Corresponding author

E-mail addresses: tlogunov@mail.ru (T. Logunov), godjayeva@mail.ru (N. Godzhaeva), abrikol13@mail.ru (M. Lokteva), s.a.zolotareva@gmail.com (S. Zolotareva)

higher education in Russia. In this context, teaching a foreign language for its own sake in a regular classroom environment is no longer the case. Mastery of foreign communicative competence becomes one of the necessary conditions for a successful career of university graduates, which is recognized by the academic community and by the students themselves. Being prepared for a career means a number of competences including skills and abilities to communicate successfully in various fields not only in one's native language (L1), but also in the second or a foreign language (L2, FL, for the purpose of this study – specifically English), which in turn requires that university students are both functionally prepared and academically literate for their interaction in English-speaking academic and professional environment, “that they are able to use English to access, understand, articulate and critically analyze conceptual relationships within, between and among a wide variety of content areas” (Kasper, 2000: 3).

However, it is not uncommon that learners willing to master an FL in academic environment suffer from the lack of actual language immersion, which has long been proved a necessary condition and means for achieving the progress in L2 skills development (Paradis, 2009). The efficiency of this immersion factor for adult L2 learners can be further increased through combining it with realized motivation for studies. Teaching English (as a FL) as a media for learning the content subjects of university curricula can become the engine that will move the progress in forming FL competences, as the students are most interested in content subjects of their specific academic field critical for developing their skills and competences and thus, preparing them for their future career. It combines both the motivation to apply the FL for solving professional tasks and the immersion in “real life” use of a language.

The most probable of the identified obstacles to increasing the level of FL skills among the country population is the lack of motivation to acquire and improve FL skills and the practical experience in applying them. These factors are closely connected as the need for studying a language (which almost always takes a great effort and time) is only justified by the realization of the necessity and understanding the prospective opportunities to use it (Dobrydina, 2010: 32). Needless to say, that it is the countries (regions) less involved in the process of global communications that have low proportion of confident FL speakers and level of FL literacy. The same is true of the countries whose population has fewer chances to be involved in cross-cultural communication or is influenced by special customs and traditions discouraging them from getting involved in this process.

In a straight response to these challenges many teachers in Russian universities are adapting methodologies to adjust their teaching practices in such a way that they motivate and engage students while reaching language standards. In this sense, Content and Language Integrated Learning (CLIL) has been applied in the Russian context as a way to teach content through English.

In Russia, the research on CLIL is being conducted in various directions but one cannot say that it is extensive. There are papers reporting results of pedagogical experiments in teaching a subject in an FL, mostly English, alongside with teachers' comments and recommendations (see, for ex., Bryksina, 2007; Shirin, 2009; Vyushkina, 2017; Zaripova, 2015). Although the theory and prospects of implementing CLIL in the Russian educational system are the focus of these articles, the publications reflect the successful results of enthusiasts' attempts to implement CLIL into the higher education process. In the works of A.G. Shirin (2007), I.E. Bryksina (2009), CLIL education is considered in the context of the cultural dialogue. The pedagogical aspect of bilingualism is closely related to research psychology and motivational sphere of learners. The paper (Khudobina, 2007) summarizes the types of language barriers which students face in the CLIL framework and urges developing mechanisms and tools to overcome such obstacles. Available individual elements of methodological and theoretical foundations do not form a single systematic conceptual basis of integrative education in a foreign language in Russian universities.

The revealed gaps determine the relevance of this study approaching are the principles and organizational and pedagogical conditions of step-by-step introduction of integrated language learning with a focus on pre-training of learners to avoid shocking immersion. Thus, the proposed research attempts at answering the question whether there is a way to introduce/incorporate CLIL format in the existing framework of FL teaching/learning in Russian universities to minimize discouraging effects associated with it, to overcome teachers' and students' distrust and to boost learners' motivation and involvement.

2. Review

Most of the arguments in favour of CLIL show that CLIL creates favourable natural conditions for language learning and therefore provides a purpose for using language in the classroom.

The efficiency of CLIL courses, proved with a number of empirical studies, rests upon psychological principle underpinning the character of learning in such format, which is featured with learning new concepts together and simultaneously with new words (as if in acquisition of L1), not just learning new words for the familiar concepts. Such framework does not only boost mental performance in L2 acquisition, but also provides for better and more stable retention and reproduction of the skills obtained, and encourages thinking in L2. ([Madrid, Garcia Sanchez, 2001: 106, 120](#))

Lightbown and Spada (2006) claim that a second language is most successfully acquired when the conditions are similar to those present in first language acquisition that is, when “the focus of instruction is on meaning rather than on form, when the language input is at or just above the proficiency of the learner and when there is sufficient opportunity to engage in meaningful use of that language through exchanges with other students. The key to these exchanges is content area instruction in English” ([Almudena, 2009: 3](#)).

When integrating content and language, students have the opportunity to acquire both Basic Interpersonal Communications Skills and Cognitive Academic Language Proficiency with the former being all the social language skills and the latter the language skills to cope with academic requirements ([Cummins, 2000](#)). Being able to communicate academically and socially opens new borders and encourages students to explore and travel around the world ([Godzhaeva, Logunov, 2015: 2300](#)).

Yet another aspect in studying CLIL impact emphasizes that “teaching subject content in the foreign language makes the use of that language more contextualized, real and meaningful for students. As language is used to fulfill real purposes, its use is authentic and much more meaningful for the students; as a consequence, motivation is increased” ([Jaisson, 2012: 177-189](#)).

Thus, it is commonly accepted that CLIL has multiple benefits, moreover, the beneficial effects of CLIL were proved with astonishing results in L2 learning described, for example, in Ruiz de Zarobe (2008, 2010). At the same time, researchers realize certain limitations and difficulties in actual application of CLIL methods, namely, those concerning various abilities of learners, lack of L1 functional support in learning process and so on ([Harrop, 2012](#)). The degree of L1 presence and role in CLIL format classes has long been looked upon differently by scholars, the common call to minimize it was often challenged based on the variety of factors of actual learning environment including learners’ needs, skills, habits, etc (see [Lasagabaster, 2002](#)).

CLIL studies in Russia. The modernization in higher education conducted in Russia now is connected with the objective of improving students’ competence in the second language as a very useful means for their employability/mobility ([Dobrydina et al., 2015](#)).

Although CLIL has been long been applied in Europe or in the United States (labeled as Content Based Instruction (CBI)), in Russia it is a relatively new paradigm shift in the field of language teaching since it entails innovation in methods and approaches, while academic environment in Russia, specifically in the periphery context, is quite peculiar, for instance, in terms of students and teachers’ mobility.

Despite a considerable degree of skepticism ([Rubtsova, 2015](#)), there are some successful examples of CLIL implementation with developed CLIL courses. For example, the conception of the teaching Mathematics in a foreign language developed by L.L. Salekhova (2008) emerged the basis of the model building of CLIL. According to Salekhova, there are many ways in which an academic lecturing in a language other than L1 of most of his/her audience can help to make the content clearer: using discourse markers, repeating concepts, using examples, reformulating. Visual means can also help students understand the content of the subject, they afford the basis for students’ own statements and contribute to the verbalization of their thinking activity.

The process of the interdisciplinary relationships regarding CLIL is described in E.G. Krylov’s monograph in detail ([Krylov, 2015](#)). The grammar material used in integrated classes according to CLIL methodology is in agreement with the course of foreign language and the foreign language for business communication. According to Russian state higher educational standards students are supposed to acquire essential grammar in use for their specialty.

In Russian CLIL contexts much work has been done on ensuring that students are able to benefit from the experience of learning through an additional language. However, in the Russian discourse, the CLIL approach is often criticized from the perspective of non-language subject-teachers, who fear substantial negative influences on the learners' subject competences. It is true that CLIL in Russian higher education can not dominate in teaching special subjects, but it must be acknowledged, that CLIL education in a foreign language in Russian universities fills its niche, which is shaped by separate teachers, who know their subject as well as a foreign language.

Methodology concerns. Summarizing challenges of CLIL methodology for the existing long-established approaches it should be recommended that educators prefer gradual implementation of this innovation through such stages as the linguistic and methodological training of the teachers and 'adjustment' of students' communicative skills. Moreover, it is essential that the programme could be adapted to the available resources with regard to the methodological and linguistic preparation of the teachers.

Another consideration to bear in mind pertains to the professional training teachers receive. CLIL requires subject teachers with foreign language skills and vice versa, unfortunately, this requirement cannot be met by the majority of the educators due to the fact that many content teachers are not even basically prepared in a foreign language. One option to tackle this issue would be co-teaching by having language teachers reading some modules of certain subjects in the curricula (Godzhaeva et al., 2018).

The use of innovative materials and methods can be an engaging factor for students and teachers. By using materials that address topics that students are familiar with and, if possible, that they have recently studied in their mother tongue, students are able to learn more as they will already know a lot of the content and context (Jaisson, 2012: 184). In terms of language, content and environment, materials need to be chosen according to social contexts and students' level and interests.

Thus, in implementing CLIL in class educators need to be trained on how to address different topics, to plan lessons for diversity or multilevel skills. Step-by-step guidelines in CLIL lesson planning prevent experiences of frustration and help overcome language barriers. Besides, teachers need guidance in the ways to assess students when the focus is content but the means is language.

3. Hypothesis

We hold the view that it is preferable that the process of introducing CLIL to content class should be gradual and well-guided through collaboration of all the participants of teaching-learning process in each particular institution of higher education. Only this way it is possible to overcome the aforementioned negative tradition in learning foreign languages (mostly, ESP) in Russia and to cope with a very specific learning environment, including such factors as curriculum, initial learners' and teachers' skills and others. It supposes giving L1 an essential role in preparing students for exposure to content concepts in L2 and going through a number of phases before actual implementation of CLIL techniques as such. Obviously, it makes collaboration and coordination between content and language teachers a vital factor, as it aimed at overcoming major obstacles and responding to major challenges of this activity.

It is admitted that students' background in Kemerovo State University (KemSU) influences the learning context and teachers' educational background affects teaching approach. It is difficult to imagine language teachers delivering highly specific contents at university level unless, of course, backed up by the subjects' teachers. Such implementation of CLIL programme would require both subject and language teachers working hand in hand in order to complement each other in the same class.

Bearing this situation in mind, in our study we presume that gradually implemented CLIL format with a number of preparatory stages should a) improve teachers' and learners' attitudes and level down their negative concerns with regard to CLIL introduction, b) increase learners' motivation and preparedness to get involved in CLIL format, and c) bring positive effect on the training results. This makes the hypothesis to be tested through a variety of instruments before and after pilot project described in the following section. Absence of positive effects (zero or negative results) would approve the null hypothesis.

4. Methodology

In this paper we discuss the results of pilot project of teaching a non-linguistic discipline in a foreign language to the Bachelor students of the Institute of History and International Relations of KemSU. Following our assumption, on the initial stage CLIL elements were introduced during 2 senior years before the completion of the university course, once learners have had the chance to improve or “fix” their FL skills. It will not only be a precondition for a more successful and less stressful mastering the course/module, but will also improve learners’ attitudes to this format of studies.

The outcomes were analyzed not only in terms of measuring the levels of students’ FL skills, abilities and knowledge, but also in the form of assessing changing teachers’ attitudes, doubts and hopes (summarized in the SWOT analysis format) connected with challenges and prospects of teaching content in FL. Thus, the discussed research is focused primarily on analyzing the effects of the gradual introduction of CLIL format studies on learners’ proficiency in the first foreign language (English) and the associated challenges and possible faults and weaknesses.

Thus, the research is based on a pedagogical experiment, since it is the only way to measure effectiveness of a teaching method/techniques or any other element of education processes, and to prove causal consequences of one pedagogical phenomenon on another.

Participants. The project participants included a group of International Relationships (IR) students in their third academic year. The pilot CLIL-associated academic module was taught for three consecutive academic years.

127 senior students and 102 freshmen of IR and Regional Studies (RS), whose professional sphere of interest is directly connected with cross-cultural communication, took part in the pre-experimental pilot surveys in September 2016, October 2017 and September 2018. Students’ answers are discussed in detail in the following sections.

To get the feed-back necessary for evaluating the results of the pedagogical experiment after its completion we used the method of survey among the students and obtained the teachers’ expert opinion. The respondents included three experimental groups, total of 67 senior students with the level of proficiency on B1-B2 according to the CEFR. Their response was later analyzed on the background of that of 60 senior students not involved in the pilot CLIL project and their own answers to the pre-experimental survey questionnaire. Besides, 12 teachers of KemSU involved in training IR and RS students were interviewed and their expert opinions were summarized afterwards applying SWOT analysis techniques (see the following section).

Instruments. In the international CLIL research context, analysis of CLIL learners and teachers’ attitudes is one of the valuable sources for better understanding of what actually happens in CLIL classrooms. Therefore, determining students’ opinions and attitudes towards the implementation of CLIL in their courses was one of the research aims.

The first tool for studying the effectiveness of CLIL in Teaching Foreign Language was aimed at proving “applicability” of CLIL at the Institute of History and International Relations of KemSU (starting from the third year of academic curricula). It was based on measuring and comparing the pilot survey response of reference and experimental groups (35 and 41 senior students in 2017 plus 25 and 26 senior students in 2018 correspondingly).

The outcomes were analyzed not only in terms of measuring the levels of students’ FL skills, abilities and knowledge, but also in the form of assessing changing teachers’ attitudes, doubts and hopes (summarized in the SWOT analysis format) connected with challenges and prospects of teaching content in FL. Thus, the discussed research is focused primarily on analyzing the effects of the gradual introduction of CLIL format studies on learners’ proficiency in the first foreign language (English) and the associated challenges and possible faults and weaknesses.

Materials and Procedure. To obtain the picture of students’ attitudes before the start of experiment they were offered a questionnaire asking for:

- their opinion on the need for more subjects taught in FL (the options included the degrees of the necessity: we need it “very much”/”rather need it”/”do not need at all”),
- their evaluation of the time it will take to make it possible for the introduction of teaching major subjects in FL (“immediately”/”in 3-5 years”/”in distant future”/”never”),
- the preferable format of classes (“lectures”/”seminars”),

- the preferable type of lecturers (“FL teachers”/“content teachers”/“FL and content teachers jointly”/“invited Russian professionals”/“invited foreign professionals”),
- the compliance of their personal FL level and the average FL level of the Institute students to the requirement of integrated learning (“enough”/“quite enough”/“rather not”/“completely not”), and
- the prospects and possible challenges to introducing such courses.

The post-experimental questionnaire was aimed at assessing the project’s impact on students’ motivation, attitudes and involvement. It was offered to the senior students only and contained the same questions as the pre-experimental one supplemented with a few based on their newly acquired experience. For example, the students involved in the pilot project were asked about the possibility of introduction CLIL courses, the obstacles hindering this introduction, their own and teachers’ preparedness for such courses in terms of FL skills, etc. In addition, new questions concerned their skills involved in CLIL classes and required for them (the use of vocabulary and structures, presentation and public speaking, listening and reading comprehension). The questionnaire suggested rather broad self-assessment of changes in the level of these skills by students (with such generally formulated options as “improved”/“remained the same”/“decreased”).

Moreover, we directly asked the students involved whether their participation resulted in changing their attitude to CLIL format of university studies, which together with the previously mentioned question demanded some degree of self-reflection over the project. Finally, some open question were added to this version of questionnaire for students making it similar to the teachers’ questionnaire and allowing for a kind of SWOT analysis as seen by the students. They were asked to identify the challenges they faced while preparing for and taking part in CLIL classes, benefits and weaknesses of this format. Comparing the response to both questionnaires for the students we could observe the subjective component of their attitude to CLIL and some changes in it and their self-reflection resulting from their immediate involvement in the process of implementing integrated learning in their particular learning environment.

The data were analyzed by using Student’s t-tests for comparing two independent proportions.

Finally, as part of the experiment, 12 participating teachers were asked for their opinions (through a questionnaire) regarding their personal *evaluation of the CLIL method applicability, possible impact and effectiveness* under the conditions discussed above. The questionnaire consisted of 11 questions, including both open and multiple choice questions. Open-ended questions suggested that respondents should name themselves the positive and negative aspects, strong and weak points of CLIL courses; while multiple choice questions were aimed at obtaining the teachers’ evaluation of particular features, namely, students’ activity and involvement in discussing debatable issues in content/language classes, amount of literature and sources used in preparation for content classes, range of points of view and solutions proposed by students and others. Some questions were designed only for FL teachers, such as the amount of non-linguistic (background) knowledge shown by the experimental group students in FL classes, the amount of extra material (mass media, online resources, etc) used to get prepared for FL classes, the changes in proportion of various activities in FL class (i.e., free discussion/prepared presentation) and others.

Pilot project design. The methodology underlying the pedagogical experiment on the implementation of CLIL requires careful analysis of existing methods/techniques and appropriate adaptation. In this regard, the particular attention should be given to careful planning, meaningful learning, gradation of content complexity and assessment according to students’ background and educational needs. In CLIL all these factors play a pivotal role at some point or another.

The example discussed further is the result of collaboration between a language and a content teacher. Together, a class plan was designed for the academic module “International, Ethnic and Religious Conflicts”. After consulting relevant intermediate level resources in English and with the help of the content teacher as a content resource person, a list of key issues and topics was generated.

The intervention period lasted for approximately 6 weeks. The strategy adopted for planning the unit took into account various approaches that explicitly included both content and language

goals. Specifically, a triple focus on content goals, language goals, and learning skills/cognitive goals (Coyle, 2010; Mehisto et al., 2008) was accepted as a guideline within framework of content-based instruction.

The content focus directed the progression of the unit, which was broken down into three main phases:

Phase 1 consisted of an introduction to conflicts issues first in the mother tongue and then in the foreign language. Sample activities included content, comprehension questions with visual aids with vocabulary activities. Students also completed content-based homework assignments online.

Phase 2 involved expert group projects in which students researched a chosen issue in more depth, using an array of research books in English. They then shared their topic with other classmates and the teachers by using ICT tools.

Phase 3 was devoted to proposing solutions to Georgian-Ossetian Conflict in 2008 and culminated in conducting the Round Table discussion classes. Each student represented one of the experts' positions. The main question they were expected to answer is "Who would you name as the main actors/protagonists who have played or continue to play a decisive or important role in the conflict, in the process of negotiations and in the post-conflict development?" This activity is one of the effective ways to demonstrate the knowledge of context and language by students. For example, students could analyze causes of this conflict, different opinions of the main actors in it, and suggest possible ways of solution. During this phase, there was collaboration between all students and language and content teachers, which involved sharing of their opinions on this conflict.

Throughout the three phases, this classroom format was integrated as much as possible, with some modifications to maintain the English content focus goal of the study. As a result, the content teacher played an active role in the intervention by explaining content-specific concepts and acted as a content expert. New vocabulary was introduced on a need-to-know basis so that language was used as tool for grasping the content rather than an end itself (Cloud et al., 2000). Vocabulary guide was created for students and collaboration with them based on the content included in the module with most topical terms that would be discussed within the module. The vocabulary was listed in English, with understandable definitions/explanations in English as well as possible synonyms or an example sentence using the term. The class plan was composed of tasks with a primary focus on content and a secondary focus on language.

5. Results and Discussion

The targeted achievements of implementing CLIL courses/modules should be that students acquire a meaningful and rich learning experience, which would encourage students to work collaboratively and engage in forms of using language, thus providing for an opportunity to develop language awareness throughout learning experiences.

Prior to discussing the findings of the experiment, the authors of the present paper admit realizing some significant limitations, including sample size, which was strictly limited to the number of students in the specified departments of Kemsu, and the chosen tools for obtaining the results. The latter was based mainly on questionnaires which, to some extent, lack objectively measurable scales unlike tests; however, this choice was determined by the research objectives.

The results of the pilot survey are summarized in Tables 1–3. Students' answers clearly demonstrate their realization of the need for more subjects taught in English for upgrading quality and prestige of their degree (see Table 1). Moreover, it should be noted that senior students are more enthusiastic about it, their answers being prompted by their experience. Totally, 58.5 % of respondents were sure that courses taught in FL are necessary in their curriculum. Strictly negative responses to this question were given only by a small minority (10.9 %).

Table 1. The results of surveying students' attitudes before the experiment (number of respondents with percentage of responses in brackets)

Selected questions (reformulated for the purpose of the research analysis)		Senior students (n = 127)	1 st year students (n = 102)	Total for pre-pilot survey (n = 229)
1. The need for teaching major subjects in FL	very necessary	71 (55.9)	63 (61.8)	134 (58.5)
	quite necessary	21 (16.5)	18 (17.6)	39 (17.0)
	rather not	19 (15.0)	12 (11.8)	31 (13.5)
	definitely no	16 (12.6)	9 (8.8)	25 (10.9)
2. When the implementation of CLIL courses is possible in your University:	immediately	29 (22.8)	18 (17.6)	47 (20.5)
	in 3-5 years	71 (55.9)	47 (46.1)	118 (51.5)
	in distant future	19 (15.0)	20 (19.6)	39 (17.0)
	never	8 (6.3)	17 (16.7)	25 (10.9)
3. CLIL courses are to be taught by (multiple options were possible):	FL teachers	40 (31.5)	9 (8.8)	49 (21.4)
	content teachers	22 (17.3)	11 (10.8)	33 (14.4)
	jointly	59 (46.4)	27 (26.5)	86 (34.2)
	invited foreign professionals	94 (74.0)	68 (67.6)	162 (70.7)
4. Compliance of the respondents' FL level to the requirements of CLIL class, self-assessed	invited Russian professionals	71 (55.9)	9 (8.8)	80 (34.9)
	definitely yes	14 (11.0)	13 (12.7)	27 (11.8)
	rather yes	73 (57.5)	31 (30.4)	105 (45.8)
	rather not	25 (18.9)	27 (26.5)	52 (22.3)
5. Compliance of the average students' FL level to the requirements of CLIL class, self-assessed	definitely no	15 (12.6)	30 (29.4)	45 (20.1)
	definitely yes	21 (16.5)	0 (0.0)	21 (9.2)
	rather yes	19 (15.0)	16 (15.7)	35 (15.3)
	rather not	26 (22.1)	26 (25.5)	52 (23.6)
	definitely no	61 (46.4)	60 (58.8)	121 (51.9)

Table 2. Comparison the students' response to surveys conducted before and after the pilot project (number of respondents with percentage of responses in brackets)

Selected questions (reformulated for the purpose of the research analysis)		Pre-experimental survey (n = 127)	Post-experimental survey		Significance value (p)
			Experimental group (n = 67)	Reference group (n = 60)	
1. The need for teaching major subjects in FL	very necessary	71 (55.9)	52 (77.6)	29 (48.3)	< 0.01
	quite necessary	21 (16.5)	8 (12.0)	20 (33.3)	< 0.01
	rather not	19 (15.0)	7 (10.4)	7 (11.7)	-
	definitely no	16 (12.6)	0 (0.0)	4 (6.7)	-
2. When the implementation of CLIL courses is possible in your University:	immediately	29 (22.8)	20 (29.9)	13 (21.7)	-
	in 3-5 years	71 (55.9)	29 (43.2)	30 (50.0)	-
	in distant future	19 (15.0)	13 (19.4)	12 (20.0)	-
	never	8 (6.3)	5 (7.5)	5 (8.3)	-
3. CLIL courses are to be taught by (multiple options were possible):	FL teachers	40 (31.5)	14 (20.9)	9 (15.0)	-
	content teachers	22 (17.3)	15 (22.3)	14 (23.3)	-
	jointly	59 (46.4)	38 (56.7)	29 (48.3)	-
	invited foreign professionals	94 (74.0)	37 (55.2)	43 (71.6)	-

	invited Russian professionals	71 (55.9)	14 (20.9)	26 (43.3)	-
4. Compliance of the respondents' FL level to the requirements of CLIL class, self-assessed	definitely yes	14 (11.0)	10 (14.9)	6 (10.0)	< 0.05
	rather yes	73 (57.5)	40 (59.7)	34 (56.7)	-
	rather not	25 (18.9)	6 (9.0)	13 (21.7)	< 0.01
	definitely no	15 (12.6)	11 (16.4)	7 (11.7)	< 0.05
5. Compliance of the average students' FL level to the requirements of CLIL class, self-assessed	definitely yes	21 (16.5)	15 (22.3)	10 (16.7)	-
	rather yes	19 (15.0)	12 (17.9)	8 (13.3)	-
	rather not	26 (22.1)	11 (16.4)	13 (21.7)	-
	definitely no	61 (46.4)	29 (43.2)	29 (48.3)	-

The distribution of responses in reference and experimental groups showed no significant difference in pre-pilot survey. In analyzing the response of the two groups in post-experimental survey we compared frequency of choosing each option by respondents in the two groups. No significant difference was found in the distribution of responses to questions 2, 3 and 5. However, the results regarding changes in learners' attitudes to CLIL format of studies clearly show the notable increase in the acceptance percentage after the end of the experiment (77.6 % in the experimental group against 55.9 % of respondents in pre-experimental survey) and decrease in rejection (with $p \leq 0.05$).

It can be considered an encouraging sign that the responses of 1st year students generally do not differ much from those of the seniors. Given the evident gap in the amount of experience between the 1st and the 4th year students, which could not but manifested in their answers, the overall similarity of their attitudes to the proposed development demonstrate the positive trend and suggest the possibility to take steps in expanding the role of FL in studying content subjects based on the students' interest and willingness.

Surprisingly, there was an obvious contradiction in students' responses assessing their own level of language skills and identifying prospective obstacles and challenges impeding introduction of content subjects taught in FL. The vast majority of senior students (68.5 %) and over a half of 1st year students (53.1 %) self-assessed their language skills as definitely/rather enough to take content courses in English. While, insufficient level of language was named by far the most important problem (75.5 %) preventing from teaching content subjects in FL (as seen by both the senior and the 1st year students) (See [Table 1](#), pp. 4 and 5). This very notable fact demonstrates lack of students' confidence and explains their doubts as to the possibility of immediate introduction of such courses, the most popular response was "possible in 3-5 years' time" (51.5 % of senior and 1st year students taken together). It can be interpreted as a conflict between interest in the desirable result and lack of means to achieve it. At the same time, this obvious trend prompts us the main direction of applying our efforts and developing activities to overcome the obstacles keeping us from expanding the number of courses taught in FL.

Speculating on the type of lecturers who will be able to deal with such courses and the format of classes the students did not demonstrate any clear preference: although the majority believes that the courses should be taught by invited specialists (preferably foreign ones – 70.7 % of responses), some proportion of respondents supposes that FL teachers are also a good choice to handle the task (21.4 %). However, a large number of students are sure that teaching courses in FL can be organized jointly by FL and content teachers (34.2 % before the experiment and 48.3 % – after it), which seems logical and realistic and suggests a sound common sense and a good understanding of the ways to overcome the possible difficulties (See [Tables 1](#) and [2](#), p. 3). As to the format (lectures/seminars) the respondents showed no clear preference.

Finally, students' enthusiasm and reasonable attitude to the problem discussed was proved by their choice of subjects to be taught in a FL (it was an open question with the possibility for the respondents to suggest any courses they think suitable): the clear majority (78.2 %) included in their lists the subjects related to international relations, history of foreign countries and regions and the like.

The results of post-project survey reflect quite a noticeable increase in students' positive attitude and their evaluation of the possibility of introducing integrated learning. Moreover, the responses of the students involved in the experiment differ as being more positive to CLIL.

Compared to the “non-CLIL” courses the students of experimental group evaluated CLIL classes (organized as project work) as more interesting and they felt more involved. They appreciated the extension of their vocabulary (both general and academic) through the direct learning of new words while working on their own projects and through listening to other students' presentations (86.6 % of respondents of the post-experimental survey). In addition, students appreciated the fact that they needed to go through many references, deal with extra texts in order to understand all the vocabulary, as well as to eventually learn it for the act of performance (56.7 %). They also mentioned a more balanced development of all communication skills in English (43.3 %). Despite the initial discomfort before presenting in English, they appreciated the chance to present orally in a foreign language, which afterwards allowed them to feel more confident not only in presenting their talks in English but also in their general presentation skills. They evaluated CLIL lessons as more demanding than “traditional” courses (91 %).

We find it a crucial and a very encouraging point to stress that 52.2 % (more than a half) of students involved in the pilot project changed their attitude to the prospect of introducing CLIL in our university after they completed their participation. This was manifested through their evaluating the possibility of immediate introduction of CLIL courses (29.9 % against 22.8 % before the project, see [Table 2](#)), full compliance of their skills with the requirements of such a course (14.9 % against 11 % before) as well as their direct admitting changing their attitude. Thus, there is some positive difference between the results obtained in pre- and post-experiment surveys.

The SWOT analysis was completed based on the results of the survey, teachers' observations and shared experience (this is summarized in [Table 3](#)).

Table 3. SWOT analysis results after experimental group session

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> - more interesting, encouraging method; - increasing motivation for studying both language and content courses ; - more balanced development of all communication skills; - developing general presentation skills (both for speaking in students' native language and a FL). 	<ul style="list-style-type: none"> - stress and discomfort when presenting; - work overload (for both teachers and students. It should be noted that teachers expressed this fear nearly unanimously 93 %, while students are not worried that much – 27.5 %)
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> - professional vocabulary extension (noted by the vast majority of teachers-respondents); - better preparation for taking international IELTS- or TOEFL-like exams; - better preparedness for applying an taking part in international training and research projects. 	<ul style="list-style-type: none"> - extending the period of studying one module (expressed by over 70 % of responding teachers); - possible decrease in the content subject learning outcomes (due to language barriers and inevitable simplification of content presented in FL) – over 55 % of responding teachers

Table 4. Areas positively and negatively affected by CLIL (as identified by the teachers involved in CLIL implementation experiment)

POSITIVES	%	NEGATIVES	%
Students' motivation to learn FL, learn and practice FL in real context	72	Demanding preparation for teachers	100
Easier learning of FL for learners, students' better communication skills in FL	93	Absence or lack of teaching resources, books	27
Active, interesting learning for students	72	Lower confidence	72
		-students are overloaded with FL; -need for more time allocation for the subjects taught in CLIL format; - no unification of the CLIL curriculum.	

Summarizing teachers' attitudes toward CLIL, the following conclusions may be offered. General teachers' attitudes range from rather positive and very positive (81 %) with only 2 rather negative responses; none of the respondents in any of the analyzed researches expressed a univocally negative attitude. However the majority of CLIL teachers mentioned they felt unprepared and lacked the necessary information. While looking for information, teachers relied on their own experience and on continual self-learning.

Teachers generally consider CLIL both professionally challenging and personally satisfying. FL teachers perceive the CLIL method as an unequivocally effective means of developing learners' foreign language proficiency (93 %).

While evaluating CLIL strengths, teachers named appreciable traits or benefits of CLIL: "natural" learning of a foreign language, as well as learning connected to 'real life'. They find learners in CLIL lessons to be more active and communicative.

They believe CLIL also develops content subject knowledge, but their evaluation of the method effectiveness is not completely unambiguous in this regard (doubts were mostly explained by certain time stress in CLIL classes caused by using a foreign language as a medium of communication – 63 % of respondents, and decrease in the learning outcomes as a result of insufficient entrance level of FL competences – 38 %).

At the same time, teachers (both FL and content) frequently mentioned drawbacks, such as work overload (the most common response), demanding preparation, extended time to master the content, lack of students' FL confidence and increase in truancy as a result.

Identifying challenging and problematic aspects of CLIL, teachers usually named the following issues: a) higher demands for teachers performance in a foreign language; b) lack of CLIL materials c) higher requirements for learners and even unsuitability of CLIL for some groups of learners (due to different level of students' knowledge of a FL, which was noted by 27 % of respondents); d) problems with planning CLIL lessons, namely, the struggle to find a balance between language and content objectives so that the content was not "neglected" and ensuring that learners did not, in fact, learn less, and finally, e) managing CLIL lessons for mixed ability classes with weak learners or learners with special educational needs.

Among the most valuable empirical acquisitions and outcomes of the pilot project there is teachers' (both FL and content) realization for the necessity of developing specialized study guides and methodological support and extensive preparatory work in terms of mastering and practicing specialized terminological vocabulary of content subjects in FL classes.

One of the matters, repeatedly appearing in all researches, was the teachers call for further training (every four of five of the content teachers regretted about insufficient level of their FL skills, which is further aggravated with nearly half (48.7 %) of students-respondents suggesting low

FL skills of their content teachers' as a major factor impeding successful CLIL introduction), which should be a strong motivating impulse for the universities providing teacher training programmes and other institutions involved in either initial or lifelong teacher training.

From our perspective, the main aim of CLIL is functional, that is, to develop proficiency in a foreign language alongside knowledge of a non-language subject area. Taking authentic material as a starting point, it leads to a task-based use of language that is organized around the understanding of subject-related topics.

In developing the course on teaching of academic content through a foreign language, there are several problems to overcome. The first problem is connected with difficulties in the assimilation of the complex academic content through an additional language that students might not have mastered yet. Therefore, it is very important to implement the programme gradually. However, we believe that such problems as an inability to perform task in the second language should be solved by additional measures such as linguistic support by language teachers in the form of language courses for the students in the specific area of study and gradual introduction of the foreign language in the classroom.

Secondly, the university teachers might have difficulties with the language proficiency. In this sense, it is very essential for teachers to improve their language competence and be able to teach and explain some points in the classroom.

The third difficulty is connected with the training in methodology of the teachers involved: under the challenging conditions, knowledge of specific strategies, techniques and activities to transmit academic content through a second language is of paramount importance.

6. Conclusion

It clearly follows from the discussion above that there are several unresolved issues regarding the implementation of CLIL in the Russian higher education. A few teachers are offered the opportunity to teach a non-linguistic course in a FL and the opportunity itself is not always possible to create. Other challenges include insufficient starting level of skills of all the participants in the learning process requiring more preparatory training and lack of readiness of its staff and learners to adjust and enhance their methodology. In some cases academic policy and tradition is not "CLIL-friendly", thus substantial restructuring and other painstaking efforts are necessary to create any opportunities for innovation.

Russian experience, however limited it might be, demonstrates the need for rethinking the approach to integration of content and language with a view to accommodate it to specific conditions of academic environment, traditions of teaching practices and so on. Evidently, in such case the implementation period of the new methodology will be somewhat lengthier with a focus on preliminary training (both for teachers and learners), but only in this case learners and teachers will take it positively and appreciate its benefits. The roles and proportions of L1 and L2 in this preparation period will have to be considered thoroughly and techniques of transition to CLIL in classroom will have to be carefully elaborated (presumably, those techniques will have to vary in specific conditions). English (FL) teachers have to work closely with subject teachers to ensure that language development is appropriately catered to, in other words, to guarantee that content and languages are truly integrated.

This article is an invitation to reflect about what is still needed to implement those relatively unfamiliar instructional approaches both smoothly and effectively, minimizing possible "shocking effect" and carefully managing the growing "brain load", so that students and teachers both succeed and benefit by being engaged in academic performance, critical thinking, collaboration, and multiculturalism through different interactions in the classroom.

References

Almudena, 2009 – Almudena, F.F. (2009). Spanish CLIL: Research and Official Actions, pp. 3-22.

Bryksina, 2009 – Bryksina, I.E. (2009). Kontseptsiya bilingvalnogo/bikulturnogo yazykovogo obrazovaniya v vysshey shkole (neyazykovye spetsialnosti): dis. ... doktora pedagogicheskikh nauk [The concept of bilingual/bicultural language education in higher education (non-linguistic specialties): Doctoral thesis in pedagogical sciences]. Tambov. [in Russian]

Cloud et al., 2000 – Cloud, N., Genesee, F., Hamayan, E. (2000). Dual language instruction: A handbook for enriched education. Boston, MA: Heinle & Heinle.

Coyle et al., 2010 – Coyle, D., Hood, P., Marsh, D. (2010) CLIL: Content and language integrated learning. Cambridge, UK: Cambridge University Press.

Cummins, 2000 – Cummins, J. (2000). Language, Power and Pedagogy: Bilingual Children in the Crossfire. Clevedon: Multilingual Matters.

Dobrydina et al., 2015 – Dobrydina, T.I., Usvyat, N.D., Kersh, N. (2015). K voprosu o roli kafedr inostrannykh yazykov v formirovaniy professionalnoy kompetentnosti kadrov dlya turistskoy industrii v vysshikh uchebnykh zavedeniyakh [The role of foreign languages departments in developing professional competency of tourism graduates in higher educational institutions]. *Bulletin of Kemerovo State University*, no. 7(2): 68-71. [in Russian]

Dobrydina, 2010 – Dobrydina, T.I. (2010). Formirovaniye professionalnykh kompetentsiy budushchikh pedagogov v protsesse obucheniya inostrannomu yazyku [The formation of future teachers' professional competences in the process of foreign language teaching]. *Bulletin of Tomsk State Pedagogical University*, No. 1, 32-35. [in Russian]

Godzhaeva et al., 2018 – Godzhaeva, N., Logunov, T., Lokteva, M., Tochilina, Yu. (2018). Challenges and Prospects of CLIL for Training Mining Engineers. *E3S Web of Conferences* 41, 04052 3rd International Innovative Mining Symposium. [Electronic resource]. URL: https://www.e3s-conferences.org/articles/e3sconf/pdf/2018/16/e3sconf_iims2018_04052.pdf

Godzhaeva, Logunov, 2015 – Godzhaeva, N.S., Logunov, T.A. (2015). Developing Language Competency of University Teachers to Implement Content and Language Integrated Learning (CLIL) in a Regional University: Challenges and Prospects. *Journal of Siberian Federal University. Humanities & Social Sciences*, 8, No. 11: 2299-2306.

Harrop, 2012 – Harrop, E. (2012) Content and Language Integrated Learning (CLIL): Limitations and possibilities [Electronic resource]. URL: <http://w.encuentrojourn.org/textos/7.%20Harrop.pdf>

Jaisson, 2012 – Jaisson, R.B. (2012). Content and Language Integrated Learning (CLIL): Considerations in the Colombian Context. *Gist Education and Learning Research Journal*. No. 6, November, 177-189.

Kasper, 2000 – Kasper, L.F. (2000). Content-based ESL instruction: Theoretical foundations and pedagogical implications. In L. F. Kasper (Ed.). *Content-based college ESL instruction*. Mahwah, NJ: Lawrence Erlbaum. 3-25.

Khudobina, 2007 – Khudobina, O.F. (2007). Pedagogicheskiye usloviya preodoleniya psikhologicheskikh baryerov u studentov v protsesse bilingvalnogo obucheniya v vuze: dis. ... doktora pedagogicheskikh nauk [Pedagogical conditions for overcoming psychological barriers for students in the process of bilingual education in higher school: Doctoral thesis in pedagogical sciences]. Volgograd. [in Russian]

Krylov, 2015 – Krylov, E.G. (2015). Bilingvalnoye obucheniye inzhenernym distsiplinam i inostrannomu yazyku v vuze [Bilingual education in engineering and foreign languages in higher school]. Moscow, Izhevsk: Computer Research Institute. [in Russian]

Lasagabaster, 2002 – Lasagabaster, D. (2002). The role of instrumental and integrative attitudes in a multilingual context. In II Simposio Internacional del Bilinguismo.

Lightbown, Spada, 2006 – Lightbown, P.M., Spada, N. (2006). How Languages are learned. Oxford: Oxford University Press.

Madrid, Garcia Sanchez, 2001 – Madrid, D., Garcia Sanchez, E. (2001) Content-based Second Language Teaching: Present and Future Trends in TEFL. Universidad de Almería, pp. 101-134. [Electronic resource]. URL: <http://www.ugr.es/~dmadrid/Publicaciones/Content%20Based%20L2%20teaching-CLIL.pdf>

Mehisto et al., 2008 – Mehisto, P. D., Frigols, M.-J., Marsh, D. (2008). Uncovering CLIL: Content and language integrated learning in bilingual and multilingual education. Oxford, UK: Macmillan.

Paradis, 2009 – Paradis, M. (2009). Declarative and procedural determination of second languages. John Benjamins B.V, Amsterdam.

Rubtsova, 2015 – Rubtsova, A.V. (2015). Sotsiokulturnaya osnova vysshego inoyazychnogo obrazovaniya na sovremennom etape [Socio-cultural basis of higher foreign language education at the present stage]. *Perspektivy razvitiya nauki v oblasti pedagogiki i psikhologii. Sbornik*

nauchnykh trudov po itogam mezhdunarodnoy nauchno-prakticheskoy konferentsii. 21–23. [in Russian]

[Ruiz de Zarobe, 2008](#) – Ruiz de Zarobe, Y. (2008). CLIL and foreign language learning: A longitudinal study in the Basque country. *International CLIL Research Journal*, 1. 60-73.

[Ruiz de Zarobe, 2010](#) – Ruiz de Zarobe, Y. (2010). Written production and CLIL: An empirical study. Language use and language learning in CLIL classrooms. Amsterdam, the Netherlands: John Benjamins. 191-212.

[Salekhova, 2008](#) – Salekhova, L.L. (2008). Didakticheskaya model bilingvalnogo obucheniya matematike v vysshey pedagogicheskoy shkole: diss. ... doktora pedagogicheskikh nauk [Didactic model of bilingual education in mathematics in the higher pedagogical school: Doctoral thesis in pedagogical sciences]. Kazan. [in Russian]

[Shirin, 2007](#) – Shirin, A.G. (2007). Bilingvalnoe obrazovanie v otechestvennoy i zarubezhnoy pedagogike: avtoref. dis. ... doktora pedagogicheskikh nauk [Bilingual education in Russian and foreign pedagogic: the author's abstract of a doctoral thesis in pedagogical sciences]. Novgorod. [in Russian]

[Vyushkina, 2017](#) – Vyushkina, E.G. (2017). CLIL Approach to Legal English Courses: Analysis of Practice and Experience. *Sustainable Multilingualism*, 10 DOI: <http://dx.doi.org/10.1515/sm-2017-0007>

[Zaripova, 2015](#) – Zaripova, R.R. (2015). Integrated subject-linguistic approach as the basis of subject teaching modelling using a foreign language at high school. *Journal of Language and Literature*, 6(3), 175-180.



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Public Standing of a Teacher and Its Adjustment

Irina M. Kyshtymova ^{a,*}, Natalia A. Rozhkova ^b

^a Irkutsk State University, Russian Federation

^b Irkutsk Senior High School №25, Russian Federation

Abstract

Public standing of a teacher is reflective of the customary social attitude towards the profession and associates with the efficiency of the professional practice. The dynamism of social processes determines the importance of defining modern criteria for the semantic categorization of teacher's public standing, differences in the perception of students, parents and school teachers themselves, as well as improvement of the teacher's indigenous creed. The Article presents the results of studies of particularities in the perception of the public standing of a teacher by high school students, their parents and school teachers (N = 150). Using the method of semantic differential and factor analysis, a categorical structure of the perception of a teacher's public standing has been defined, including the factors of 'kindness', 'competence' and 'prestige'. Verifiable group differences in the semantics of a 'teacher' were revealed in categorical criteria 'competence' ($p \leq 0.05$). In the course of comparing particularities of perception of professional and personal public standing of school teachers, it was determined that personal self-esteem is significantly different from the professional one: educators perceive a 'teacher' as less kind, but more competent and prestigious than their 'self'. In the process of adjustment work with school teachers (N = 50), which was based on the principle of outbound mediation of personal and professional introspection processes, there was a change in the teacher's inner public esteem: bridging the distance between perception of a 'teacher' by teachers and students, as well as the convergence of its semantic evaluation with the self-esteem of teachers. The research results bring the need to find ways to increase the prestige of teachers' work in contemporary Russian society.

Keywords: teacher's public standing, students, parents, school teacher, semantic evaluation, perception, factor analysis, external evaluation, teacher's self-assessment.

* Corresponding author

E-mail addresses: info@creativity.ru (I.M. Kyshtymova), baikalnat@yandex.ru (N.A. Rozhkova)

1. Introduction

The social importance of teacher's activities determines sustainability of scientific interest in the social and psychological determinants of its effectiveness, personal characteristics of school teachers and conditions for their professional development. While the role of a teacher remains decisive for the processes of individual and social development of schoolchildren, the attitude towards it in contemporary world with its dynamically changing value priorities is unstable. The place of the notion 'teacher' in the public consciousness, the attitude of the examinees – students and parents, as well as teachers themselves, under the conditions of global value changes, undergoes transformation that affects performance of the education process. Identifying particularities of the semantic status of the character of a school teacher, comparing ideas about a teacher between different groups of subjects of the educational process can be the basis for determining ways to improve the effectiveness of educational activity by adjustment of public standing of a teacher.

Public standing, being the object of active societal interest and scientific research today, is determined in differential ways. We have accepted its understanding as the one of sustained group impression, opinion or judgment about an object (Kyshtymova, 2014). The concept of 'Public standing' designates the attitude that has developed in a society towards an object, which can be either poorly comprehended, non-reflexive, as well as rationally justified. In any case, that attitude, firstly, determines the behavior of people in relation to the vehicle of public standing, trust in him, and secondly, influences the bearer of public standing, his self-esteem and behavior.

The issue of perception and self-perception of the character of an educator, school teacher and university professor today is the subject of various studies, whose analysis shows the diversity of methods used and the results obtained, in particular, semantic bases used in categorizing a teacher's character.

Thus fundamental attributes, on the basis of which the concept of a 'teacher' was evaluated, 'observance of rules' and 'capability to influence others' come under consideration. The data were obtained on the basis of analyzing the results of students' interpretations of pseudo-tautology: 'A teacher is a teacher' (Belova, 2016). In another study, using the method of assessing qualities significant for teacher's performance on a given scale by students, it was determined that 'professionalism', 'credibility', 'attitude to the subject of instruction', 'altruism', 'beauty' and 'modesty' of teachers are important for schoolchildren (Slepko, 2013).

When determining teacher's public standing using the method of semantic differential, its penta-, hexa- and hepta-factorial structure was generated, which included such common factors as, for example, 'peculiarities of professional communication', 'teacher as a person', 'psychological affinity with the teaching profession'. The data on the differences in the factor structure of the assessment of a public standing in six different age groups of schoolchildren were presented: 10 to 16 years (Kalyuzhny, 2010), which may be the basis for the conclusion about the instability of that assessment, and, therefore, based on the data obtained by the author, it was impossible to draw a conclusion about the identified particularities of the teacher's public standing, since public standing is characterized by stability.

A social image of a teacher came under review using the analysis of conceptual metaphors: in the course of the study, future educators supplemented an unfinished sentence 'In Chilean society, a teacher is understood as ..., because ...,' then the resulting statements were discussed and ranked. As a result of the research, the image of a modern teacher was characterized through his positive ('announcer', 'father', 'engine', 'superhero') and negative ('insect', 'mechanical device', 'nanny', 'robot', 'victim') semantics. The authors concluded that the social conditions, under which a teacher works, have a greater impact on the categorization of his public standing than his professional capacity: the reason for its predominantly negative image-building characteristics was the social discredit of the teacher, low reward of his work (Alarson, 2018).

The method of describing memories was used by Chang-Credl when studying the particularities of a teacher's image among social media platform users: The examinees compiled texts about their best and worst teachers, the analysis of those essays afforded us to identify ways of shaping positive public standing of a teacher through the presentation of his character in the media space (Chang-Credl, 2017). Ideas about teacher were also investigated using the method of metaphorical evaluation, which afforded to identify particularities of the holistic: analytical and, at the same time, emotional – reflections of the perceived object (Guerra, 2009).

The method of analyzing photographs was used in the study of the relationship between mental and visual (reflected in photographs) images of teachers (Bautista, 2018). Their difference, according to the position of the authors, was the basis for actualization of the processes of reflection and changing the model of one's behavior among teachers.

The study of self-image and self-esteem of teachers in the face of changing formal requirements for their work, in particular the need to use digital technology in the educational process, was carried out using qualitative methods: interlocution and semi-structured interviews – which allowed teachers to discover how their perception of their professional image depends on their attitude to new educational conditions (Fransson, 2018).

In scientific works, the importance of adjustment of teacher's inner image, the need to harmonize the ideas about it with the teachers themselves and other participants of the educational process, were defined. At the same time, the data on the basic assessment categories, according to which public standing of a teacher is evaluated, is contradictory. Whereby the importance of focused work on pedagogical image-building noted by researchers, theoretical foundations of its organization were unclear. Programs in the course of their implementation targeted at improving teacher's inner image had a general educational character (Ignatenko, 2014).

2. Materials and Methods

Determination of the factors on the basis of which a 'teacher' is categorized and, accordingly, its assessment is shaped, which determines public standing, was carried out using the method of a dedicated semantic differential composed of pairs of bipolar constructs that characterize professional and personal qualities that are important for the performance of pedagogical activity, whereby examinees evaluated public standing of a teacher on a 7-point scale. Evaluation adjectives were determined on the basis of assessment using the G. Kelly repertoire grids method – the stimuli of 'my favorite teacher' and 'my unloved teacher' by students of a Teachers' Training Institute (N = 34).

To identify the particularities of a teacher's image, his semantic evaluation was matched against semantic evaluation of mythopoetic characters: Vasilisa the Wise and the old witch Baba Yaga, whose characters are endowed with stable semantics in mass consciousness and can serve as symbolic markers of the positive and negative poles of the image of a 'teacher/schoolmaster'.

The character of Vasilisa the Wise traditionally symbolized wisdom, beauty and kindness, manifested in her attitude to others. The nature of Baba Yaga, on the other hand, was manifested through negative attitude: 'She kidnaps children and tries to roast them' (Propp, 1998: 147). Baba Yaga's ugliness, as well as her 'connection to the realm of the dead' (ibid.) also gives grounds to use that ambivalent character as a marker of the negative semantic boundary of the semantic space of the image under study.

'Mom' and 'Dad' incentives, marking zones of emotional intimacy and 'self' stimulus, were also subjected to semantic evaluation, the importance of which was determined by the task of identifying the differences between professional and personal self-esteem of school teachers participating in the study.

150 people participated in the research: 50 students of the upper grades of secondary school No. 34 of Irkutsk, 50 parents and 50 teachers working in schools No. 34 and 43, as well as in senior high schools No. 3 and 25 of Irkutsk. Diagnosis of the characteristics of the perception of the stimulus 'teacher' in the group of teachers was carried out twice: before and after the implementation of the experimental program targeted at adjusting teacher's inner image. Thus, the categorial structure of the image-building assessment was determined on the basis of processing 200 diagnostic protocols.

The program was based on the principle of media artistic mediacy of personal development, the proposition that personal and professional reflection, updated in the process of perception of teacher's artistic images and their discussion, contributes to changing teacher's attitude to self as a professional, reducing differences in the semantics of the teacher's structural components in groups of students, their parents and teachers.

Mathematical processing of the data obtained in the process of research was carried out using the IBM SPSS Statistics 23 statistical set. The non-parametric Mann-Whitney U-test was used to compare the values of independent samples, while to compare more than two independent samples, the Kruskal–Wallis test was employed. To assess credibility of the shift in the values of the

test attribute, the *Wilcoxon test* was employed. To determine the indicators of semantic evaluation of the stimuli under consideration, factorial analysis procedure was used.

3. Findings

The analysis of data obtained in the process of diagnostic research made it possible to determine the main evaluation categories according to which teacher's public standing was assessed. To do that, the values obtained in the course of semantic evaluation of the six stimuli, were subjected to a factor analysis procedure using dominant component analysis. Three factors were determined on its basis, explaining 73.233 % of the variables scatter.

The first factor with a high specific load included such scales as 'light – dark' (0.845), 'warm – cold' (0.840), 'good – evil' (0.825), 'pleasant – nasty' (0.808), 'friendly – hostile' (0.808), 'honest –deceitful' (0.793), 'favored – hated' (0.779), 'understanding – not understanding' (0.775). Based on the meaningful value of the scales, the factor was designated 'kindness'.

The second factor of 'competence' was made on the scale: 'Experienced - inexperienced', 'competent – incompetent', 'self-developing – non-developing' (0.683), 'responsible - irresponsible' (0.669), 'educated – uneducated' (0.659), 'smart – cramped' (0.657).

The third factor included scales: 'Rich – poor' (0.755), 'full of strength – tired' (0.725), 'successful – unsuccessful' (0.724) and 'prestigious – non-prestigious' (0.680). It was named 'prestige factor'.

Thus, categorization of a teacher's public standing, which was the basis of image evaluation, was carried out in accordance with the idea of kindness, competence and prestige of the subject.

The peculiarities of the perception of a 'teacher' by students, their parents and teachers were presented in the semantic space of the factors of 'kindness' and 'prestige', along with the images endowed with consistent cultural meaning: 'Mom', 'Dad', 'Vasilisa the Wise' and 'Baba Yaga' (Figure 1).

A 'Mom' was expectedly perceived as 'best' (0.61), while Baba Yaga as the 'worst' (-1.7). A 'Teacher', according to the data, was less kind than 'Mom', 'Vasilisa the Wise' (0.6) and 'Dad' (0.18). At the same time, students perceived him as less kind (0.09) than parents (0.16) and teachers (0.18) (Figure 1).

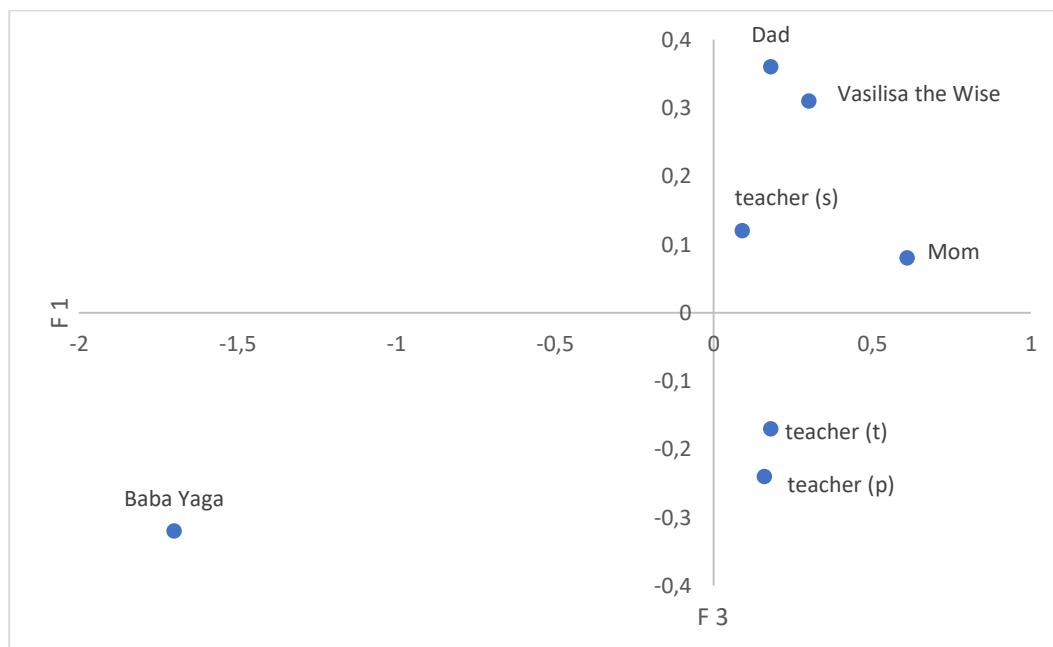


Fig. 1. Evaluation of a Teacher by Different Groups of Examinees in the Semantic Space of Mythopoetic And Parental Images Based on the Factors of 'Kindness' (F1) and 'Prestige' (F3)
 Note: 'teacher (p)' – assessment of the image of the teacher by parents, 'teacher (t)' – assessment of the teacher's image by teachers (school teachers), 'teacher (s)' – assessment of the teacher's image by the students.

According to the 'prestige' factor, differences in the evaluation of incentives were more significant: the most prestigious was 'Dad' (0.36), the least one – 'Baba Yaga' (-1.7). At the same time, the assessment of the image of a teacher by parents (-0.24) and teachers (-0.17), as well as the assessment of 'Baba Yaga', were in the area of negative values. Schoolchildren estimated the 'prestige' of a teacher as significantly higher (0.12) (Figures 1, 2).

From the semantic space presented in Figure 2, it can be seen that the teacher's 'competence' (F2) was rated most highly by all groups of examinees: by parents (0.72), teachers (0.45) and students (0.41). Comparison of group evaluations using the Kruskal – Wallis test showed that the differences were statistically significant ($H = 10.844$, $p = 0.004$) by the factor of 'competence'. At the same time, parents' perception of the competence of a 'teacher' was much higher than that of the teachers themselves and their students.

According to the data obtained, 'Dad' (0.28), 'Vasilisa the Wise' (0.05), 'Mom' (0.02) and 'Baba Yaga' (-0.78) were less competent (Figure 2).

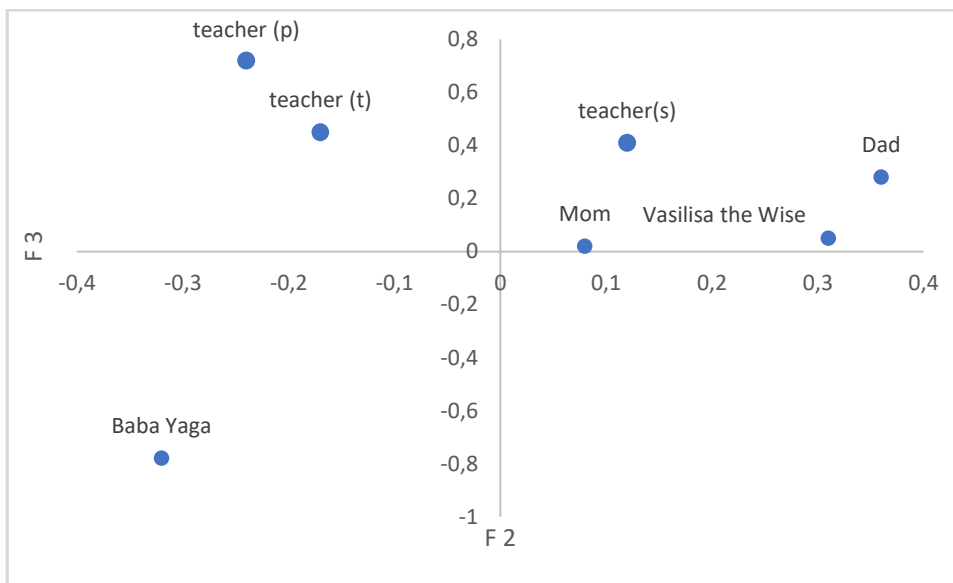


Fig. 2. Evaluation of a Teacher by Different Groups of Examinees in the Semantic Space of Mythopoetic and Parental Images Based on the Factors of 'Competence' (F2) and 'Prestige' (F3). Note: 'teacher (p)' – assessment of the image of the teacher by parents, 'teacher (t)' – assessment of the teacher's image by teachers (school teachers), 'teacher (s)' – assessment of the teacher's image by the students.

Thus, in the semantic space of the mythopoetic and parental images, the 'teacher' was less kind than 'Mom', 'Vasilisa the Wise' and 'Dad', but more kindly than 'Baba Yaga'. At the same time, students consider 'teachers' to be less kind than those school teachers who participated in the study. The image of a teacher was perceived as the most 'competent' of estimated incentives by all groups of examinees, and the parents rated that criterion the highest. The status assessment of a 'teacher' by parents and teachers was low: according to the 'prestige' factor, it was in the area of negative values, same as is the assessment for 'Baba Yaga'. A comparison of the status assessment of 'Baba Yaga' and 'teacher' by teachers using the Mann–Whitney U-test demonstrated that there were no differences in the semantics of the incentives ($U = 1221$, $p = 0.978$). Such negative determination of the status of their profession by school teachers marks critical situation in the education system and cannot fail to influence the quality of educational work.

For schoolchildren, a 'teacher' is more prestigious than 'Baba Yaga' ($U = 351$, $p = 0.008$), hence, no statistically significant differences in the perception of the status of a 'teacher' and 'Mom' have been disclosed ($U = 1068$, $p = 0.210$). The low status 'teacher' and 'Mom' in the eyes of the millennials may be explained by low socio-economic support, which is consistent with the conclusions of colleagues (Alarson, 2018).

Particularities of the perception of their professional image label the attitude towards professional activity and, of course, affect its efficiency. Therefore, adjustment of the inner image of a 'teacher', characterized, according to the results of the research, by low standards, seemed to be an urgent task. In the course of the study, we developed and implemented an educational program for school teachers, involving the intensification of personal and professional reflection in the process of discussing popular media presentations of a teacher's public standing (feature films 'We Will Live Until Monday', 'French Lessons', 'Schoolmarm') and patterns of modeling personal and professional image (Kyshtymova, 2015). The importance of a teacher's public standing reflected in the public consciousness was discussed; factors affecting it; the role of ideas about the teacher for his professional and personal performance. The program was implemented within 17 hours (except for the time of watching movies), it was attended by young teachers, whose work experience was from one to two years.

To test the assumption that the perception of the public standing of their profession was associated with self-perception, the teachers participating in the study semantically evaluated not only the image of a teacher, but also the 'self' stimulus.

It was revealed that the professional image of a 'teacher' and the image of 'self' among school teachers were significantly different in two assessment categories. So, a 'teacher' is much less kind than 'self': $F_1 = 0.19$ and 0.36 , respectively ($U = 953$, $p = 0.04$); he is more 'competent': $F_2 = 0.45$ and 0.03 ($U = 802$, $p = 0.003$). By the factor of 'prestige', no significant differences in the semantics of a 'teacher' and 'Self' were revealed: $F_3 = (-0.22)$ and (-0.19) , $U = 1173$, $p = 0.716$).

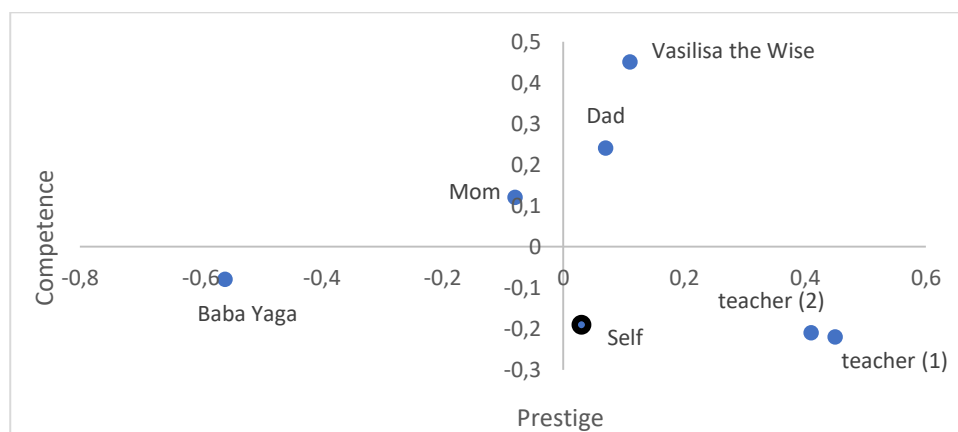


Fig. 3. The Image of the self of School Teachers in the Semantic Space of Professional, Mythopoetic and Parental Images

Note: «teacher (1)» factorial values of the semantics of a teacher's image before adjustment work, «teacher (2)» – after.

It may be assumed that the perception of their personality by school teachers, to a degree greater than the perception of the profession, was affected by their objective social and economic status: they were seeing themselves as 'very kind' and, at the same time, 'very undervalued.'

The actualization of the processes of professional reflection in the process of implementing a program targeted at correcting professional self-attitude affected the perception of a teacher's image. He came to be perceived by school teachers as more 'kind' ($F_1 = 0.19 - 0.25$, $Z = -8.595$, $p = 0.000$) – thus, the semantic distance between the personal and professional self-esteem of school teachers decreased (Figure 4). A decrease in the values of 'competence' ($F_2 = 0.454 - 0.408$, $Z = -8.262$, $p = 0.000$) also indicated a trend towards convergence with the semantics of 'self'.

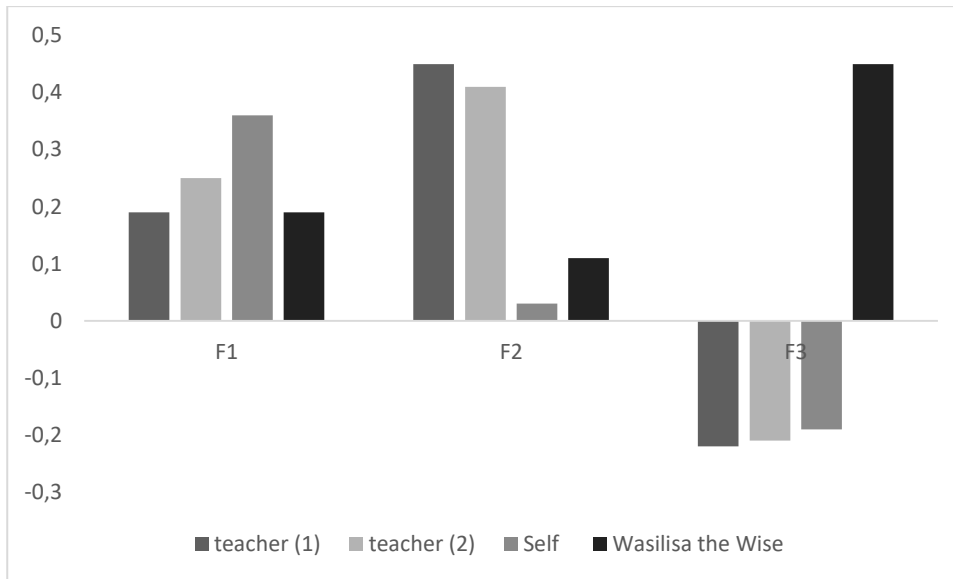


Fig. 4. The dynamics of assessing public standing of a ‘teacher’ by the factors of ‘kindness’, ‘competence’ and ‘prestige’.

Note: «teacher (1)» factorial values of the semantics of a teacher’s image before adjustment work, «teacher (2)» – after.

The change in the ‘prestige’ factor of a ‘teacher’ stimulus was not significant: $F_3 = (-0.22) - (-0.21)$. The emerging trend towards a positive change in meanings was nonetheless important, given the complex social nature of a status defined by the social context. It may be assumed, based on the data obtained, that a change in the public perception of the standing of a ‘teacher’ is possible through media communication of positive artistic images of teachers. Under the conditions of prevalence of negative images in the media space, positive changes in the teacher’s public standing are not possible.

The results of the Choi survey were consistent with that judgment, wherein it was shown that a negative presentation of a teacher in a preschool institution by the media causes a greater trust of information consumers than a positive one. The data affords to make conclusion that media discourse determines the social status of the teacher to a greater extent, rather than his professionalism. The presentation of a teacher’s image in Hollywood films was the subject of scientific reflection, and their social relevance in regards of formation of attitude towards a teacher was noted (Dahlgren, 2017).

4. Discussion

The fundamental problem addressed by the study is the contradiction between the traditional public importance of the teacher’s function and a change in attitudes towards him in contemporary Russian society, the negative presentation of his public standing in the media. The dependence of teacher’s professional performance on his self-attitude, and self-attitude on the attitude of students and their parents towards him, actualizes the problem of identifying the categorical structure of perception of the teacher’s public standing by the subjects of the educational process.

The structure of semantic evaluation of the character of a “teacher” exposed in the course of research, including the factors of kindness, competence and prestige, was not consistent with the reasoning presented in earlier scientific work that determined the attitude towards a teacher (Alarson, 2018; Belova, 2016; Kaljuzhnyj, 2010; Slepko, 2013).

The results of our study of low rating of the public standing of a ‘teacher’ do not agree with the data that more than a third of teachers gave their professional qualities higher rating than students (Hammer, 2018).

5. Conclusion

Under the conditions of dynamic changes in values, socially significant priorities and criteria for social success that are taking place in the Russian society, images traditionally endowed with positive semantics, wherein a teacher was traditionally included, are undergoing transformations. High cultural status has always been reflected in the media, primarily in literary texts. The contemporary public information space is filled with alternate images of teachers: poor, even miserable, lost, unworthy. Those images are communicated through news broadcasts, television shows, feature films. They encourage negative attitude towards a 'teacher' in Russian society, determining the decline in his social status. This situation, determining the negative characteristics of the public standing of a teacher from the outside, is aggravated by low wages and complication of formal requirements, manifested primarily in the need to issue numerous documents. Those circumstances do not contribute to the improvement of professional self-esteem of a teacher, his inner image.

In the process of research, we identified a system of categories, according to which public standing of a teacher in contemporary Russian society was assessed. According to the identified criteria (kindness, competence and prestige), particularities of perception of a teacher's public standing were determined and compared with the estimates of characters that carry habitual (positive or negative) value: fairytale characters and parents. The low valuation of a 'teacher' by the factor of 'prestige' in every group of examinees indicated a grave, socially significant problem of the importance of studying the effects of such attitude towards a teacher on his personal self-esteem and brought it into the foreground.

Indeed, in the process of comparing semantic assessments of the incentives 'Self' and 'teacher', differences in their perceptions were identified by the factors of 'kindness' ($F_1 = 0.357 - 0.189$, $U = 953$, $p = 0.04$) and competence ($F_2 = 0.03 - 0.45$, $U = 802$, $p = 0.003$) by school teachers. The assessment of the status of 'Self' was as low as the one of a 'teacher' ($F_3 = (-0.19) - (-0.21)$, $U = 1173$, $p = 0.716$). Low image rating of a 'teacher' by school teachers and the semantic distance in the perception of own personality and profession shaped the basis of developing a teachers' public standing adjustment program targeted at actualizing the processes of professional and personal reflection, and its implementation in a group of school teachers.

The revealed dynamics of the semantics of a 'teacher' following the criteria of 'kindness' ($Z = -8.595$, $p = 0.000$) and 'competence' ($Z = -8.262$, $p = 0.000$) testifies of the efficiency of the elected approach – joint discussion of a teachers' media images and mechanics of shaping and functioning of a good image. On the other hand, the absence of reliable changes in teachers' perception of their professional public standing in terms of 'prestige', contiguity of their assessments of the status of a 'teacher' and 'Baba Yaga' ($U = 1221$, $p = 0.978$) marks the complexity of the problem of professional image self-assessment, its dependence on the external-social and economic factors that evade psychological correction, – their change requires a review of the conditions of teaching work and the semantic interpretation of the image of a teacher in the media.

References

- Alarson et al., 2018 – Alarson, P. and others (2018). Conceptual metaphor analysis of teacher's social images in pre-service teachers. *Onomazein*, 40, 1-27. DOI: 10.7764/onomazein.40.01
- Bautista et al., 2018 – Bautista Garsia-Vera, A. and others (2018). Experiential images and photo-elicitation in teacher training. *Educatio Siglo, XXI*, 36 (2), 135-161. DOI: 10.60118/j/333001
- Belova, Kolomiets, 2016 – Belova T.M., Kolomiets, S.V. (2016). Stereotipnyi obraz uchitelya v obydenom soznanii predstavitelei amerikanskoi i russkoi lingvokul'tur [Habitual image of a teacher in the everyday consciousness of representatives of american and russian linguistic cultures]. *Yazyk i kul'tura: Sbornik statei XXVI mezhdun. nauchnoi konferentsii*, 7-11. [in Russian]
- Chang-Kredl, Colannino, 2017 – Chang-Kredl, C., Colannino, D. (2017). Constructing the image of the teacher in Reddit: Best and worst teachers. *Teaching and Teacher Education*, 64, 43-51. DOI: 10.1016/j.tate.2017.01.019
- Choi, Kwak, 2017 – Choi, E-J., Kwak, F-S. (2017). Analysis of trust image of preschool teachers on newspaper and TV news. *The Journal of Korea Open Association for Early Childhood Education*, 22(6). 95-117. DOI :10.20437/KOAECE22-6-05

Dahlgren, 2017 – Dahlgren, R.L. (2017). From Martyrs to Murderers: Images of Teachers and Teaching in Hollywood Films. Rotterdam., Sense Publishers.

Fransson et al., 2019 – Fransson, G. and others (2019). Digitalise and capitalise? Teachers' self-understanding in 21st-century teaching contexts. *Oxford Review of Education*, 45 (1), 102-118. DOI: 10.1080/03054985.2018.1500357

Guerra, 2009 – Guerra, P. (2009). Revisión de Experiencia de Reflexión en la Formación Inicial de Docentes'. *Estudios Pedagógicos*, 35 (2), 243-260. DOI: 10.4067/S0718-07052009000200014

Hammer et al., 2018 – Hammer, R. and others (2018). Faculty attitudes about student evaluations and their relations to self-image as teacher. *Social Psychology of Education*, 21 (3), 517-537. DOI: 10.1007/11218-018-9426-1

Ignatenko, 2014 – Ignatenko, I.M. (2014). Imidzh sovremennogo pedagoga (prosvetitel'skaya programma seminar-praktikuma dlya pedagogov) [Image of the modern teacher (educational program of the workshop for teachers)]. *Vestnik prakticheskoi psikhologii obrazovaniya*, 4 (41), 101-115. [in Russian]

Kaljuzhnyj, 2010 – Kaljuzhnyj, A.A. (2010). Issledovanie stereotipnykh predstavlenii ob imidzhe uchitelya [Study of stereotyped ideas about the image of a teacher]. *Izvestiya Saratovskogo universiteta. Ser. Filosofiya. Pedagogika. Psikhologiya*, 10(3), 73-78. [in Russian]

Kelchtermans, 2009 – Kelchtermans, G. (2009). Who I am in how I teach is the message: self-understanding, vulnerability and reflection. *Teachers and teaching*, 15(2), 257-272. DOI: org/10.1080/13540600902875332

Kyshtymova, 2014 – Kyshtymova, I.M. (2014). Metodologicheskie osnovaniya psikhologicheskogo issledovaniya imidzha [Methodological foundations of psychological image research]. *Vestnik Leningradskogo gosudarstvennogo universiteta im. A.S. Pushkina*, 5 (1), 136-145. [in Russian]

Kyshtymova, 2015 – Kyshtymova, I.M. (2015). Lichnostnyi imidzh [Personal image]. Irkutsk: TsentrNauchServis, 236 p. [in Russian]

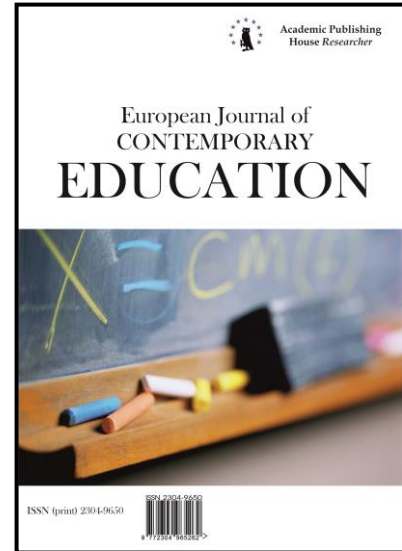
Propp, 1998 – Propp, V.Ja. (1998). Istoricheskie korni volshebnoi skazki. Morfologiya volshebnoi skazki. Istoricheskie korni volshebnoi skazki (Sobranie trudov V.Ya.Proppa) [Historical roots of a fairy tale. The morphology of a fairy tale. Historical roots of the fairy tale (collection of works of V.Ya. Propp)]. M.: Labirint, 112-436.

Slepko, 2013 – Slepko, Ju.N. (2013). Otnoshenie uchashhihsja shkoly k uchitelju [The attitude of school students to teacher]. *Sistemogenez uchebnoi i professionalnoi deiatelnosti. Mater. VI Vseross. nauchno-prakt. konf. Yaroslavl*, 172-174. [in Russian]



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Cultural Intelligence of the Jordan Teachers and University Students from the Hashemite University: Comparative Study

Ahmad M. Mahasneh ^{a,*}, Ahmad M. Gazo ^a, Omar A. Al-Adamat ^b

^aThe Hashemite University, Jordan

^bMinistry of Education, Jordan

Abstract

The present study aimed at comparing the level of cultural intelligence among teachers and university students, and to define whether there are statistically significant differences in the level of cultural intelligence due to gender variables. The sample consisted of 300 teachers and 400 students at the Hashemite University, chosen by random selection, and data collected using the Cultural Intelligence Scale. Results of the study showed a high level of cultural intelligence among teachers and university students and also showed Statistically significant differences were also found in the levels of both cognitive and behavioral cultural intelligence attributed to teachers and university students, in favor of teachers. And statistically significant differences in the level of motivational cultural intelligence in favor of male teachers, and statistically significant differences in the level of behavioral cultural intelligence in favor of female teachers. The results of the study also showed statistically significant differences in the levels of cultural intelligence, meta-cognitive cultural intelligence, cognitive cultural intelligence and motivational cultural intelligence in favor of male students.

Keywords: cultural intelligence, teachers, university students.

1. Introduction

The recently accepted link between culture and intelligence has led to cultural intelligence becoming the subject of a range of research studies in a variety of fields, and this increasing interest and curiosity as regards intelligence has led to the recognition and classification of specific types of intelligence in diverse areas including social intelligence (Thorndike, Stein, 1937) and the more recent study of emotional intelligence by Mayer, Salovey (1993). However, as Sternberg, (1997) pointed out, there is a lack of cross-cultural dimensions in the domains of

* Corresponding author

E-mail addresses: dahmadmahasneh1975@yahoo.com (A.M. Mahasneh)

emotional and social intelligence since their area is limited to describing the manner and reason for an individual's response.

The contemporary environment of burgeoning globalization and multi-cultureless involving a wide variety of fields has heightened the focus on an individual's ability to function effectively in a mixed cultural setting, which has resulted in a surge of academic and scientific realization of the necessity for systematic study of cultural intelligence. The concept however is far from novel, having been mooted in 2003, defined as the aptitude to function successfully in miscellaneous cultural situations (Ang, VanDyne, 2008), whereas Earley and Ang (2003) defined cultural intelligence as that of an individual being able to deal effectively in multi or cross-cultural situations, adapting intuitively to collating, inferring and responding to different cultural cues and nuances, while cultural intelligence was defined by Crowne (2008) as a complex multidimensional proficiency using a combination of deeply understood and acquired knowledge, being aware and mindful of cultural mores and taboos, and possessing a wide range of interaction and communication skills.

Due to its comparatively recent introduction in the field there is limited empirical evidence available to the researcher (Alon, Higgins, 2005; Crowne, 2008; Earley, Ang, 2003) with most of the research studies focusing on cultural intelligence-related results (Crowne, 2008) including cultural adaptation and judgment, as well as decision making and task performance in various cultural surroundings (Ang et al., 2007) in addition to successful leadership abilities overseas (Alon, Higgins, 2005).

Crowne (2008) broadened the spectrum, finding a number of significant precursor backgrounds and associates related to cultural intelligence, which included experiences of travelling abroad and holidays spent in foreign countries, as well as studying and working abroad. The predominantly relevant finding in the Crowne study was the benefit of previous experience or tutoring gained by living and travelling abroad and its correlation with the general concept of cultural intelligence, as well as its diversity of dimensions.

According to Sternberg (1986), the complex framework of cultural intelligence is a concept comprising four dimensions:

1) Meta-cognitive: awareness of one's own thought processes and adaptation to different cultural situations (Ng et al., 2012). Individuals having elevated meta-cognitive levels of cultural intelligence will constantly adjust perceptions and adapt approaches to interact appropriately within given cultural settings, responding with acquired reactions and conventions to the prevailing cultural environment (Ang et al., 2007). Meta-cognition is having the capability to absorb and comprehend cultural norms and mores, and respond appropriately.

2) Cognitive: knowledge gained through education or personal experience of a wide range of social and legal practices, regulations and cultural conventions; these higher order thinking skills allow for correlation of similarities and dissimilarities of attitudes and social mores in cross-culture situations which prompt particular responses (Ang et al., 2007; Ng et al., 2012).

3) Motivation: the wish to learn about, understand and function in a different culture, basically an urge to acquire a comprehensive knowledge and understanding of another culture to enable one to function with ease and competence (Ang et al., 2007; Bandura, 2002; Ng et al., 2012).

4) Behavioral: pertaining to acceptable verbal and physical behavior in a different cultural situation, regarding appropriate language tone and content, and including physical actions such as facial expressions and other body language. High levels of both knowledge and sensitivity in these aspects are required to successfully reflect culturally acceptable norms and value systems (Ang et al., 2007; Ng et al., 2012).

Although a number of empirical studies have examined the presence of cultural intelligence and other variables, in the present study we have expanded on this body of work by examining the cultural intelligence construct in a sample of Jordanian teachers and university students. More specifically, the current study attempted to answer the following questions:

Question 1: Is there a statistically significant difference in the level of cultural intelligence among teachers and university students?

Question 2: Is there a statistically significant difference in the level of cultural intelligence among teachers due to the gender variable?

Question 3: Is there a statistically significant difference in the level of cultural intelligence among students due to the gender variable?

2. Methodology

Participants

The current study consisted of all teachers in the Education Directorate of Mafraq and all students at the Hashemite University in the first semester of the academic year 2018/2019. The study sample consisted of 300 teachers (150 male and 150 female) their ages ranged from (23-49 years) 400 university students (200 male and 200 female) their ages ranged from (18-22 years).

The teachers participants were randomly selected from forty primary and secondary public schools from 162. The questionnaires were distributed to the teachers and a week later the questionnaire were collected. Whereas the students sample were selected based on the purposive sample technique from among students enrolled in four university mandatory requirement courses at the Hashemite university.

Study instrument:

Cultural Intelligence Scale: Developed by Ang et al (2007), it includes 20 items measuring four subscales of cultural intelligence: (1) Meta-cognitive (4 items, e.g. "I am conscious of the cultural knowledge I apply to cross-cultural interactions". (2) Cognitive (6 items, e.g. "I know the marriage systems of other cultures". (3) Motivational (5 items, e.g. "I enjoy living in cultures that are unfamiliar to me". (4) Behavioral (5 items, e.g. "I alter my facial expression when a cross-cultural interaction requires it". The cultural intelligence scale was scored on a 7 point Likert scale ranging from (1) Strongly disagree to (7) Strongly agree. Ang et al. (2007) calculated that the internal consistency of the scale using Cronbach alpha was (0.91, 0.88, 0.87 and 0.89) respectively for meta-cognitive, cognitive, motivation and behavioral. For the purpose of the current study, the scale items were translated into Arabic and a back translation performed by an expert and compared with the English version of the scale items, and finally accepted as showing a good concurrence between the English version and the back translation.

For the purpose of verifying the validity of the scale in the Arabic version, the correlation coefficients between the sub-scales were calculated as shown in [Table 1](#).

Table 1. Correlation coefficients between dimensions of cultural intelligence

Dimensions	Meta-cognitive	Cognitive	Motivation	Behavioral	Cultural intelligence
Meta-cognitive	1				
Cognitive	0.55*	1			
Motivation	0.60*	0.72*	1		
Behavioral	0.67*	0.55*	0.59*	1	
Cultural intelligence	0.79*	0.87*	0.87*	0.81*	1

Notes: * Correlation is significant at the level 0.01.

[Table 1](#) shows the four cultural intelligence dimensions to be significantly and positively correlated. The Pearson correlation value between the four dimensions ranged from 0.55 to 0.72, and the Pearson correlation value between the four dimensions and total scale score ranged from 0.79 to 0.87.

For the purpose of verifying the reliability of the scale in the Arabic version, the authors applied the scale to the pilot sample (30 teachers and 40 university students) after a period of two weeks and correlation coefficients between the two applications are shown in [Table 2](#).

Table 2. Value reliability t-retest and Cronbach Alpha for cultural intelligence subscale

Variables	Teachers		University students	
	test-retest	Cronbach's Alpha	test-retest	Cronbach's Alpha
Meta-cognitive	0.73	0.69	0.81	0.77
Cognitive	0.86	0.77	0.86	0.78
Motivation	0.80	0.77	0.83	0.77
Behavioral	0.77	0.75	0.77	0.75
Cultural intelligence	0.89	0.74	0.91	0.75

Table 2 shows that the values of the reliability of cultural intelligence using test-retest ranged from 0.73 to 0.89 among teachers and from 0.77 to 0.91 among university students. The values of the reliability of cultural intelligence using Cronbach Alpha ranged from 0.69 to 0.77 among teachers and from 0.75 to 0.78 among university students.

Data collocation and analysis:

To achieve the objective of the study, the following implementation procedures were followed: review of theoretical literature and previous studies related to cultural intelligence, the study sample comprised teachers in the Education Directorate of Mafraq and students at the Hashemite University, the study scale was distributed to the study sample who were given an idea of the study objective, and assured that the data would be used for research purposes only. The final stages were collocation of the study tools and inputting of the data, while means, standard deviation, and multivariate analysis (MANOVA) were used to analyses the data. To check the normal distribution of data of the study skewness and kurtosis were collected. To determine the level of cultural intelligence the following standard has been adopted: below 3 = low, 3-4.99 = medium, above 5 = high.

Results:

Question 1: Is there a statistically significant differences in the levels of cultural intelligence between teachers and university students?

To determine whether significant differences exist between the levels of cultural intelligence of teachers and university students. Table 3 presents means and standard deviations for each dimension.

Table 3. Means, standard deviations of the levels of cultural intelligence among teachers and university students

Variables	Teachers		University students	
	M	SD	M	SD
Meta-cognitive	5.63	0.81	5.55	0.89
Cognitive	4.96	1.06	4.76	1.07
Motivation	5.32	0.99	5.39	1.04
Behavioral	5.68	0.84	5.45	0.97
Cultural intelligence	5.39	0.79	5.28	0.86

Table 3 show that there are differences in the level of cultural intelligence between teachers and university students. In order to use MANOVA, we conducted preliminary tests to check for multicollinearity, sphericity, and homogeneity of variance. A multivariate analysis was conducted to investigate the differences in the level of cultural intelligence. In order to evaluate multivariate significance, Wilks's lambda statistic was used. The results indicated statistically significant between teachers and university students in the level of cultural intelligence (F = 9.210, Wilks's lambda = 0.950, sig = 0.00, Partial η^2 = 0.050).

Table 4. Results of MANOVA analysis with respect to teachers and university students of the levels of cultural intelligence

Source	Dependent variable	Sum of squares	df	Mean square	F	Sig	Partial η ²
Teachers-university students	Meta-cognitive	1.097	1	1.097	1.478	0.22	0.002
	Cognitive	6.408	1	6.408	5.560	0.01	0.008
	Motivation	0.990	1	0.990	0.940	0.33	0.001
	Behavioral	8.912	1	8.912	10.475	0.00	0.015
	Cultural intelligence	2.150	1	2.150	3.097	0.07	0.004
Error	Meta-cognitive	518.072	698	0.742			
	Cognitive	804.452	698	1.153			
	Motivation	735.493	698	1.054			
	Behavioral	593.798	698	0.851			
	Cultural intelligence	484.692	698	0.694			
Corrected total	Meta-cognitive	519.170	699				
	Cognitive	810.860	699				
	Motivation	736.483	699				
	Behavioral	602.710	699				
	Cultural intelligence	486.842	699				

The results showed statistically significant differences in the cognitive ($F = 5.560, P = 0.01$) and behavioral ($F = 10.475, p = 0.00$) dimension levels attributable to teachers and university students. For the cognitive dimension, the teachers' mean score ($M = 4.96, SD = 1.06$) was higher than that of the university students ($M = 4.76, SD = 1.07$); for the behavioral dimension, the teachers' mean score ($M = 5.68, SD = 0.84$) was higher than that of the university students ($M = 5.45, SD = 0.97$). The results showed no statistically significant differences between teachers and university students in the levels of cultural intelligence, meta-cognitive and behavioral dimensions.

Question 2: Is there a statistically significant differences in the levels of cultural intelligence due to the teachers' gender variable?

To determine whether significant differences exist between the levels of cultural intelligence due to the teachers gender. [Table 5](#) presents means and standard deviations for each dimension.

Table 5. Means, standard deviations of the levels of cultural intelligence according teachers gender

Variables	Male		Female	
	M	SD	M	SD
Meta-cognitive	5.63	0.80	5.64	0.81
Cognitive	5.07	0.99	4.85	1.13
Motivation	5.54	0.86	5.09	1.06
Behavioral	5.58	0.87	5.77	0.81
Cultural intelligence	5.43	0.73	5.30	0.84

[Table 5](#) show that there are differences in the level of cultural intelligence due to the teachers gender. In order to use MANOVA, we conducted preliminary tests to check for multicollinearity, sphericity, and homogeneity of variance. A multivariate analysis was conducted to investigate the differences in the level of cultural intelligence. In order to evaluate multivariate significance,

Wilks's lambda statistic was used. The results indicated statistically significant between male and female teachers in the level of cultural intelligence ($F = 9.544$, Wilks's lambda = 0.885, sig = 0.00, Partial $\eta^2 = 0.115$).

Table 6. Results of MANOVA analysis for comparing levels of the cultural intelligence with respect to teachers gender

Source	Dependent variable	Sum of squares	df	Mean square	F	Sig	Partial η^2
Teachers gender	Meta-cognitive	0.007	1	0.007	0.011	0.91	0.000
	Cognitive	3.521	1	3.521	3.102	0.07	0.010
	Motivation	15.323	1	15.323	16.123	0.00	0.051
	Behavioral	2.765	1	2.765	3.864	0.05	0.013
	Cultural intelligence	1.229	1	1.229	1.968	0.16	0.007
Error	Meta-cognitive	196.275	298	0.659			
	Cognitive	338.288	298	1.135			
	Motivation	283.212	298	0.950			
	Behavioral	213.235	298	0.716			
	Cultural intelligence	186.029	298	0.624			
Corrected total	Meta-cognitive	196.282	299				
	Cognitive	341.809	299				
	Motivation	298.535	299				
	Behavioral	216.000	299				
	Cultural intelligence	187.258	299				

The results showed statistically significant differences due to teachers' gender in both motivation ($F = 16.123$, $P = 0.00$) and behavioral (3.864) levels. For the motivation dimension, male teachers' mean score ($M = 5.54$, $SD = 0.86$) was higher than that of female teachers ($M = 5.09$, $SD = 1.06$). For the motivation dimension, female teachers' mean score ($M = 5.77$, $SD = 0.81$) was higher than that of male teachers ($M = 5.58$, $SD = 0.87$), whereas the results showed no significant differences attributable to teachers' gender in the levels of cultural intelligence, meta-cognitive, and cognitive dimensions.

Question 3: Is there a statistically significant differences in the cultural intelligence levels due to the students' gender variable?

To determine whether significant differences exist between the levels of cultural intelligence due to the students gender. [Table 7](#) presents means and standard deviations for each dimension.

Table 7. Means, standard deviations of the levels of cultural intelligence according students gender

Variables	Male		Female	
	M	SD	M	SD
Meta-cognitive	5.69	0.84	5.42	0.93
Cognitive	4.96	0.94	4.57	1.15
Motivation	5.55	1.05	5.24	1.01
Behavioral	5.51	0.91	5.39	1.02
Cultural intelligence	5.39	0.81	5.11	0.88

Table 7 show that there are differences in the level of cultural intelligence due to the students gender. In order to use MANOVA, we conducted preliminary tests to check for multicollinearity, sphericity, and homogeneity of variance. A multivariate analysis was conducted to investigate the differences in the level of cultural intelligence. In order to evaluate multivariate significance, Wilks's lambda statistic was used. The results indicated statistically significant between male and female students in the level of cultural intelligence ($F = 4.892$, Wilks's lambda = 0.953, sig = 0.00, Partial $\eta^2 = 0.047$).

Table 8. Results of MANOVA analysis for comparing levels of the cultural intelligence with respect to students gender

Source	Dependent variable	Sum of squares	Df	Mean square	F	Sig	Partial η^2
Student gender	Meta-cognitive	7.290	1	7.290	9.226	0.00	0.023
	Cognitive	15.734	1	15.734	14.012	0.00	0.034
	Motivation	9.486	1	9.486	8.832	0.00	0.022
	Behavioral	1.440	1	1.440	1.523	0.21	0.004
	Cultural intelligence	7.840	1	7.840	10.775	0.00	0.026
Error	Meta-cognitive	314.500	398	0.790			
	Cognitive	446.909	398	1.123			
	Motivation	427.472	398	1.074			
	Behavioral	376.358	398	0.946			
	Cultural intelligence	289.594	398	0.728			
Corrected total	Meta-cognitive	321.790	399				
	Cognitive	462.643	399				
	Motivation	436.958	399				
	Behavioral	377.798	399				
	Cultural intelligence	297.434	399				

The results showed statistically significant differences in the students' gender variable in the levels of cultural intelligence ($F = 10.775$, $P = 0.00$), meta-cognitive ($F = 9.226$, $P = 0.00$), cognitive (14.012 , $P = 0.00$) and motivation ($F = 8.832$, $P = 0.00$) dimensions. For the cultural intelligence level, male students' mean score ($M = 5.39$, $SD = 0.81$) was higher than that of female students ($M = 5.11$, $SD = 0.88$). For the meta-cognitive dimension, male students' mean score ($M = 5.69$, $SD = 0.84$) was higher than that of female students ($M = 5.42$, $SD = 0.93$). For the cognitive dimension, male students' mean score ($M = 4.96$, $SD = 0.94$) was higher than that of female students ($M = 4.57$, $SD = 1.15$), and for the motivation dimension, male students' mean score ($M = 5.55$, $SD = 1.05$) was higher than that of female students ($M = 5.24$, $SD = 1.01$). However, the results showed no statistically significant differences attributable to the students' gender variable in the behavioral dimension levels.

3. Discussion

The study results showed that the level of cultural skills and expertise among teachers was high. According to the researchers, this result is due to the teachers' experience in the education field at both school and university levels in dealing with students from a variety of local and regional cultural backgrounds. The teachers have there for developed the necessary knowledge, understanding and skills which allow them to interact positively across the whole student body spectrum and achieve the desired educational goals. This result may be due to the fact that the teachers themselves have the desire to adapt to students and other employees from various

cultures so as to facilitate school performance and achieve the desired goals, or that teachers have the required skills and sufficient knowledge to interact and deal positively with all individuals in their schools, which reflects the teachers' intelligence level.

The study results revealed that the teachers' meta-cognitive dimension level was high. The researchers accredit this result to the ability of teachers to adapt their cultural knowledge when they interact with and deal with students who belong to cultures that differ from their own. Another valuable asset is the teachers' ability to identify cultural knowledge when they interact with individuals from cultures or cultural backgrounds different from their own.

The study results revealed that the teachers' cognitive dimension level was intermediate. The researchers attribute this result to the fact that teachers have the essential knowledge of the common cultural values in the society that are derived from the different cultural backgrounds and religious beliefs and practices that individuals from various cultures believe in, in addition to their knowledge of rules related to nonverbal expressions of individual behavior, and other language rubrics in terms of the use of vocabulary, grammatical and linguistic rules.

The study results revealed that the teachers achieved a high grade in the motivation dimension, which the researchers explain is due to the teachers' ability to adapt and deal naturally with the pressures that may result from the existence of individuals or groups belonging to different cultures, and having different beliefs or value systems to those which the teachers themselves have traditionally been accustomed to. This stress-free familiarity allows the teachers there for to create a relaxed and enjoyable atmosphere when interacting with individuals belonging to different cultures.

The study results revealed a high level for the teachers' behavioral dimension, the researchers attributing this result to the teachers' ability to adapt their verbal behavior regarding the suitable dialect and tone of voice, as well as the rate of speech when interacting with individuals from other cultures. This may indicate that these teachers are knowledgeable about these individuals' cultures, and illustrate this awareness for instance in their facility to adopt suitable facial expressions, by varying the speed at which they speak or using a pause while speaking, thereby adapting to the requirements and social mores of different local cultures.

The study results revealed that there are no statistically significant differences in the level of cultural intelligence between teachers and university students in the whole degree of meta-cognitive and motivation dimensions. The researchers attribute this result to the similarity of the teaching methods used in both universities and schools that focus on the development of critical thinking, which reinforces the ability to possess cultural awareness within the educational environment. The presence of teachers and students in a varied cultural environment helps them to possess the skills of cultural intelligence and its practice in their daily life. All of them live in varied cultural environments, cope with each other and practice different, cultural activities regardless of their jobs, all of which helps to diminish differences among them.

The study results revealed that there are statistically significant differences in the cognitive and behavioral dimension among teachers and university students and in favor of teachers. The researchers attribute this result to the teachers being more aware of cognitive and behavioral intelligence compared to students who may be busy with other non-related issues. Teachers may have more awareness and interest than students in the field of culture in general, including its derivatives such as behavioral cognitive intelligence, which they are interested to learn about and particularly its effect on school work, and the benefits which result for the educational institution as a result of teachers possessing this kind of intelligence.

The study results revealed that there are no statistically significant differences in the level of the students' cultural intelligence due to the students' gender variable in the total grade, the meta-cognitive and cognitive levels. The researchers consider this result due to the partnership between the motivation that pushes students to achieve and succeed and building the positive and constructive relationships which are of prime concern in achieving different individual interests regardless of gender. The process of success at the cultural level in the tasks required of teachers is a necessity for all parties and is not gender exclusive. The process of technological development, which facilitated cultural rapprochement, was not confined to a specific category of either males or females, and thus its affect reached all groups without discrimination.

Although the results of this present study differ from those of Baez, (2012); Brancu, Munteanu, Golet (2016); Keavanloo, Seyedahmadei, Mokhtar (2013), which all pointed to the

existence of statistically significant differences in cultural intelligence due to the gender variable and in favor of males, the opposite is found in the following studies: Al-Jarrah (2016); Al-Momani, Atoum (2016); Engle, Nehrt (2012); Ward, Festcher (2008), where the results are in agreement with those of the present study, finding no statistically significant differences in cultural intelligence due to the gender variable.

Results of the present study showed that there are statistically significant differences in the motivation dimension due to the teachers gender variable and in favor of male teachers, and this result is explained by the researchers as success in life being related to the motivation level; as they developed in the education process they become more aware of their cultural desires and ambitions. Males have more motivation than females for schoolwork and educational plans and their future development. Males have a different attitude and perspective to that of females that may indicate a clear gender variation with regard to their motivation to work. The result of this study agrees with that of Cavanaugh, 2007, which indicated that there are statistically significant differences in the motivation dimension due to the gender variable and in favor of male teachers.

Regarding the behavioral dimension however, results of the present study show statistically significant differences due to the teachers' gender variable and in favor of female teachers. The researchers are of the opinion that female teachers are generally more interested in cultural matters related to other cultures than male teachers, and attach greater importance to being aware of other cultures' values, principles, beliefs and issues than male teachers. Female teachers may be more readily influenced by behavioral cultural issues than their male counterparts, particularly in language, type of speech, way of expressing oneself, and the dialect used, these are all factors that may be more influential in women than men, possibly because they are more sensitive, emotional and empathetic in this aspect.

In the field of cultural intelligence, the study results revealed a high level among the university students which in the researchers' view, is due in the main to the nature of the study sample, whose many cultural skills and mental abilities are naturally engendered by being exposed to a multi-cultural student body, and since the sample is of university students, it represents a level of maturity of an individual's personality, and attributes to him the awareness, understanding and knowledge of various cultures in the social environment, and teaches him how to deal and interact with these different cultures.

Allowing for personal differences in the level of ability, it becomes clear that the university students have the degree of awareness, knowledge and active practice of the skills required to successfully interact with different cultures, by acquiring the language, social habits and behaviors to deal with and accept the other in one homogenous society. Given that the students consider living in this way as their natural environment, their high cultural heritage level is therefore no surprise.

Students' motivation to interact with others and widen their range of experiences has a role in increasing cultural intelligence, including the ability to analyze symbols and cultural signals, to modify aspects of differences and promote agreement between them, and determine its importance, which offers students a chance to adapt to these cultural variances in all their different sources and variety (Ang, 2011). These results support those of Erez et al. (2013); Imai, Gelfand (2010); Keavanloo, Seyedahmadei, Mokhtar (2013); Okulu (2013); Brancu, Munteany, Golet (2016); Al-Jarrah (2016); Naughton (2010); Keung (2011) all of which pointed out the high level of cultural intelligence among university students.

In contrast however, the present study results differ from the results of Al-Momani, Atoum (2016), which found the level of cultural intelligence among university students was intermediate.

The present study results revealed that the university students' level in the meta-cognitive dimension was high, the researchers attributing this result thus, that students attempt at this stage to control their conduct and behavior through awareness of these behaviors and practices in order not to become so immersed in the other culture that they forget their original culture, its components and dimensions, while maintaining the same levels of cultural interaction and dealings with members of other cultures in the environment, especially since the individual's knowledge of the principles and origins of his own culture is still incomplete, and his knowledge of the other culture still needs more training and education in order to master it.

Regarding the university students and the cognitive dimension, their level was intermediate. This was explained by the researchers as being due to a low level of awareness of training to

prepare for the engagement of students entering university and being exposed to an unfamiliar and culturally diverse environment, for which their previous life-experience in secondary schools, villages, and various rural and urban environments has not prepared them. The university environment is indeed a strange new world and students need help and support to understand the nature of the huge variety in the university environment, which is reflected in the principles and cultural systems that rule it, and this novelty and bewilderment is further exacerbated by the intrinsic low level of knowledge of other cultures.

The study revealed that the motivation dimension of university students was high, a result the researchers accredit to the students' confidence with which they can practice social communication with members of a community who belong to unfamiliar cultures. This practice and positive interaction with their colleagues may lead to a sense of enjoyment and feeling of happiness associated with the experience of being able to communicate naturally with these individuals and provide them with the help or advice they may require.

Levels of the behavioral dimension were also high among the university students, the researchers accredit this result to the university students' ability to use suitable ways of expressing themselves while talking to their colleagues, relating to pausing or keeping silent for example, the student using his knowledge and judgment in adapting his/her response according to the requirements of the various conditions and situations he/she may face, in accordance with the nature of the different cultures. Thus university students may use facial expressions or other body language to correspond with the nature of the existing relationship with individuals, and in accordance with the nature of the culture to which these individuals belong. Frequent practice of such interactions leads to increasing understanding of situations and the ability to respond suitably to the situation and its requirements.

4. Conclusion

The study results revealed that there are statistically significant differences in the level of cultural intelligence due to the teachers' gender variable in the total degree, and in the meta-cognitive dimension, cognitive and motivation dimensions, in favor of the male teachers. The researchers attribute this result to the nature of the role played by males concerning cultural issues that are directly connected to their work. Despite the globalization of functional aspect roles, males are still the most important component in the performance of the tasks required from them, and thus care and attention to the cognitive dimensions of other cultures is a strategic variable for their success in the performance of their tasks, failure reduction, goal achievement confirmation, a stronger interaction that brings them pleasure in performing the tasks, both academic and functional. In addition, Jordanian society is a male dominated society where the role of women is in the home, and this is undoubtedly the major factor in controlling the distribution of gender-related roles in general. Males have the necessary aspiration and interest required to carry out the research needed in order to study, understand and assess this novel field of cultural intelligence, and put it into practice with their colleagues in the future.

This result agrees with the studies by Baez (2012); Brancu, Munteanu, Golet (2016); Keavanloo, Seyedahmadei, Mokhtar (2013), which pointed out that there are statistically significant differences in cultural intelligence due to the gender variable and in favor of males. The study result however differs widely from the studies by Al-Jarrah (2016); Al-Momani, Atoum (2016); Engle, Nehrt, (2012); Ward, Festcher (2008), which concluded that there were no statistically significant differences in cultural intelligence attributable to the gender variable.

The study results revealed no statistically significant differences in the behavioral dimension due to the students' gender variable. The researchers point out that both teachers and students are similar in their verbal behavior according to the appropriate dialect, the tone of voice that can elicit the required response, and the ability to vary the speed of speech in their conversation, their similarity of facial expressions while dealing with others of different cultures, since that requires matching the individuals' facial expressions suitably with the cultural requirements dictated by the person to whom he is speaking. In addition, the use of hand movements is an expressive aid to verbal transmission of the meaning or the required idea to the other side.

5. Limitations

The current study was limited to a sample of undergraduate university students from the Hashemite University at the academic year 2018-2019 and teachers enrolled in the education Directorate of Mefraq. In the light of the findings of the current study researchers recommended maintaining the level of cultural intelligence among teachers and university students by offering reinforcement in the form of designing training programs for teachers and university students to improve cultural intelligence cognition. Finally, to conduct more studies investigating the relationship between cultural intelligence and other variables such as psychological adjustment.

References

- Al-Jarrah, 2016 – Al-Jarrah, A. (2016). The cultural intelligence level among international students in Jordanian Universities. *Educational Research Quarterly*, 39(3), 23-39.
- Al-Momani, Atoum, 2016 – Al-Momani, A.L., Atoum, A. (2016). Cultural intelligence among Jordanian university students. *International Journal of Education and Management Studies*, 6(1): 48-53.
- Alon, Higgins, 2005 – Alon, I., Higgins, J.M. (2005). Global leadership success through emotional and cultural intelligences. *Business Horizons*, 48(6): 501-512.
- Ang, 2011 – Ang, S. (2011). *Leading with cultural intelligence: The new secret to success*, New York: AMACOM.
- Ang, Van Dyne, 2008 – Ang, S., Van Dyne, L. (2008). Conceptualization of cultural intelligence: Definition, distinctiveness, and nomological network. In S. Ang & L. Van Dyne (Eds.), *Handbook of cultural intelligence: Theory, measurement, and application* (pp.3-15). Armonk, NY, USA: M. E. Sharpe.
- Ang et al., 2007 – Ang, S., Van Dyne, L., Koh, C., Ng, K.Y., Templer, K.J., Tay, C., Chandrasekar, N.A. (2007). Cultural intelligence: Its measurement and effects on cultural judgment and decision making, cultural adaptation and task performance. *Management and Organization Review*, 3(3), 335-371.
- Baez, 2014 – Baez, D. (2014). Cultural intelligence in foreign language classes. Unpublished Ph.D. Thesis, Indiana State University, Terre Haute, Indiana.
- Bandura, 2002 – Bandura, A. (2002). Social cognitive theory in cultural context. *Applied Psychology: An International Review*, 51 (2): 269-290.
- Branču et al., 2016 – Branču, L., Munteanu, V., Golet, I. (2016). Understanding cultural intelligence factors among business students in Romania. *Procedia-Social and Behavioral Sciences*, 221(7): 336-341.
- Cavanaugh, Gooderham, 2007 – Cavanaugh, A., Gooderham, S. (2007). *Cultural intelligence: Factors and measurement*. New York: Oxford University press.
- Crowne, 2008 – Crowne, K.A. (2008). What leads to cultural intelligence? *Business Horizons*, 51: 391-399.
- Earley, Ang, 2003 – Earley, P.C., Ang, S. (2003). *Cultural intelligence: Individual interactions across cultures*. Palo Alto, CA: Stanford University Press.
- Engle, Nehrt, 2012 – Engle, R.L., Nehrt, C.C. (2012). Antecedents of cultural intelligence: The role of risk, control, and openness in France and the United States. *Journal of Management Policy and Practice*, 13(5): 35-47.
- Erez et al., 2013 – Erez, M., Lisak, A., Harush, R., Glikson, E., Nouri, R., Shokef, E. (2013). Going global: Developing management students' cultural intelligence and global identity in culturally diverse virtual teams. *Academy of Management Learning & Education*, 12(3): 330-355.
- Imai, Gelfand, 2010 – Imai, L., Gelfand, M.J. (2010). The culturally intelligent negotiator: The impact of cultural intelligence (CQ) on negotiation sequences and outcomes. *Organizational Behavior and Human Decision Processes*, 112(2): 83-98.
- Keavanloo et al., 2013 – Keavanloo, F., Seyedahmadei, M., & Mokhtar, R. (2013). A comparison of cultural intelligence in students. *International Research Journal Applied Basic Sciences*, 6(4): 481-483.
- Keung, 2011 – Keung, E.K. (2011). What factors of cultural intelligence predict transformational leadership: A study of international school leaders (Doctoral dissertation, Liberty University, 2011). *Dissertation Abstracts International*, 72(11), 111. (AAT 3468229).

Mayer, Salovey, 1993 – Mayer, J.D., Salovey, P. (1993). The intelligence of emotional intelligence. *Intelligence*, 17(4): 433-442.

Naughton, 2010 – Naughton, W.M. (2010). Do highly effective principals also have high levels of cultural intelligence? University of La Verne.

Ng et al., 2012 – Ng, K.Y., Vandyne, L., Ang, S. (2012). Cultural Intelligence: A review, reflections, and recommendations for future research. In A.M. Ryan, F.T.L. Leong & F.L. Oswald (Eds.). *Conducting multinational research: applying organizational psychology in the workplace* (pp. 29-58). Washington, DC: American Psychological Association.

Okulu, 2013 – Okulu, K. (2013). Cultural intelligence (CQ) in action: The effects of personality and international assignment on development of CQ. *International Journal Intercultural Relation*, 39(1): 189-198.

Oolders et al., 2008 – Oolders, T., Chernyshenko, O. S., Stark, S. (2008). Cultural intelligence as a mediator of relationships between openness to experience and adaptive performance. *Handbook of cultural intelligence. Theory, Measurement, and Applications*: 145-158.

Sternberg, 1997 – Sternberg, R.J. (1997). The Concept of Intelligence and Its Role in Lifelong Learning. *American Psychologist*, 52: 1030-7.

Sternberg, 1986 – Sternberg, R.J. (1986). A framework for understanding conceptions of intelligence. In R.J. Sternberg & D.K. Detterman (Eds.). *What is intelligence? Contemporary view points on its nature and definition* (pp. 3-15). Norwood, NJ: Ablex.

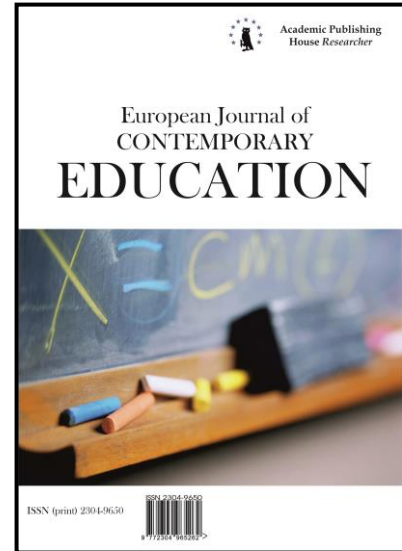
Thorndike, Stein, 1937 – Thorndike, R. L., Stein, S. (1937). An evaluation of the attempts to measure social intelligence. *Psychological Bulletin*, 34(5): 275.

Ward, Fischer, 2008 – Ward, C., Fischer, R. (2008). Personality, cultural intelligence, and cross-cultural adaptation. *Handbook of cultural intelligence* (Ed SLVD Ang), 159-73.



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Model of the System of Raising the Social Status of the Teacher in the Region on the Basis of a Pedagogical University

Roman S. Nagovitsyn ^{a, *}, Elena G. Zamolotskikh ^b, Irina I. Potashova ^c,
Lyudmila V. Rybakova ^d

^a Glazov State Pedagogical Institute, Russian Federation

^b Moscow Psychological and Social University, Russian Federation

^c College of small business №4, Russian Federation

^d Moscow Aviation Institute (National Research University), Russian Federation

Abstract

The social attractiveness and prestige of the teaching profession over the past twenty years have reached an extremely low level, despite the fact that the teaching profession is declared by the state as one of the most respected, honorable and responsible professions. The presented contradiction determined the purpose of the research: to develop a model of systemic improvement of the teacher's social status in the region and experimentally prove the effectiveness of introducing its key component – an individually differentiated program to increase the motivation of students of a pedagogical university for the implementation of future professional activities in the training profile. In various types of experimental research participated (n = 1159) respondents: teachers (n = 23), part-time teachers (n = 48), students of the pedagogical institute (n = 1030), and graduates (n = 58). Experimental work was carried out from 2016 to 2018 based on the analysis of scientific literature, the collection of official information, sociological and comparative methods, questioning, interviews, modeling, analysis and formulation of relevant conclusions. Statistical processing of research results was carried out using chi-square at (p < 0.05), which was used for the quantitative analysis of experimental data. Based on the identification of economic, labor, professional-cultural and legal directions of raising the status of a teacher, an integrated model of a system of individual integrated solutions has been developed. The study substantiates the effectiveness of introducing its key component – an individually-differentiated program, including synergistic interaction of all departments of the university for the implementation of educational activities in five groups of students: “teacher-innovator”, “teacher-educator”, “teacher-manager”, “teacher-entrepreneur”,

* Corresponding author

E-mail addresses: gto18@mail.ru (R.S. Nagovitsyn), e.g.zamolotskih@mail.ru (E.G. Zamolotskikh),
ira.potashova@gmail.com (I.I. Potashova), ludmila.firsova@yandex.ru (L.V. Rybakova)

“teacher-scientist”. The authoring development and technological aspects of its implementation in order to systematically improve the social status of a teacher in the region will open a new direction for the development of research in pedagogical science and will allow an increase in the indicators of professional growth of teachers in the Federal Project “Teacher of the Future”.

Keywords: model, social status of the teacher, pedagogical university, individual-differentiated program, region, motivation.

1. Introduction

Today there is a paradoxical situation in the Russian society regarding the social prestige of various professions, in particular, the teacher. On the one hand, the teacher's profession is declared as one of the most respected, honorable and responsible professions. As the Federal Law on Education explains: “In the Russian Federation, the special status of teachers in society is recognized and conditions are created for them to carry out professional activities. Pedagogical workers in the Russian Federation are granted rights and freedoms, social support measures aimed at ensuring their high professional level, conditions for the effective fulfillment of professional tasks, increasing social significance, and the prestige of pedagogical work.” As well as in the report of the working group of the Council under the President of the Russian Federation on science, technology and education “School – 2020” it is noted that the school becomes a key element in the implementation of the Development Strategy of Russia until 2020 and an essential element in building a new society. In the recommendations of the council, one of the basic directions of the state-public strategy for the development of general education in the Russian Federation is the increase in the prestige and social status of the teacher's profession.

On the other hand, the social attractiveness and prestige of the teaching profession over the past twenty years have reached an extremely low level. In this aspect, the words of the Chairman of the Board of the Russian Public Opinion Research Center (RPORC) K. Abramov should be noted: “In the past few years, against the background of the economic crisis, our society has changed its attitude to the teacher's profession. Prestige has dropped to the level of 2008, the material aspect of the existence of a teacher is the level of income, it does not allow our citizens to consider the teacher's work adequately paid, and the prestigious profession. The well-known academician of the Russian Academy of Education, L.A. Verbitskaya emphasizes the importance of solving the problem: “It is necessary to raise the material and social status of the teacher, to raise the prestige of the profession in society.” The studies conducted by RPORC in 2016 fully identify the identified problem: 37 % of respondents consider the teaching profession to be under-prestigious and 37 % are not too prestigious. Only 21 % of respondents make the profession of a prestigious teacher. In the following survey: 42 % – this profession today definitely does not allow living normally in a material sense and “I wouldn't want my child to become a schoolteacher over time” – 65 %, and only 16 % adhere to the opposite opinion.

In turn, the study of the Foundation Appraisal Opinion (FAO) proves that in the ranking of professions in terms of prestige, the teacher's profession ranks last (Vorobyeva, 2014). And from the point of view of prospects on the question “If you have (would have) growing children, grandchildren, what profession, occupation would you like for them, and what not?” Is only the penultimate one, below is just a cleric. According to a survey of young people, more than half of young people will prefer the profession that provides a decent income, even if they don't like it very much. However, for most it is important to achieve a high position at work. However, the older a person is, the more he is concerned about wages, rather than status in the team, while the very young are more concerned about the high position at work than the size of earnings. In a similar study conducted by the Levada Center in 2018: doctors are leading in the list of professions that Russians call desirable for their children – 20 % of respondents chose this option. Teaching activity turned out to be unpopular – only 3 % of respondents.

In unison with the presented sociological studies, many foreign scholars show the inconsistency of the current situation in teacher education (Kaplan, 2012). So (MacLeod, 2009) proved that students undergo negative changes in their motivation for future professional activities from first-year students to undergraduates. The system of “double no” in society is being implemented, when some applicants who cannot go anywhere, go to the pedagogical university, and when some graduates of these universities, who cannot get a job, go to educational organizations. Schools, for such graduates, are beginning to be perceived as useless as an obstacle

that must be overcome (Brisman, 2009). As emphasized (Iwakuni, 2017), the curriculum for teacher training should be built on the basis of the theory of teacher-student training, differentiation of future teacher career growth, focusing only on reflexive introductory and work experience. Increasing the age structure of teachers is one of the most important problems faced by education systems around the world, including in Europe and the USA (Reeves, Lowenhaupt, 2016). It is necessary to create a strong and diverse research base in the field of education to improve the quality of teacher training in motivational-orientational (Nagovitsyn et al., 2018a), cultural and value perspectives (Miles et al., 2016).

The presented contradiction determined the purpose of the research: to develop a model of systemic improvement of the teacher's social status in the region and experimentally prove the effectiveness of introducing its key component – an individually differentiated program to increase the motivation of students of a pedagogical university for the implementation of future professional activities in the training profile.

2. Materials and Methods

In various types of experimental research took part (n = 1159) respondents: teachers (n = 23), part-time teachers (n = 48), students (n = 1030) of the pedagogical university (focus-organization) on full-time, distance learning and evening departments as well as graduates who are not working in the pedagogical profile and expelled students from the institute (n = 58). In the experimental group (EG1), full-time students implementing vocational training for primary school teachers, basic life safety, physical education, biology, teachers of pre-school institutions and additional education (n = 407), in EG2 – students of the same distance learning and evening training profiles departments working on a training profile for more than three years (n = 205). In the control group (CG1) – only full-time students who implement vocational training for teachers of mathematics, computer science, physics, history, social studies, the national language and geography (n = 418). In the next control group (CG2) – graduates who are not working on the pedagogical profile or students who have been expelled from the institute (n = 58).

Experimental work was carried out from 2016 to 2018 based on the analysis of scientific literature, the collection of official information, sociological and comparative methods, questioning, interviews, modeling, analysis and formulation of relevant conclusions. Statistical processing of research results was carried out using special software. For the quantitative analysis of the data obtained during the study, chi-square was used at ($p < 0.05$), which was used to quantitatively analyze the experimental data. The choice of this criterion for mathematical-statistical processing is due to the following characteristics: allows you to compare the distribution of frequencies (number of manifestations), regardless of whether they are normally distributed or not, and not depending on the different number of respondents in focus groups; application of the criterion is possible when the results of focus groups on the state of the property being studied, the trait are divided into more than two categories (Nagovitsyn et al., 2018b), in our case into three or four categories.

An analysis of the scientific literature made it possible to identify the main “institutions” that affect young people, such as the family, the media, the educational environment, and various authoritative personalities. A detailed study of research on the problem of raising the status of a teacher identified a system of key problems that hinder the solution of the goal set in the study:

- economic block: low wages, lack of material benefits; non-transparent incentive fund distribution system (Ilyin et al., 2012, Reeves, Lowenhaupt, 2016; Shafranov-Kutsev, 2016; Smirnova, 2016);
- professional-cultural bloc: insignificant career growth; the formation of a negative image of the teacher and the concept of “teacher’s vocation” in the mass media; the unpretentiousness of the majority of pedagogical universities in comparison with other types of universities; low self-affirmation of most teachers (Sychev et al., 2008; Margolis, 2015; McMahan et al., 2013; Zagvyazinsky, 2016);
- labor bloc: administrative-bureaucratic system of school management, increased accountability, lack of power of a teacher in front of the direct management of the school, complexity of relations in teaching staff and with the administration; deviant behavior of students (Vorobyeva, 2014; Efimova, Semenov, 2015; Aydarova, 2016; Khusnutdinova, 2017);
- legal block: turning a teacher into attendants for children, parents and the administration; lack of teacher's rights to freedom of speech and action (Abashina, 2012; Miles et al., 2016; Maslinsky, Ivanyushina, 2016).

Research organization. At the first stage of the study, an analysis of conceptual scientific literature to increase the prestige of the teaching profession (Bolotov, 2014; Margolis, 2015; Fedorov, Sedykh, 2015; Rijswijk et al., 2016; Shafranov-Kutsev, 2016; Zagvyazinsky, 2016; Chistyakova et al., 2017; Bressman et al., 2018), on the problem of the Russian educational system in the context of international indicators in the aspect of the problem under study (Kasprzhak, 2013; Sidorkin, 2013) outlined the main vector of theoretical and practical solutions.

At the second stage of scientific work to identify the system of the main problems of raising the status of a teacher, author's sociological research was conducted on the prestige of a teacher based on interviews and questionnaires:

- among foreign students of Tajikistan, Turkmenistan and Kazakhstan (n = 121) studying at the pedagogical institute (focus-organization), on the basis of which higher professional and cultural reference points of students from neighboring countries on further employment in the education system were identified, compared to Russian students, which allows you to apply this foreign experience in the process of developing motivational and value orientations of future teachers;

- among villager (n = 576) and urban students (n = 231) studying at the pedagogical institute (focus-organization), with the help of which it was proved that villager students, compared to urban students, make a significantly smaller emphasis on the economic and labor component a teacher's life activity, but more than a professional-cultural aspect, which ultimately determines the vector of development and solution of the problem of raising the status of a teacher according to an individually differentiated strategy in the region;

- among the main earners in the family and not, in the families of teachers (n = 23) and part-time teachers (n = 48), who work in a focus-organization, on the basis of which the conclusions that teachers who have non-basic family income from educational activities is more focused on professional and cultural development, less on improving power characteristics, as compared to another focus group, which reveals the need to improve early vocational guidance of schoolchildren to the teaching profession in the aspect of the right balance of economic and professional-cultural space of a teacher and a teacher.

As a result, a model was developed to systematically improve the social status of the teacher in the region (Figure 1):

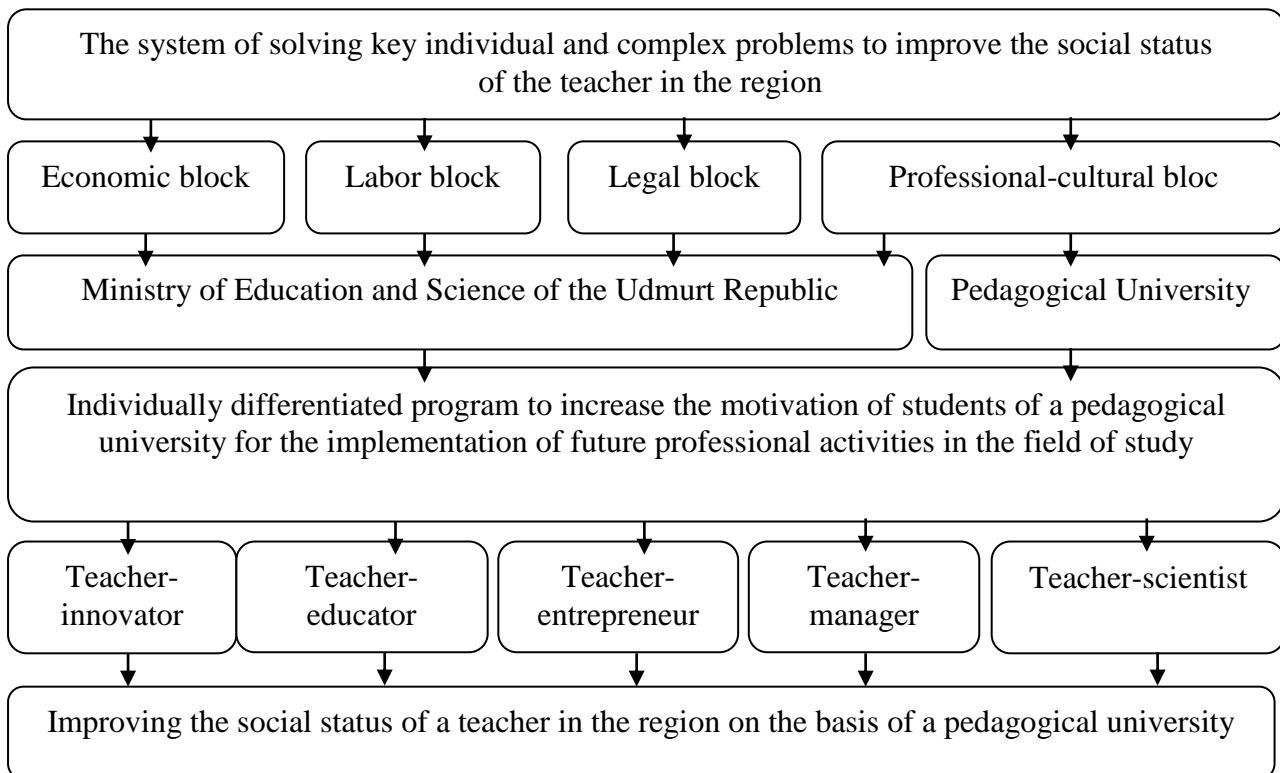


Fig. 1. Model of systemic improvement of the social status of a teacher in the region

The author's model is developed on the basis of identifying key areas for improving the social status of the teacher through a system of individual and integrated solutions for the following blocks:

- economic: raising the salaries of teachers by increasing the rate from 18 to 25 hours per week; an increase in the salaries of the highest "teacher categories" by increasing the number of children in classes; increasing the salaries of teachers due to the centralization of additional educational and preparatory services at schools; the creation of a unified system of criteria and indicators for obtaining incentive surcharges at the municipal, regional or federal levels;

- labor: improving the system of interaction of the teacher on the one hand and the parents of students and stakeholders on the other hand; the possibility of obtaining a higher "teacher category" for graduates of pedagogical universities; creation of a unified electronic document management system; development of a regional and municipal system "Social Nannies"; the director and head of the training department – elective positions under a fixed-term labor contract; the creation of a single federal base for the distribution of employment for graduates of pedagogical universities and teaching staff for "teacher categories"; the introduction of career development in the context of the introduction of categories of teachers;

- legal: the introduction of the federal program "First-year student", based on the fact that a first or second year student can be dismissed from the university by the administration only on a special commission; improvement of the charters of educational organizations in the aspect of strengthening the rights of teachers in relation to students and their parents; social benefits for children of teachers to obtain places in kindergarten and targeted detailed directions for training in pedagogical universities; reservation of individual medical days for teachers and their children in specialized electronic systems; improvement of the procedure for exclusion from school of students violating academic discipline or with deviant behavior in specialized classes or schools;

- professional-cultural: the development and implementation of additional education programs "Young Teacher", getting graduation diplomas – will ensure applicants receive detailed directions; with the increase in the category of teachers, they receive a budget target direction in the master's or postgraduate and formalization of clothing teachers with honors in categories; creation of a centralized system of informational impact on society on changing stereotypes about a teacher; making adjustments to the provisions of the "Teacher of the Year", certification requirements and top ratings based on indicators of employment in the teaching profession; an increase in intangible awards of thank-you letters of various levels, as well as enrollment of teachers on the Honor Board and their number in various authorities; introduction of an individually differentiated program to increase the motivation of students of a pedagogical university for the implementation of future professional activities in the field of study.

One of the key decisions in the development of an integrated model proposed an individually-differentiated program to increase the motivation of students of a pedagogical university for the implementation of future professional activities in the training profile. Its content includes the synergistic interaction of all departments of the university:

- deans: an annual survey of first-year and second-year students for their motivation for future professional educational activities; the definition of five target groups: teacher-innovator, teacher-educator, teacher-manager, teacher-entrepreneur, teacher-scientist;

- departments: the development of electives or elective disciplines, including a basic module aimed at solving key problems and creating a system of solutions to improve the social status of a teacher in a region, and a variant module aimed at training students in various types of professional activity and research activity; teacher-manager: pedagogical and organizational-managerial activity; teacher-innovator: pedagogical and project activity; teacher-p Illuminator: pedagogical, cultural and educational and methodical activity; teacher-entrepreneur: business activity – development and implementation of business plans in education, etc.);

- management of educational and social work: organizes out-of-class time in groups interactive meetings and master classes with leading high school graduates; carries out student visits in groups of the center for student initiatives, psychological services and a center for leisure and creativity;

- the department of pedagogical practice provides individual content and practical training for the target groups: teacher-scientist: carry out the practice in the departments of the university secondary vocational education and implement research activities at the departments; teacher-

manager: they implement the “Day of Self-Government” school under the guidance of the head of the school or the deputy principal; innovative teacher: create a project team at school and jointly apply for a social grant or a project competition; teacher-educator: make and implement a cultural and educational program at school under the guidance of a leading methodologist of the school; teacher-entrepreneur: undergo practical training in leading organizations of additional education and high-rated non-commercial centers of educational services;

- the commission on employment and postgraduate support of graduates creates an individually-differentiated map of pedagogical vacancies in the region by target groups: teacher-scientist: master's programs in the field of "Vocational Education" and postgraduate programs in the field of "Pedagogical Sciences". (vacancies: laboratory assistant, secondary vocational teacher, curator, specialist of the dean's office); teacher-manager: master's programs “Leader of educational organization” and “Management of educational work” (vacancies: head of the educational part of the school, deputy director for educational work or educational work); innovative teacher: educational "top" organizations in the field of project and grant activities, such as the «Presidential Grants Foundation», «Rosmolodezh», «Rybakov Foundation», etc. (vacancies: teacher, deputy director for research and innovation); teacher-educator: educational "top" organizations by subject ratings (vacancies: teacher-methodologist, teacher-organizer); teacher-entrepreneur: centers of additional education, preparatory courses and health and fitness services, international linguistic centers (vacancies: heads of educational centers, founders of autonomous non-profit organizations);

- the commission on graduation support of graduates: implements the interaction and feedback with graduates; promotes the employment of graduates; monitors the employment of graduates by target groups; collects information about the features of the professional activities of graduates.

At the third stage of the research, from the 2nd quarter of 2016 to the present, the developed model of the system for improving the social status of the teacher is introduced into the process of teacher training in the Udmurt Republic. On the basis of the pedagogical university "Glazov State Pedagogical Institute" was implemented an experimental study to determine the impact of the introduction of its key component, individually-differentiated program to increase the motivation of students of the pedagogical university to the implementation of future professional activities in the profile of training. In turn, which is determined by the following main indicators:

1. Analysis of the results of a survey of target groups on the prestige of the teaching profession on the questionnaire developed by RPORC, according to which respondents are ranked in three groups, the first believe that the teaching profession is prestigious, the second is not prestigious, and the third is found difficult to answer.

2. Assessment of the general professional competence of respondents – 1 (Willingness to recognize the social significance of their profession, possessing motivation to carry out professional activities) according to special case assignments.

3. Comprehensive assessment for summer pedagogical practice in the second or third year of study (interaction with children and teaching staff, performance of pedagogical tasks by a methodologist, public analysis, documentation reporting, activity in the activities of pedagogical and volunteer groups, recommendation letters, portfolio).

It should be noted that a preliminary diagnostic study on the presented indicators before the introduction of the author's program, between groups EG1 and CG1, showed a not significantly significant difference in chi-square at ($p > 0.05$).

3. Results

The following focus groups participated in the control section in 2nd quarter 2018: EG1, EG2, CG1, CG2. The results of the study on the above indicators are reflected in the [Tables 1-3](#):

Table 1. Analysis of the results of the survey of target groups on the prestige of the teaching profession

Groups / criteria	Difficult to answer	Not prestigious	Prestige	Mathematical-statistical processing by chi-square		
EG2 (%)	12	25	63	chi-square=18.58 chi-square(critical)=9.21, p<0.01	chi-square=2.923 chi-square(critical)=5.991, p>0.05	chi-square=5.56 chi-square(critical)=5.991, p>0.05
EG1 (%)	8	23	69			
CG1 (%)	24	36	40			
CG2 (%)	39	32	29			

Table 2. Analysis of the results of the formation of the respondents general professional competence – 1 (Willingness to recognize the social importance of their profession, possessing motivation to carry out professional activities)

Groups / grade	"5"	"4"	"3"	Mathematical-statistical processing by chi-square		
EG2 (%)	50	37	13	chi-square=25.348 chi-square(critical)=9.21, p<0.01	chi-square=2.923 chi-square(critical)=5.991, p>0.05	
EG1 (%)	62	28	10			
CG1 (%)	34	27	39			

Table 3. Comprehensive assessment for the summer teaching practice in the second or third year

Groups / grade	"5"	"4"	"3"	Mathematical-statistical processing by chi-square		
EG2 (%)	75	18	7	chi-square=26.086 chi-square(critical)=9.21, p<0.01	chi-square=3.164 chi-square(critical)=5.991, p>0.05	
EG1 (%)	71	26	3			
CG1 (%)	47	24	29			

For a more systematic analysis of the impact of the introduction of an individually differentiated program to increase the motivation of students of a pedagogical university for the implementation of future professional activities, the research profile developed the author's system of evaluating the respondents' choice of key stimulating factors for choosing future professional pedagogical activities: economic. Respondents were offered to select and explain in detail the key problems facing the young teacher in professional pedagogical activity, presented above in the author's model: legal, professional-cultural, labor and economic. Respondents themselves exhibited interest. The results of the study are reflected in the [Table 4](#):

Table 4. Analysis of the results of a survey of target groups on the choice of key problems facing the young teacher

Groups / criteria	Legal	Labor	Professional-cultural	Economic	Mathematical-statistical processing by chi-square		
EG2 (%)	18	32	22	28	chi-square=8.382 chi-square(critical) = 7.815, p<0.05	chi-square=1.316 chi-square(critical) = 7.815, p>0.05	chi-square=1.410 chi-square(critical) = 7.815, p>0.05
EG1 (%)	20	25	26	29			
CG1 (%)	14	13	28	45			
CG2 (%)	11	9	31	49			

The obtained values after statistical processing of research results using chi-square prove: a significant difference in all four indicators after the introduction of the author's program between EG1 and CG1 ($p < 0.01$ and $p < 0.05$); not significant difference in all four indicators after the introduction of the author's program between EG1 and EG2 ($p > 0.05$); no significant difference in the questionnaire developed by RPORC and the author's system of evaluating the choice of key incentives after the introduction of the experiment between CG1 and CG2 ($p > 0.05$).

The obtained statistical data on identifying the reliability of differences between the group of students where the experiment was carried out and where it was absent, prove the effectiveness of introducing an individually differentiated program to increase the motivation of students of a pedagogical university for the implementation of future professional activities in a pedagogical profile.

The revealed statistical data on the uncertainty of the differences between the experimental groups of full-time students and the group of students in the correspondence and evening departments working in the training profile for more than three years prove the formation of the necessary motivation and competencies under the influence of the experiment in full-time students not yet working in pedagogical profiles. In our opinion, the obtained data on the level and characteristics of motivation of students in the correspondence and evening departments who are already engaged in professional activities should be reference values or taken as a basis for students who are preparing to realize themselves in the teaching profession.

Statistically recorded data on the uncertainty of the differences between the data of the control group of full-time students and the group of respondents, which includes graduates who are not working on the pedagogical profile or students who have been expelled from the institute, show that not the right motivation among students in the control group. The found motivational and value orientations of this focus group on the implementation of pedagogical activity create a certain risk of further increasing the number of non-employed graduates in the pedagogical profile. What, in the end, may be one of the key conditions for lowering the quality indicators of vocational training and generally not the effectiveness of the system of training future teachers.

4. Discussion

The obtained research results complement the data of a study on the prestige of educational activities in professional self-determination (Ilyin et al., 2012). The study focuses on the economic and social aspects of enhancing prestige as a sociocultural phenomenon, as well as on developing a career guidance program through influencing various social institutions that affect the young person.

Certain aspects of the system model developed in the study update the scientific reference points for the key research problem, in particular, the scientific viewpoint in the work (Sichev et al., 2008). It examines the social status of the teacher through the balance of power between agents

and institutions, that teachers, despite dissatisfaction with wages, are primarily interested in the results of work, as well as self-education and creative self-realization as the key to successful professional activity. The contradictions found in the study in the system of social status of the teacher are connected, according to the authors, with the discrepancy between the high social mission of the teacher (social and cultural capital accumulated by the profession) and real institutional means (primarily economic capital and state support) that he has.

Continuing the discussion, the following study (Khusnutdinova, 2017) should be noted, in which similar results were obtained. The research model proposed by the author for the social status of the teacher includes an analysis of the three leading components: prestige, respect and satisfaction with the professional process. The main reasons, according to the researcher, which should be emphasized in the implementation of practical programs, lack of "free time" and the lack of "social recognition of the teaching profession in society as a whole." To solve the problem raised in the study, it is necessary to provide teachers with freedom from patterns in their professional activities and favorable conditions for creative self-realization, individuality and creativity (Iwakuni, 2017). In this aspect, it should also be noted that a study (Efimova, Semenov, 2015) describes a comprehensive program that helps teachers spend their time rationally, learning their time management, which they can spend on improving the quality of work with students during lessons and during extracurricular activities. Focuses on self-education, organizing and conducting various activities with schoolchildren or workshops to share experiences with colleagues and supervise the work of young teachers (Nagovitsyn et al., 2017).

In turn, our results reveal the depth to a holistic and systemic understanding of the improvement of the educational process of the pedagogical institute in the aspect of the professional orientation of students. Only with synergistic and systemic interaction of all departments of the university (deans, departments, department of educational and social work, department of pedagogical practice, commission of the institute for employment, and department of postgraduate support for graduates) is it possible to implement the program to increase the motivation of students of the pedagogical university to implement future professional activity profile training. Thus, in the study (Merenkov, Sushchenko, 2016), similarly to our study, measures were proposed to develop the system of additional education in order to intensify activities to create students' need for constant improvement of their competitiveness, more complete self-realization in the professional sphere. The following scientific work is devoted to improving the training of future teachers in terms of enhancing prestige in society through improving the quality of education according to the formula "The quality of the education system cannot be higher than the quality of teachers working in it" (Borisenkov, 2015). The author proposes a complex method of differentiation of future teachers from among those suitable for this profession and a systematic professional orientation to a teacher's career through the identification of aptitudes and abilities for educational work. Interesting are the results obtained in the article (Aydarova, 2016), in which students are offered attractive career incentives to work based on the use of an adequate system for evaluating their activities or approximating the content of initial teacher training to practical needs. Under these conditions, in order to make meaningful changes in the field of education, it is necessary to reconstruct school spaces and organize a public discussion of the role that education should play in society (Bressman et al., 2018).

Differentiation of activities by five target groups (teacher-innovator, teacher-educator, teacher-manager, teacher-entrepreneur, teacher-scientist) are close to practical results (McMahon et al., 2013) on the use of non-traditional approaches to teacher training and continuous professional development which confirm the findings of the study to rethink the preparation of bachelors of teacher education (Rijswijk et al., 2016). And also, the requirements of the new innovative thinking to individually-differentiated pedagogy (Hildenbrand, Schultz, 2015). The expanding elective course proposed in our study is similar to the study (Pinskaya et al., 2016). The authors proposed a practical course "Introduction to the profession" to expand opportunities for professional development, to adapt to the requirements of school realities, especially in classes with a problem contingent, through maintaining their basic motivation in the system of continuing education. Attention is drawn to the fact that differentiated teacher training in some cases is shifted toward implementation towards independent non-profit organizations (Lincove et al., 2015). The implementation of such innovative programs is proved to be effective both in raising the competence of graduates and in employer feedback. However, some types of programs are not

available for all schools, and thus, not significant differences between types of programs do not justify focusing reforms in this direction.

In general, the results presented in the study prove the need for studying and adjusting the main directions of the modernization of teacher education in the aspect of the motivational and value direction of training the future teacher (Nagovitsyn et al., 2018c). The key problems of raising the social status of a teacher are particularly evident in various scientific and methodological studies in Russia and around the world. Comprehensive programs for the systematic solution of economic, power, labor, status, cultural and other key problems facing modern education find a response in the implementation of continuous pedagogical education in the regions. The development of theoretical concepts, modeling and carrying out the practical component of the experimental work proved the effectiveness of the systemic impact on the above key areas of improving the social status of a teacher in the region on the basis of a pedagogical university.

5. Conclusion

Thus, the study presents the author's vision of a systematized activity to improve the social status of the teacher. The results of the study, focused on the formation of the social significance of the teaching profession, have shown that the level of schoolchildren's motivation to choose and train the teaching profession and, in general, the quality of education cannot be higher than the motivation of teachers working in it and, in general, their quality characteristics. The obtained statistical data in the study prove the effectiveness of the implementation of an individually differentiated program to increase the motivational and value attitude of students of pedagogical areas of study to the implementation of future professional activities. In particular, the existence of the necessary motivation and competences in the field of further education and upbringing of the younger generation under the influence of the experiment with full-time students who are not yet working in pedagogical profiles. Statistically recorded data on the reliability of differences between the data of a group of students of the experimental group and a group of respondents, which includes graduates who do not work on the pedagogical profile and students who have been expelled from the institute, show that the correct orientation to the social essence of the pedagogical profession in the Russian Federation.

In the work, a fundamentally new result was obtained in the strategy of planning for improving the indicators of student employment in the education system and education of the region and the country as a whole through the implementation of the author's program. New scientific data on the processes of raising the social status of a teacher and the laws existing in the studied pedagogical science on this subject are revealed. What ultimately may be one of the key conditions for improving the indicators of the quality of vocational training and, in general, the effectiveness of the system of training future teachers. The model developed in the study and the technological aspects of its implementation in terms of systematically increasing the social status of a teacher in the region will open a new direction of research development in pedagogical science and will allow an increase in the indicators of professional growth of teachers in the Federal Project "Teacher of the Future".

In the practical aspect, further implementation of the whole authoring development in the educational activities of all its model areas in the region will be significantly more effective. Namely, without an increase in budget financing and material social investments, it is statistically reliable to reduce the lack of "quality" teaching staff in educational, additional, preschool, physical education, sports, and creative areas of the region and reducing the number of young teachers leaving the profession during the first 3-5 years.

References

Abashina, 2012 – Abashina, A.D. (2012). Diversifikatsiya podkhodov k ponimaniyu sotsial'nogo statusa uchitelya v sovremennoy Rossii [Diversification of approaches to understanding the social status of teachers in modern Russia]. *Vestnik sotsial'no-gumanitarnogo obrazovaniya i nauki*, 1: 4-11. [Electronic resource]. URL: https://elibrary.ru/download/elibrary_18918785_35380837.pdf [in Russian]

Aydarova, 2016 – Aydarova, E.V. (2016). Bedstvennoye polozheniye uchiteley i ukhod studentov-pedagogov iz professii. Vosprinimayemoye, perezvivayemoye i ponimayemoye prostranstvo shkoly [The plight of teachers and the departure of student teachers from the

profession. Perceived, experienced and understood school space]. *Voprosy obrazovaniya*, 2: 183-207. DOI: 10.17323/1814-9545-2016-2-183-207 [in Russian]

Bolotov, 2014 – *Bolotov, V.A.* (2014). K voprosam o reforme pedagogicheskogo obrazovaniya [Questions about the reform of teacher education]. *Psikhologicheskaya nauka i obrazovaniye*, 19(3): 32–40. [Electronic resource]. URL: http://psyjournals.ru/files/71562/pno_3_2014_bolotov.pdf [in Russian]

Borisenkov, 2015 – *Borisenkov, V.P.* (2015). Povysheniye kachestva shkol'nogo obrazovaniya v sovremennoy Rossii [Improving the quality of school education in modern Russia]. *Pedagogika*, 10: 14-24. [Electronic resource]. URL: <http://pedagogika-rao.ru/journals/2015/12/> [in Russian]

Bressman et al., 2018 – *Bressman, S., Winter, J.S., Efron, S. E.* (2018). Next generation mentoring: Supporting teachers beyond induction. *Teaching and Teacher Education*, 73: 162-170. DOI: 10.1016/j.tate.2018.04.003

Brisman, 2009 – *Brisman, A.* (2009). Book Review: Ain't No Makin' It: Aspirations and Attainment in a Low-income Neighborhood (3rd edn): Jay MacLeod Boulder, CO: Westview Press, 2009. 537 pp. ISBN 9780813343587. *Crime, Media, Culture: An International Journal*, 2(5): 228-231. DOI: 10.1177/1741659008337178

Chistyakova et al., 2017 – *Chistyakova, S.N., Rodichev, N.F., Sokolova, I.I.* (2017). Kontseptual'nyye osnovaniya podgotovki pedagogov k professional'noy oriyentatsii obuchayushchikhsya [Conceptual foundations of training teachers for the professional orientation of students]. *Pedagogika*, 2: 84-96. [Electronic resource]. URL: <https://elibrary.ru/item.asp?id=28916182> [in Russian]

Efimova, Semenov, 2015 – *Efimova, G.Z., Semenov, M.Y.* (2015). Klyuchevyye bar'yery, prepyatstvuyushchiye effektivnoy rabote uchitelya: po materialam sotsiologicheskogo issledovaniya [Key barriers to the effective work of the teacher: based on a sociological study]. *Teoriya i praktika obshchestvennogo razvitiya*, 20: 38-43. [Electronic resource]. URL: http://teoria-practica.ru/rus/files/arhiv_zhurnala/2015/20/sociology/efimova-semyonov.pdf [in Russian]

Fedorov, Sedykh, 2015 – *Fedorov, A.A., Sedykh, E.P.* (2015). Modelirovaniye protsessov tselevogo obucheniya i trudoustroystva v sisteme pedagogicheskogo obrazovaniya [Modeling of processes of target training and employment in the system of pedagogical education]. *Psikhologicheskaya nauka i obrazovaniye*, 5(20): 93-98. DOI: 10.17759/pse.2015200508 [in Russian]

Hildenbrand, Schultz, 2015 – *Hildenbrand, S.M., Schultz, S.M.* (2015). Implementing Service Learning in Pre-Service Teacher Coursework. *Journal of Experiential Education*, 38(3): 262-279. DOI: 10.1177/1053825915571748

Ilyin et al., 2012 – *Ilyin, V.A., Shabunova, A.A., Leonidova, G.V.* (2012). Sotsial'noye polozheniye uchitel'stva v Rossii [The social status of teachers in Russia]. *Sotsiologicheskiiye issledovaniya*, 8(340): 123-133. [Electronic resource]. URL: https://elibrary.ru/download/elibrary_17912684_39036538.pdf [in Russian]

Iwakuni, 2017 – *Iwakuni, S.* (2017). Impact of initial teacher education for prospective lower secondary school teachers in Rwanda. *Teaching and Teacher Education*, 67: 538-549. DOI: 10.1016/j.tate.2017.08.001

Kaplan, 2012 – *Kaplan, S.N.* (2012). Alternative Routes to Teacher Preparation. *Gifted Child Today*, 35(1): 37-41. DOI: 10.1177/1076217511427510

Kasprzhak, 2013 – *Kasprzhak, A.G.* (2013). Institutsional'nyye tupiki Rossiyskoy sistemy podgotovki uchiteley [Institutional deadlocks of the Russian teacher training system]. *Voprosy obrazovaniya*, 4: 261-282. [Electronic resource]. URL: https://vo.hse.ru/data/2014/02/15/1328118373/Kasprzhak.indd_261.pdf [in Russian]

Khusnutdinova, 2017 – *Khusnutdinova, M.R.* (2017). Sotsial'nyy status professii uchitelya: samoopredeleniye rossiyskikh pedagogov [The social status of the teacher's profession: Russian self-determination of teachers]. *Psikhologicheskaya nauka i obrazovaniye*, 4(22): 38–48 DOI: 10.17759/pse.2017220406 [in Russian]

Lincove et al., 2015 – *Lincove, J.A., Osborne, C., Mills, N.* (2015). Teacher Preparation for Profit or Prestige. Analysis of a Diverse Market for Teacher Preparation. *Journal of Teacher Education*, 66(5): 415-434. DOI: 10.1177/0022487115602311

MacLeod, 2009 – *MacLeod, J.* (2009). Ain't No Makin' It: Aspirations and Attainment in a Low-income Neighborhood (3rd edn). England: Westview Press.

Margolis, 2015 – Margolis, A.A. (2014). Problemy i perspektivy razvitiya pedagogicheskogo obrazovaniya v RF [Problems and prospects of development of pedagogical education in the Russian Federation]. *Psikhologicheskaya nauka i obrazovaniye*, 19(3): 41–57. [Electronic resource]. URL: http://psyjournals.ru/files/71565/pno_3_2014_margolis.pdf [in Russian]

Maslinsky, Ivanyushina, 2016 – Maslinsky, K.A., Ivanyushina, V.A. (2016). Ostavat'sya uchitelem? Faktory, vliyayushchiye na otnosheniye k ukhodu iz professii uchitelya [Stay teacher? Factors influencing attitudes to leaving the teaching profession]. *Voprosy obrazovaniya*, 4: 8-30. DOI: 10.17323 / 1814-9545-2016-4-8-30 [in Russian]

McMahon et al., 2013 – McMahon, M., Forde, C., Dickson, B. Reshaping teacher education through the professional continuum. *Educational Review*, 67(2): 158-178. DOI: 10.1080/00131911.2013.846298

Merenkov, Sushchenko, 2016 – Merenkov, A.V., Sushchenko, A.D. (2016). Potrebnosti studentov vuzov v dopolnitel'nom obrazovanii: osobennosti formirovaniya i realizatsii [The needs of university students in additional education: features of the formation and implementation]. *Voprosy obrazovaniya*, 3: 204–223. DOI: 10.17323/1814-9545-2016-3-204-223 [in Russian]

Miles et al., 2016 – Miles, R., Lemon, N., Mitchell, D.M., Reid, J. A. (2016). The recursive practice of research and teaching: reframing teacher education. *Asia-Pacific Journal of Teacher Education*, 44(4): 401-414. DOI: 10.1080/1359866X.2016.1169502

Nagovitsyn et al., 2017 – Nagovitsyn, R.S., Maksimov, Y.G., Miroshnichenko, A.A., Senator, S.J. (2017). Realizatsiya didakticheskoy modeli podgotovki studentov k novatorstvu v protsesse nepreryvnogo obrazovaniya budushchego uchitelya [Implementation of the didactic model of preparing students for innovative practice within the framework of continuing teacher education]. *Novosibirsk State Pedagogical University Bulletin*, 7(5): 7-24 DOI: 10.15293/2226-3365.1705.01 [in Russian]

Nagovitsyn et al., 2018a – Nagovitsyn, R.S., Miroshnichenko, A.A., Senator, S.Yu. (2018). Realizatsiya mobil'noy pedagogiki v nepreryvnom obrazovanii uchiteley fizicheskoy kul'tury [Implementation of mobile pedagogy during continuous education of physical culture teachers]. *Integration of Education*, 22(1): 107-119. DOI: 10.15507/1991-9468.090.022.201801.107-119 [in Russian]

Nagovitsyn et al., 2018b – Nagovitsyn, R.S., Chigovskaya-Nazarova, Y.A., Miroshnichenko, A.A., Senator, S.Y. (2018). The Realization of the System Programme “Health Saving Education” in the Pedagogical University. *European Journal of Contemporary Education*, 7(1): 137-149. DOI: 10.13187/ejced.2018.1.137

Nagovitsyn et al., 2018c – Nagovitsyn, R.S., Bartosh, D.K., Ratsimor A.Y., Maksimov Y.G. (2018). Formation of Social Tolerance Among Future Teachers. *European Journal of Contemporary Education*, 7(4): 754-763. DOI: 10.13187/ejced.2018.4.754

Pinskaya et al., 2016 – Pinskaya, M.A., Ponomareva, A.A., Kosaretsky, S.G. (2016). Professional'noye razvitiye i podgotovka molodykh uchiteley v Rossii [Professional development and training of young teachers in Russia.] *Voprosy obrazovaniya*, 2: 100–124. DOI: 10.17323/1814-9545-2016-2-100-124 [in Russian]

Reeves, Lowenhaupt, 2016 – Reeves, T. D., Lowenhaupt, R. J. (2016). Teachers as leaders: Pre-service teachers' aspirations and motivations. *Teaching and Teacher Education*, 57: 176-187. <https://doi.org/10.1016/j.tate.2016.03.011>

Rijswijk et al., 2016 – Rijswijk, M., Akkerman, S. F., Schaap, H., Tartwijk, J. (2016). Past perceptions and future expectations: Sensed dis/continuity at the start of teacher education. *Teaching and Teacher Education*, 58: 99-108. DOI: 10.1016/j.tate.2016.05.002

Shafranov-Kutsev, 2016 – Shafranov-Kutsev, G.F. (2016). Mesto uchitel'stva v stratifikatsionnoy strukture sovremennogo rossiyskogo obshchestva [Place of teaching in the stratification structure of modern Russian society]. *Sotsiologicheskiye issledovaniya*, 9 (389): 65-72. [Electronic resource]. URL: https://elibrary.ru/download/elibrary_26687694_90628335.pdf [in Russian]

Sidorkin, 2013 – Sidorkin, A.M. (2013). Professional'naya podgotovka uchiteley v SSHA: uroki dlya Rossii [Professional teacher training in the USA: lessons for Russia]. *Voprosy obrazovaniya*, 1: 136-155. [Electronic resource]. URL: https://vo.hse.ru/data/2014/08/04/1314334288/2013-1_Sidorkin.pdf [in Russian]

[Smirnova, 2016](#) – *Smirnova, I.N., Smirnova, A.A.* (2016). Osobennosti sotsial'nogo samochuvstviya provintsial'noy uchitel'skoy intelligentsii v nachale XXI veka [Features of social well-being of the provincial teacher intelligentsia at the beginning of the XXI century]. *Intelligentsiya i mir*, 3: 33-55. [Electronic resource]. URL: [https:// elibrary.ru/download/elibrary_26710687_38525674.pdf](https://elibrary.ru/download/elibrary_26710687_38525674.pdf) [in Russian]

[Sychev et al., 2008](#) – *Sychev A.A., Fofanova K.V., Starodubtseva L.V.* (2008). Sotsial'nyy status uchitelya: sootnosheniye sil mezhdru agentami i institutami [The social status of the teacher: the balance of power between agents and institutions]. *Integration of Education*, 4(53): 18-23. [Electronic resource]. URL: https://elibrary.ru/download/elibrary_11735468_91247689.pdf [in Russian]

[Vorobyeva, 2014](#) – *Vorobyeva, I.V.* (2014). Prestizh professii uchitelya [Prestige of the Teaching Profession]. *Vestnik RGGU. Seriya: Filosofiya. Sotsiologiya. Iskusstvovedeniye*. 4(126): 247-254. [Electronic resource]. URL: https://elibrary.ru/download/elibrary_21681829_61450021.pdf [in Russian]

[Zagvyazinsky, 2016](#) – *Zagvyazinsky, V.I.* (2016). O vedushchikh napravleniyakh podgotovki uchiteley v vuze [On the leading orientations of teacher training at the university]. *Pedagogika*, 9: 77-83. [Electronic resource]. URL: <http://pedagogika-rao.ru/journals/2016/11/> [in Russian]



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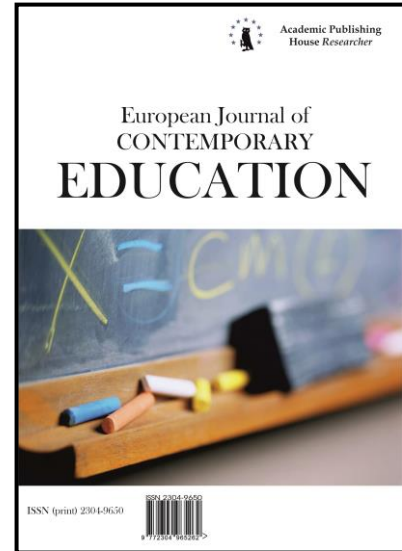
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The Practical Guidelines for Implementing Modular Training in Higher Education

Marina A. Pastushkova ^a, Oxana V. Savateeva ^{a,*}, Alla A. Trotsenko ^a, Dmitry A. Savateev ^b

^a Murmansk Arctic State University, Russian Federation

^b Murmansk State Technical University, Russian Federation

Abstract

The article presents comparative analysis of modular training as a teaching tool against traditional methods and techniques in educational institutions, particularly in higher education. Being one of the forms of interactive learning, modular training ensures efficient intermutual development of all members of educational process. It increases active learning and improves critical thinking, as well as problem solving skills. Based on several years of experimental research this article gives recommendations on modular training for improving knowledge in emergency first aid treatment for students of various educational institutions. It also briefly describes the algorithm of introducing elements of modular training for implementation of Health and Safety course.

Keywords: modular training, education, health and safety.

1. Introduction

The General Conference of the United Nations Educational, Scientific and Cultural Organization (UNESCO), Eighteenth Session held in Paris from 17 October to 23 November 1974, encouraged the introduction of modular technology, which helped to adjust to changing production and scientific needs and local conditions. At that time the goal of modular education was set, that is to establish favorable conditions for full development of human personality through learning based on individual differences and needs of the students as well as the full mastery of the content of educational programs considering the educational background and skills of subjects of the educational process.

The modern world is characterized by a constant multiplication of natural, man-made, social and other hazards, often threatening the human health and life. In the 21st century, society has already been called a "risk society" (Vladimirov i dr., 2000).

* Corresponding author

E-mail addresses: ovsavateeva@mail.ru (O.V. Savateeva), pastushkovamarina@mail.ru (M.A. Pastushkova), trotcenko2007@yandex.ru (A.A. Trotsenko), dasavateev@rambler.ru (D.A. Savateev)

One of the key goals of modern higher education is to help students to build good expertise, knowledge and skills of safe behavior in different real-life situations. In addition, the level of learning outcomes should be so high that it ensures preservation of life and health not only in hazardous and emergency situations but in everyday life as well. This goal can be achieved through combination of modular and traditional education.

Technology drives our society and plays a crucial role in classrooms today. While the impact on learning has not reached its potential; educators need to explore how we go about integrating technology so that it positively impacts educational processes and learning outcomes. Michelle Norton and Casey Creghan, Kathleen Adair Creghan and Robert Maninger explored both teacher and administrator perceptions of technology integration and intended to find ways administrators can support teachers with integrating technology in the classroom in order to impact learning (Norton et al., 2017).

Some authors consider active-learning and role-playing methods as the most effective. Kelley and Liles both focus on the topic of active-learning. This method can be used to help pharmacy students develop patient education skills. The authors emphasize that patient education is an important part of the Pharmacists Patient Care Process and that active-learning strategies can also be incorporated into interprofessional education activities (Kelley, Liles, 2018).

The other author Cleveland (Cleveland, 2018) discusses digital portfolios and how they can be used to foster student reflection. In his article he presents the findings of a study into the role of formative feedback on student reflection and concludes that practitioner-preparation programs and interprofessional education activities should be encouraged to implement digital portfolios (Cleveland, 2018).

Hughes, Bradford, and Likens, present a study of how short instructional sessions can be used to encourage faculty to incorporate technology into their courses. They explored faculty perceptions of technology's impact on communication, critical thinking, and collaboration. Their findings suggest "that faculty are using technology without a good understanding of the pedagogy related to instructional design" (Hughes et al., 2018).

Being one of the forms of interactive learning, modular education ensures efficient intermutual development of all members of educational process. The teacher's role is to coordinate the student's actions, provide all necessary materials and structure the lesson in such a way that the students achieve the set goals and objectives of learning and cognitive process. This form of training develops the students' ability to independent problem-solving in various spheres of activities and promotes confidence in taking real actions in life.

2. Materials and methods

Health and Safety is one of the general subjects in higher education institutions in many countries all around the world regardless of major or educational profile. Based on several years of experimental research this article gives recommendations on modular training for improving knowledge in emergency first aid treatment for students of various educational institutions. The efficiency of introduction of modular system in the course of four years has been analyzed in comparison with traditional (control) methods and modes of study at different independent sample groups (n = 316): 150 students in control group and 166 students in experimental one.

The initial knowledge of a given topic or unit was assessed by valid tests covering all competencies for knowledge, skills, expertise and clear evaluation criteria based on T.V. Melnikova technique. The level of learning outcome on a certain unit was measured using the results of content analysis. The questions should include not only tests but cases and topic related pictures, for example:

Case

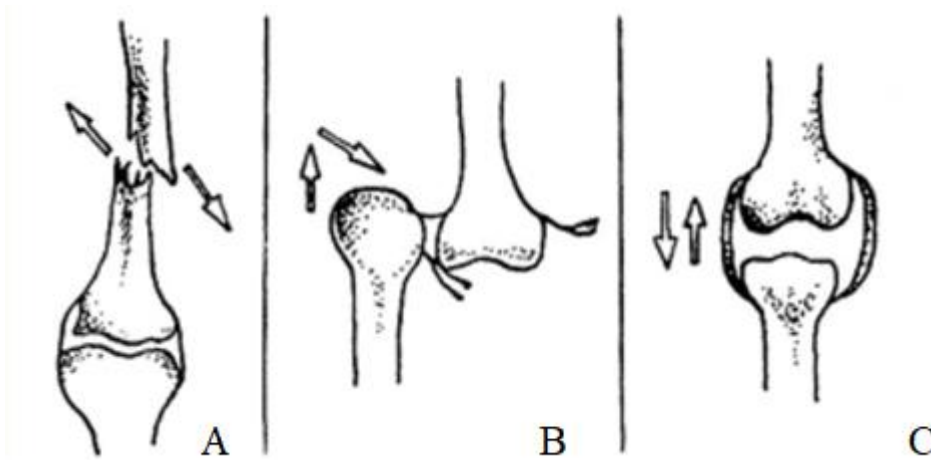
You witnessed a car accident; the driver has severe arm injury. Just above his elbow joint you see a deep wound and blood flows in the form of pulsating stream. Identify the type of bleeding and administer the first aid.

Specify the sequence of first aid for collapse:

- a) Spray a face with cold water;
- b) Raise his legs above heart level;

- c) Position the injured person on his back and tilt his head slightly back;
- d) Unbutton or loosen his collar and provide fresh air.

Identify the type of injury:



This technique will allow in future training to place greater focus on the topics and issues on which students made the most mistakes. It is recommended to have in average three cases, five tests, and three pictures for students to comment.

Evaluation criteria in T.V. Melnikova technique:

Each question has a score: cases – 3 points for every correct solution (9 points in total), 5 tests – 1 point for correct answer (5 point in total), tasks with pictures – 2 points for each correct comment per figure (6 points in total). The total maximum score is 20 points.

F («2») – 12 and less points;

C («3») – from 13 to 15 points,

B («4») - from 16 to 18 points,

A («5») – from 19 to 20 points.

From the methodological point of view this modular approach has a very distinct feature – the students need to reflect their work at every lesson. They must assess not only their performance but the learning process of a group in general. This type of assessment promotes learning motivation not only for a given student but for the whole group and builds a cohesive team work. The reflection should be organized in three levels – “performance”, “me”, “we” (Table 1):

Table 1. A lesson self-assessment sheet of a student

#	Lesson activity	Assessment
1	My level of understanding of the lesson’s material? (“performance”)	1-5 points – little understanding, must learn it again; 6-8 points – partial understanding; 9-10 points – have solid knowledge, understood everything.
2	How was my work? Did I have any mistakes? Am I satisfied with my work? (“Me”).	1-5 points – failed; 6-8 points – had some mistakes; 9-10 points – did all tasks by myself and satisfied with my work.
3	What was the group’s or pair progress? (“We”).	1-5 points – we worked slowly, had lots of mistakes and low interest; 6-8 points – not everyone actively participated in discussion; 9-10 points – we had a good team work and done all the tasks together.
4	Tell your opinion and some feedback about the lesson.	

To organize modular training of the Health and Safety course it is required to have the following conditions:

1. Clear structure of learning process.
2. Learning objectives and tasks for the whole module.
3. Combination of verbal and visual teaching tools and aids.
4. High involvement of students through various forms of independent work.
5. Combined assessment: written and oral answers, peer check.
6. Teacher's belief in students' abilities (Melnikova, 2013).

Modular training is an interactive type of learning. It requires involvement of teachers and students and thus provides efficient development of competencies in a subject for all participants of the educational process. Modular training is oriented at building solid knowledge and strong practical skills, which can be used in first aid treatment in emergency situations and other units of this subject, for example: Basics of Military Service, Natural and Man-made Emergencies, Health and Wellness, etc.

It is advisable to spend a considerable number of non-school hours on development of students' target practical skills. It is also recommended to organize practical training with participation of medical personnel of the school. This will improve the training structure and raise the students' motivation. The lectures of medical specialists and excursions to emergency response team's department could be useful for training and may help some students to make their career choice in future. It is also reasonable to organize special interest groups for students eager to learn first aid treatment on a deeper level.

During the lessons devoted to development of practical skills the teacher should monitor the learning process and help students in drilling exercises. To prevent students' mistakes and objectively evaluate their answers and completed tasks, the teacher should clearly show and explain the technique of first aid actions and use preparatory exercises considering the students' skills and age peculiarities of the group.

It should be noted that all teaching aids for modular learning are based on individual needs and interests of the students.

The validity of the results was evaluated using the Fisher's ratio test for independent samples, pairwise sequence comparison, with the level of statistical significance of differences $p \leq 0.01$ and considering the variance. When comparing, control was exercised over the group error probability using the Bonferroni correction, and the critical level of significance was 0.015.

Below are the averaged results of a four-year study of the Health and Safety knowledge and skills ("First Aid" unit) of high school students obtained during traditional and modular modes of training.

3. Results

Results of a comparative analysis of traditional and modular lessons. Innovative technologies allow combining standard and interactive teaching methods. Often a teacher who mainly uses traditional forms of education does not dare to switch completely to another mode of training, for example, to modular one. However, some sections of the Health and Safety course are very convenient for introducing innovative techniques. For example, the use of modular training for studying "First Aid" unit engages students on a greater level and they show higher enthusiasm to learn important topics independently and without detriment to the learning process.

The initial ascertaining experiment identifies the level of learning outcome of the target unit in the control (other lessons of Health and Safety course will be taught only with traditional teaching methods) and experimental groups (other lessons of Health and Safety course will be taught using modular training). The review of "First Aid Provision" unit consists of two options, each contains test tasks, three cases and three topic related pictures to determine the type of injury. According to the results of initial testing, as a rule, the results in the groups do not differ significantly: the control group – 82 students (54.55 % from $n = 150$); experimental – 83 students (50 % from $n = 166$) (Figure 1).

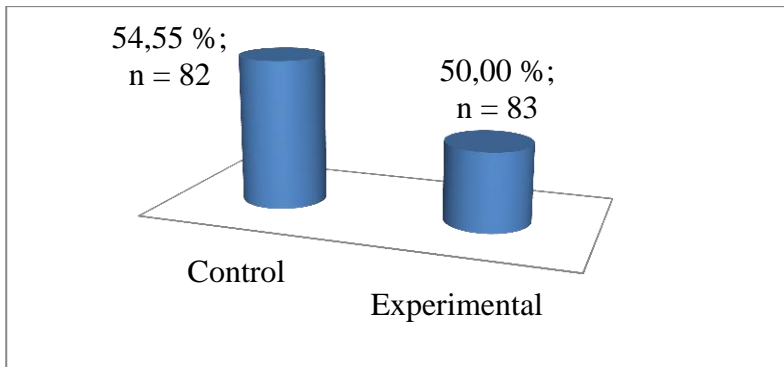


Fig. 1. Percentage of students with low level of knowledge and skills in “First Aid Provision” unit based on the results of initial tests (average data for 2014-2017; n = 316; $\varphi^*_e = 2.45 > \varphi^*_c = 2.31$, $p \leq 0.01$)

Based on the criteria for knowledge assessment, it can be concluded that students in both groups have an average level of knowledge on the topics of the target section.

The teaching experiment involves the development of didactic material for the target unit for both groups and teaching classes using these materials.

Based on the test results for the control group, the didactic material was developed according to the traditional method, based mainly on the explanatory-illustrative teaching method. The didactic material included presentations, as well as lessons notes on the topics of the unit.

Based on the results of initial testing and questionnaire analysis for the experimental group, the didactic material was developed, including the following:

- Modules structure layout;
- Modules on first aid provision in emergency cases;
- Lessons notes for each module;
- Presentations;
- Video materials for the following topics: “Imposition of pressure bandage”, “First aid for arterial bleeding”, “Basic cardiopulmonary resuscitation”, “How to apply a splint to a fractured limb”.

The same topics of the “First Aid” unit during the school year are taught by a teacher in both groups in accordance with the program of the experiment, i.e. in the control group - using traditional teaching methods, in the experimental group – using modular training.

After studying a half of the material for each topic, the knowledge and skills in both groups are monitored to identify and evaluate the effectiveness of the developed modules in comparison with traditional training.

As a rule, the test results show the following: the statistical processing of data does not reveal significant differences between the groups, i.e. based on the obtained data, it can be concluded that with 99 % confidence the level of knowledge and skills of students in both groups is the same (the control group – 131 students; experimental – 152 students) – a medium when mastering half of the required material (Figure 2):

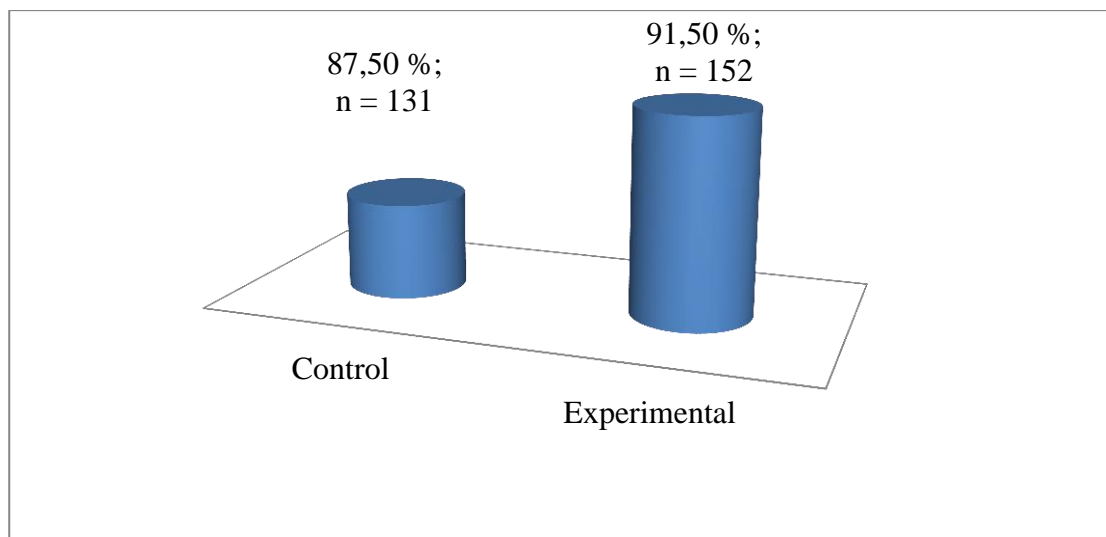


Fig. 2. Percentage of students with medium level of knowledge and skills in “First Aid Provision” unit after studying a half of the topics (average data for 2014-2017; $n = 316$; $\varphi^*_e = 2.39 > \varphi^*_c = 2.31$, $p \leq 0.01$)

However, it should be noted that upon completion of the study of all the material in the “First Aid” unit, the level of knowledge and skills of students in both groups increased from medium to high, which indicates the effectiveness of both traditional and modular methods without any significant differences, i.e. methods bearing no significant differences on effectiveness (Figure 3).

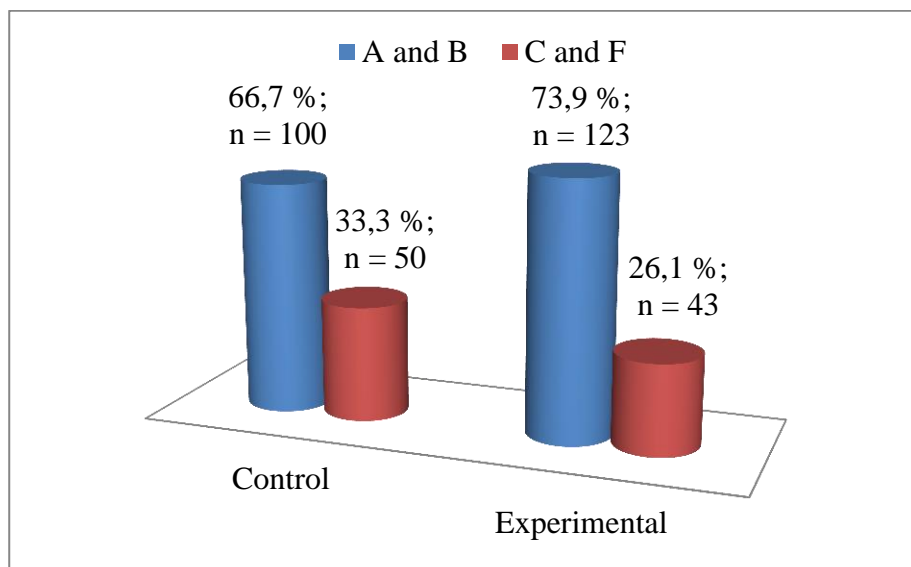


Fig. 3. Percentage of students with high level of knowledge and skills in “First Aid Provision” unit after studying all material (average data for 2014-2017; $n = 316$; $\varphi^*_e = 3.01 > \varphi^*_c = 2.31$, $p \leq 0.01$)

The obtained results allow us to conclude that the developed modules are effective and contribute to improving the knowledge of students and can also be used in teaching the first aid in emergency situations along with traditional methods. The traditional teaching method was just as effective, the study did not reveal any significant differences between the results in both groups, the level of knowledge increased from medium to high, which proves the feasibility and effectiveness of introducing the developed modules into the educational process along with the traditional teaching methods.

Recommendations for development of algorithm for modular training implementation. First aid is a set of simple actions for saving human’s life. First aid provision is the civic duty of every

person, regardless of religion, race and political convictions. Below is a list of conditions when the first aid is needed (Ob utverzhdenyi perechnya..., 2012; Pogodin i dr., 2014; Golub i dr., 2007):

1. Collapse.
2. Respiratory and circulatory arrest.
3. External bleeding.
4. Upper respiratory airway foreign body.
5. Injuries of different body areas.
6. Burns, heat strokes.
7. Freezing injuries and other impacts of low temperatures.
8. Intoxication.

The experience of teachers all around the world showed that the essence of modular training is to develop skills for self-education of students (partial or full) based on individual program containing all elements for achieving teaching goals: lesson plans, information database, teaching materials, handouts, etc. The educational process is structured around conscious learning, the teacher acts as a counselor and coordinates, monitors and guides the learning process, and his key role is preserved but he can interact with every student during a lesson. Many years of experience revealed the number of shortcomings of modular training:

- large number of students' individual work;
- the teacher spends considerable time on development of training modules, handouts, teaching recommendations;
- development of specific practical skills against general ones;
- difficulty to maintain the required level of motivation for self-learning and self-development.

The modular training has important features: it involves algorithmization of educational process, clear structuring of teaching materials, consistent presentation and study of theoretical material; it assumes variability of training and possibility to introduce certain components of a given module into the educational programs; it also suggests adjustment of training process to an individual pace of a student's learning-cognitive activity (Blokhin, 2012; Borisova, Kozlov, 2010).

The fundamental difference between modular and traditional training is that material is divided into separate modules (blocks), each module is not a source of information but a tool for its assimilation. Another important distinctive feature is that each module is characterized by completeness of training process with further reflection and assessment of gained knowledge, the traditional training involves systematic study of logically connected topics and final assessment of knowledge of all course units.

A module, as a rule, consists of submodules and smaller units – training elements (TE). Training element is a separate teaching brochure, which is a step towards achieving the set goal; gradually learning the material of these elements a student achieves integration goals and tasks of a module in general.

Each training element must include a goal, certain theoretical knowledge and practical skills, interdisciplinary connections, teaching information, reflection and evaluation of material retention. It is recommended to have not less than seven training elements (Table 2).

Table 2. Required training elements (TE)

TE-0	Setting of integrating goal for achieving the learning outcomes;
TE-1	Tasks for evaluating the level of knowledge previous material/new topic (checking home task or independent work, etc.)
TE-2 and other TEs	Drilling of teaching material: explanation (individual, pair, group work), learning and initial consolidation of new material
Final TE	Knowledge assessment, summary, home task, reflection.

A larger (thematic) item is a modular block, uniting elements close in their content. Modular block ends with practical qualification task, according to which a student can be assessed on a professional scale. The whole modular course ends with final qualification test. The course must

have the multi-level assessment system but at the same time a student can plan his individual training process.

Modular training program is a system of logically completed elements of a given academic course – training modules. The teacher should develop the modular program including regular assessment of knowledge, skills and expertise, which helps to manage the educational process.

If there is a need to choose between modular and traditional system for teaching any given subject it is recommended to conduct a pedagogical experiment including the following stages:

1. Carry out the summative pedagogical research to determine the students’ knowledge on a given unit/topic by means of tests. This will allow not only to identify the main knowledge gaps but to build the relevant modules, lesson plans and pay greater attention to problem areas.

It is recommended to evaluate students’ knowledge on the following scale:

- High level – a student mastered successfully more than 70 % of the content of the educational program;
- Middle level – a student mastered successfully from 40 % to 70 % of the content of the educational program;
- Low level – a student mastered successfully less than 40 % of the content of the educational program.

2. Preparation and development of main teaching material.

3. Carrying out of forming and control experiment.

4. Mathematical-statistical processing of results.

For example, an ascertaining test can have five theoretical questions, three cases and three pictures for students to identify the type of the injury. Each task has its own score: questions - 1 point, cases – 3 point for each case, picture tasks – 2 point for each task. The maximum possible score is 20 points. The evaluation criteria could be the following:

- F (“unsatisfactory”) – 12 points and less;
- C (“satisfactory”) – from 13 to 16 points,
- B (“good”) – from 17 to 18 points,
- A (“excellent”) – from 19 to 20 points.

Based on the testing results it is recommended to conduct a forming experiment based on developed teaching material corresponding to modular training algorithm, namely:

- build modules structure (Table 3) for first aid provision in emergency cases;
- write lesson plans for each module;
- create presentations for lessons;
- select video materials for topics: “Imposition of a pressure bandage”, “First aid for arterial bleeding”, “Basic cardiopulmonary resuscitation”, “Broken limb splintage” (Bubnov, Petrov, 2006; Golub, 2007; Diamant, 2013). (Table 3)

Table 3. Modules structure

Block: “First aid for emergency cases”	
#	Module title
M 1	General rules for first aid.
M 2	First aid for bleeding
M 3	Structure and function of cardiac and pulmonary activity. Signs of clinical and biological death.
	First aid for respiratory and cardiac arrest. Cardiopulmonary resuscitation.
M 4	First aid for fractures, bruises and dislocations
M 5	First aid for thermal injuries

Listed below are the main principles on the basis of which the didactic materials and the algorithm of all modular training are constructed: the principle of fragmentation and isolation of discipline elements; the principle of structuring of all elements and modules; the principle of dynamism; the principle of relevance, systemic and interdisciplinary integration of knowledge; the

principle of the flexibility of interaction between the teacher and the student; principle of perspective and applied value of knowledge, skills and expertise (Bukalova, 2009; Melnikova, 2013).

The most difficult in modular training is the selection of evaluation criteria for each module (topic). To check the building of knowledge, skills and expertise for each module it is required to conduct control testing, its results will help to make conclusions on the efficiency of modular training in comparison to traditional methods for mastering given competencies (Vakhitove, 2011).

As a rule, the developed modules are expedient and efficient for building competence for a certain topic or some subject in general.

4. Conclusion

Conclusions and recommendations for compilation of modules for ensuring their successful inclusion in educational process alongside with traditional techniques:

1. The modules should be introduced in educational process gradually. On the initial stage only elements of modular training can be used. The first few modules should be small but concise as the students are not familiar with this type of learning and training.

2. The modules should be interesting, informative, memorable and built according to age and individual peculiarities of students. The material, examples and tasks should be selected considering needs and life experience of students and current situation in the country and the world.

3. It is necessary to clearly mark the time for each task, because the enthusiasm of students with independent work can interfere with the lesson plan and effectiveness of the educational process.

4. It is necessary to ensure constant assessment of knowledge after each module or several training elements. This will promote consolidation and repetition of the material and reduce the possibility of cheating.

5. The tasks and questions should be structured in such a way that the student's answer is clear and concise, this helps to perform a self-check.

6. At all stages of modular training the teacher should act as a counselor and coordinate, monitor and guide the education process and he still has a leading role in communication with each student.

7. The development of modules should be based on basic principles of modular training: the structuring of the content of learning for isolated elements, dynamism, relevance, systemic and interdisciplinary integration of knowledge, flexibility and mutual understanding of the teacher and the student, parity and versatile methodological counseling.

8. One of the main features of modular training is the reflection of students at the end of each lesson. At the same time, it is necessary to evaluate not only their work, but also the educational process in the group, which contributes to the motivation of the training and cohesion of team work.

So, the gradual assimilation of theoretical material in modules, the consistency, completeness and coherence of learning activity, the possibility to select the pace of work – all this provides the opportunity for successful self-education and professional orientation in the future.

References

Blokhin, Travin, 2012 – Blokhin N.V., Travin I.V. (2012). Psikhologicheskiye osnovy modulnogo professionalno orientirovannogo obucheniya [Psychological foundations of modular, professionally-oriented education]: metod. posobiye. Kostroma: Izd-vo KGU im. N.A. Nekrasov, 14 p. [in Russian]

Borisova, Kozlov, 2010 – Borisova N.V., Kozlov V.B. (2010). Metodologiy modulnogo obucheniya i formirovaniya [Methodology of modular training and formation]. M.: Institut stali i splavov, 44 p. [in Russian]

Bubnov, Petrov, 2006 – Bubnov V., Petrov S. (2006). Obucheniye navykam orfzaniya pervoy meditsinskoy pomoschi [Teaching first aid skills]. OBZH: Osnovy Bezopasnosti Zhizni, 12: 61-64. [in Russian]

Bukalova, 2009 – *Bukalova G.V.* (2009). Tekhnologiya modulnogo obucheniya kak sredstvo effektivnosti prepodavaniya obscheinzhenernykh distsiplin [Modular training technology as a means of effective teaching in general engineering disciplines]: dis. ... kand. ped. nauk : 13.00.08. Orel, 234 p. [in Russian]

Cleveland, 2018 – *Cleveland R.E.* (May 2018). Using Digital Portfolios: Reflection, Assessment & Employment. *TechTrends*, 62(3): 276-285.

Diamant, Romanov, 2013 – *Diamant I.I., Romanov D.S.* (2013). Innovatsionnye podkhody k obucheniyu starshikh shkolnikov okazaniyu pervoy pomoschi [Innovative approaches to the training of senior schoolchildren in providing first aid]. *Vestn. TGPU*, 4: 136-138. [in Russian]

Golub i dr., 2007 – *Golub I.E., Abramovich G.M., Netesin E.S., Sorokina L.V.* (2007). Obucheniye priemam dogospitalnoy reanimatsii trenazhernym metodom [Training in pre-hospital resuscitation using a training method]. *Bul. Vost.-Sib. nauch. tsentra Sib. otd. Ros. akad. med. nauk*, 5: 92-93. [in Russian]

Hughes et al., 2018 – *Hughes E.S., Bradford J., Likens C.* (May 2018). Facilitating Collaboration, Communication, and Critical Thinking Skills in Physical Therapy Education through Technology-Enhanced Instruction: A Case Study. *TechTrends*, 62(3): 296-302.

Kelley, Liles, 2018 – *Kelley K., Liles A.M.* (May 2018). Active Learning Activity Aimed to Develop Group Patient Education Skills. *TechTrends*, 62(3): 250-258.

Melnikova, 2013 – *Melnikova T.V.* (2013) Formirovaniye kultury bezopasnosti zhiznedeyatelnosti uchashikhsia na osnove tekhnologii modulnogo obucheniya [Forming a culture of life safety of students based on modular learning technology]: dis. ... kand. ped. nauk: 13.00.01. Sankt-Peterburg, 193 p. [in Russian]

Norton et al., 2017 – *Norton M., Creghan C., Creghan, K.A., Maninger R.* (2017). Professional Development and Effective Technology Integration. *The Journal of Multidisciplinary Graduate Research*, 3(1): 1-17.

Ob utverzhdeniyi perechnya... – Ob utverzhdeniyi perechnya sostoyaniy, pri kotorykh okazyvaetsya pervaya pomosch, i perechnya meropriyatiy po okazaniyu pervoy pomoschi [On approval of the list of conditions for which first aid is provided, and the list of first aid measures]. Prikaz M–va zdravookhraneniya i sotsialnogo razvitiya Ros. Federatsii ot 4 maya 2012 № 477n. [Elektronnyi resurs]. URL: <http://lib.znate.ru/docs/index-199700.html> (data obrascheniya: 01.02.18). [in Russian]

Pogodin i dr., 2014 – *Pogodin Y.I., Volodin A.S., Yudin A.B., Medvedev V.R.* (2014). Pervaya pomosch postradavshim v chrezvychaynykh situatsiyakh: sovremennyye metodiko-tekhnicheskiye aspekty i metodologiya obucheniya sposobam – eyo okazaniya [First aid to victims in emergency situations: modern medical and technical aspects and the methodology of teaching how to provide it]. *Meditsina katastrof*, 1: 41–45. [in Russian]

Vakhitove, 2011 – *Vakhitove G.Kh.* (2011) Psikhologo-pedagogicheskiye aspekty kompetentnostnogo podkhoda in system vysshego professionalnogo obrazovaniya [Psychological and pedagogical aspects of the competence-based approach in the system of higher professional education]. *Vestn. Tom. gos. ped. univ-ta*, 10: 9–13. [in Russian]

Vladimirov i dr., 2000 – *Vladimirov V.A., Vorobiev Y.L., Malinetsky G.G.* (2000). Upravleniye riskom. Risk, ustoychevoye razvitiye, sinergetika [Risk management. Risk, sustainable development, synergetics]. M.: Nauka, 432 p. [in Russian]



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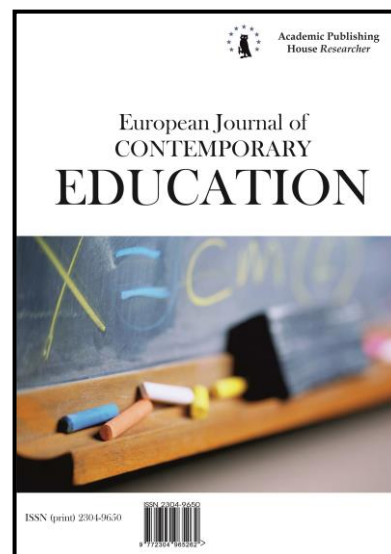
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Trajectories of Building a Career of a Teacher within Academic Competition

Olga V. Rogach ^a, Elena V. Frolova ^a, Tatyana M. Ryabova ^{a,*}

^a Russian State Social University, Moscow, Russian Federation

Abstract

The article analyzes the values, motives, preferences and expectations of teachers of Russian universities through the prism of the choice of the trajectory of building their career. The sample for the study was formed by 36 experts – the representatives of the academic staff of Russian universities, who took part in a focus group survey. In order to validate the presented toolset, the results of the focus group interview were concretized with the data of in-depth interview, which made it possible to formulate a description of the limitations and possibilities in achieving the career goals of teachers in higher education. According to the results of the study, it has been concluded that the career strategies of a university lecturer are based on the intersection of three areas: advance of academic degree and academic title; obtaining an administrative position within the framework of “merit system”. Based on the survey materials, the time, financial and emotional costs of building a career have been determined. The assessment of the degree of their “payback” is differentiated depending on the level of motivation, personal ambitions and a number of other conditions. The utmost effectiveness and justification of costs is achieved at the intersection of two career trajectories (degree and merit), which is due to the devaluation of the value of the administrative resource. The stereotypes and value-normative attitudes of the academic staff in some cases block the mechanisms of the university’s motivational policy. The article reveals the role of institutional factors determining the process of building a teacher’s career, defines the significance of such aspects as value-normative, motivational-stimulating, synergistic.

Keywords: university teachers, academic competition, rating system, personnel policy, career strategies, salary, research chops.

1. Introduction

Modern trends in the development of higher education lead to significant transformations in the academic career of university lecturers (King, 2004; Must, 2006). The inclusion of universities in the rating race (Mautner, 2005; Salmi, 2013; Altbach et al., 2011), the change in the performance

* Corresponding author

E-mail addresses: tani-87@inbox.ru (T.M. Ryabova)

indicators of higher-education teaching personnel (Vinkler, 2008; Reitz, 2017) leads to the need to build flexible career trajectories and strategic planning of career growth.

The introduction of innovations in education and economy, the removal of the state's economy from the protracted crisis, the development of production capacity (Frolova, Rogach, 2017) addresses the issue of "filling the staff hunger" through improving the quality of scientific and educational activities of faculty of universities (Mulyukin, 2012). The system of education is not purely market-based and it produces primarily public goods that cannot be assessed in the market coordinates of efficiency, with the result that the assessment of the performance of such organizations is based on artificially created criteria (Volchik, 2013).

This situation is reflected in the requirements for the activity of the teaching staff of educational organizations, obliging academic staff to increase their competitive advantage in the global scientific space (Kirillova, Soloshenko, 2012). At the same time, the main indicators of academic competitiveness are bibliometric indicators such as the publication activity of scientists and the number of citations that ensure recognition of the results of their scientific works by the international scientific community (Markusova, 2008).

The change of the vector from the traditional teaching profession of higher education workers towards increasing their research potential has led to the expansion of the content of the academic profession. According to a number of scientists, the teaching profession in the organization of higher education is not similar in its content to the profession of a research, since its function primarily involves working with students to generate new specialists (Hammersle, 1993). The teacher and the researcher appeal to different value systems, which requires their deliberate integration in new conditions (Teelken 2012; Ylijoki et al., 2013). In addition, the expectations around academic success due to the transformation of the foundations of higher education also change, which requires early career building (Kathryn, 2015).

The contracts concluded by the employees of higher education are not typical for other areas of business. The main difference lies in the principles that they reflect: in particular, the contracts of academic personnel rely on the principle of "up-or-out" (Song, 2008) in order to combat archaic and inert teachers and scholars (Abramov, 2011). This means that in developed countries, higher school teachers who increase their performance receive guarantees of lifetime employment, whereas in the case of a lack of positive dynamics, they are forced to leave the university (Dickinson, 2008). The specificity of such contracts consists, firstly, in the fact that they imply a long trial period of 3-5 years; secondly, at the end of this period, a decision is made on permanent employment (Corcoran, Goldhaber, 2013). In conditions of limited number of vacancies and high competition for them among professors, the personnel policy of life-long employment ensures the stability of the teacher's workplace, organizational commitment (O'Flaherty, Siow, 1991; Peterson, 2007).

Academic career paths in Europe are heterogeneous, and the chances of becoming a permanent member of the academic profession in the early stages of a career differ from country to country (Höhle, 2015). In some countries, employment prospects are highly volatile. For example, in Russia, labor contracts are concluded for a period of not more than 5 years, usually for 1-2 years. The lack of stability in the workplace ensures a high level of competition between university lecturers and a general fear of being dismissed (Rogach et al., 2016).

In this context, the intersection of formal and informal norms that determine the specificity of the construction of career trajectories acquires special significance (Bartunek et al., 2008). In developed countries, the approach to building career strategies has undergone a number of changes over time. Initially, it is customary to associate competitive mobility with formal rules and regulations adopted within the university community (Turner, 1960). Later, an alternative "model of the tournament" was proposed, according to which the teacher's career was based on the principle of "knockout competition" (Rosenbaum, 1984). In modern conditions, the basis for building career strategies is the ratio of remuneration and costs, which determines the degree of individual involvement into academic competition.

Another innovation is the introduction of an effective contract, which, in addition to the traditional employment contract, includes consideration of the teacher's performance and creativity (Zamarro et al., 2015; Podgursky, Springer, 2007). The experience of developed countries in using the system of incentive payments to the teachers of higher education indicates a

relationship between the attitude to online ratings and age and gender characteristics of university professors (Goldhaber, Walch, 2012).

Building a career as a university teacher in the framework of the modern concept of “adaptive career” presented by R.Kh. Waterman, J.A. Waterman and B.A. Collard is carried out by assuming the responsibility to dispose of one’s own career, to monitor the ongoing changes in the trends of socio-economic development, mastering the necessary competencies to quickly adapt to the changing external environment and market requirements.

Thus, the authors set the purpose of the study is to identify constraints in the implementation of career strategies of high school teachers in the new conditions for the assessment of teaching work based on an analysis of factors for building successful career trajectories. The analysis provides a partial filling of the research gap in the monitoring of career trajectories of university workers within the context of the transformation of the foundations of higher education.

2. Materials and methods

The methodological basis of the study was an interdisciplinary approach to the problems of career mobility of teachers in the context of academic competition, covering the economic and social aspects of university teacher behavior.

The outlines of the social exchange theory, institutional approach were used. Successful reforming of higher education and science depends primarily on whether institutions that will become the basis for the reproduction of productive recurring interactions within organizations and regulatory mechanisms are formed or not (Volchik, 2013). Institutional factors are the most significant determinants that regulate the effectiveness of the development of personnel potential of higher education, creating the conditions for the implementation of career trajectories (formal and informal norms, role expectations, values, interaction parameters of the subjects in the system of higher education). The historical and institutional context determines the individual’s behavioral strategies (Ghezzi, Mingione, 2007), social rules and restrictions determine individual choice (Urpelainen, 2011).

The outlines of the theory of social exchange are important within the framework of this study. The effectiveness of the implementation of career trajectories is determined by a number of parameters: the expenses or costs necessary to move to the next stage of the career hierarchy, the estimated benefits and patterns of behavior, fixed depending on the cost-benefit ratio (Homans, 1984).

The survey sample was formed by 36 faculty members from leading Russian universities, who took part in a focus group survey (N = 36). In order to validate the presented tools, the results of the focus group interview were concretized with in-depth interview data (N = 10). The principle of sampling was to focus on the search for informants who are able to provide the most complete picture of the ongoing career transformations of a higher school teacher. This made it possible to form a description of the limitations and opportunities in achieving the career goals of higher school teachers.

The main blocks of in-depth interview included an analysis of formal and informal constraints, costs and results in the building of career trajectories in the following areas:

- gaining a scientific degree and academic titles;
- administrative career;
- career strategies based on “merit system” (publication activity, participation in international conferences, participation in research activities, etc.).

The study also used such research methods as the Spearman’s rank correlation method and the Pearson’s χ^2 test. Statistical significance was set at $p < 0.05$.

3. Results

3.1. Proceeding to an Academic Degree and Academic Rank as a Factor of Building Career

The conducted transformations of the foundations of higher education, in the opinion of the university teachers surveyed, very strictly defined the formal conditions for the construction of the career trajectory of university personnel. Achieving career goals through gaining academic degrees and academic titles runs up against a number of restrictions, shaped by the specifics of the formation of a modern scientist. In particular, in the course of the focus group study, the

respondents noted significant time and financial costs for the search for the dissertation council. Tightening of control by the State Commission for Academic Degrees and Titles led to a reduction in the number of dissertation councils. A fairly limited number of universities in modern Russia are implementing doctoral training programs. “The increased level of corruption in postgraduate education” significantly limits the possibility of proceeding to an academic degree by an applicant, and time and financial costs also increase. “Applicants, when admitting to defense, have to wait for their turn” (Osipyán, 2010).

Doctor of Science, 47 years old: “After the closure of our Dissertation Defense Committee, we had to search for where we could defend our theses. And then the cost of such attaching is not cheap”

In the course of the focus group study, difficulties in finding an appropriate base for testing the results of the dissertation research were also identified. For many lecturers in the status of the applicant of a scientific degree, the costs of gaining it exceed the possible positive benefits from the acquisition of status.

Table 1. Evaluation of the Costs of Gaining a Degree Depending on the Status (Degree) of a University Teacher (N = 36)

	Evaluation of Financial and Time Costs to Proceed to an Academic Degree		
	Unreasonable	Very high, but justified	Insignificant, in comparison to the status gained
Having of Degree of Doctor of Science	4	3	2
Having of Degree of Candidate of Science	8	2	4
Lack of an Academic Degree	7	5	1

By analyzing the data in Table 1. using the Pearson’s χ^2 test, the following has been determined: the number of degrees of freedom is 4. The value of the χ^2 criterion is 3,282. At a significance level of $p < 0,05$, the critical value of χ^2 is 9,488. Accordingly, we see that the relationship between the academic status of a teacher and the estimates of financial and time costs associated with gaining a degree is not statistically significant, the significance level is $p > 0,05$.

The revealed dynamics of strengthening the teaching load is also considered by the respondents as a limiting factor, which does not allow enough time to be spent on research work.

Candidate of Science, 33 years old: “Every year the classroom hours increase. We have to take one or even three new disciplines each year, and to prepare them. There is no time left for writing a dissertation”

Table 2. Publication Activities of University Teachers in Scopus International Base, Depending on Academic Degree (or Lack Thereof) (N = 10)

Code of university teacher in in-depth interview	Academic Degree	Number of Publications in Scopus International Base
1	Doctor of Science	25
2	Doctor of Science	9
3	Doctor of Science	11
4	Candidate of Science	15
5	Candidate of Science	4

6	Candidate of Science	19
7	Candidate of Science	2
8	Teacher	1
9	Teacher	7
10	Teacher	2

Spearman's correlation coefficient (R) equals 0,673. The connection between the studied characters is direct, the correlation ratio according to the Chaddock scale is meaningful. The number of degrees of freedom (f) is 8. The critical value of the Spearman criterion for a given number of degrees of freedom is 0,648. The dependence is statistically significant ($p < 0,05$). This confirms the authors' hypothesis that a university lecturer who does not have an academic degree due to an increased number of hours of study does not have time to conduct research and write high-quality scientific articles.

According to university teachers who do not have a degree, and who are at the beginning of their career path, the lack of systemic support for "young professionals" becomes a significant barrier to their development as competitive employees in higher education. In view of this circumstance, many of them feel excluded from the context of both existing small groups and the scientific team as a whole. In the course of the focus-group study, this category of respondents noted: *"the feeling of being detached", "useless", "too much loading", "confusion about the inconsistency of their expectations and the real situation", "you give up when you need to prepare for classes, write a thesis, publish articles, participate in educational work with students, and a whole lot more"*.

Note that, the price of "loss" in the transition to the status of a candidate of sciences for a university teacher who does not have an academic degree is quite high and for the most part leads to the end of teaching. According to respondents, *"30 years is a certain milestone when a teacher without an academic degree is unlikely to pass a competition"*. The respondents also note that having an academic degree provides higher salary, strengthened authority among the colleagues. These preferences are a significant factor for applicants for Doctor of Science, but not decisive, especially when assessing the size of related costs (they are significantly higher than in the case of defending a master's thesis: by the number of publications, the level of requirements for the quality of materials, testing, etc.). In addition, informal barriers (closedness of the scientific community, cultivation of a feeling of superiority of members of dissertation councils to potential applicants) are assessed as higher.

3.2. Administrative Career of University Staff

The idea of the existence of significant barriers that reduce the access of teachers to administrative positions in higher education organizations has traditionally dominated. However, the results of the study are not so linear. The attractive effect of this career trajectory is not high enough, which is associated with a high routine loading, significant time costs for the implementation of administrative functions, the lack of flexible schedule.

During the focus group survey, a certain devaluation of the administrative career was noted. For example, the position of head of a university department, in the opinion of the respondents, has ceased to be attractive in view of the high loading with "not enough high pay," and therefore, does not appear to be the object of career claims for most teachers.

Doctor of Science, 50 years old: *"The holder of chair, unfortunately, today has a minimum of opportunities at maximum load, performing rather secretarial than organizational or managerial functions, that is, to notify everyone, collect documents, pass information upstairs"*.

Under current conditions, university teachers prefer a scientific career to administrative advancement, choosing the tactics of evading offers to take a particular position in the management apparatus. Subdominant positions retain their attractiveness for persons have no an academic degree. The lack of remuneration for a novice university teacher actualizes the potential benefits of an administrative career. As such, an increase in teacher's professional status, stability of the workplace, possible levers of influence in determining the teaching load, information resources were noted. A significant role here is played by the amount of monetary reward. Leadership positions in high schools with a high status are attractive for career-oriented teachers seeking to realize their administrative resources.

Table 3. The Attractiveness of the Administrative Career for University Teachers (N = 36)

	Administrative career in university is attractive	Avoiding of the administrative career	Administrative career opens up opportunities in gaining an academic degree
Doctor of Science	3	6	0
Candidate of Science	4	8	2
A university teacher who has no academic degree	8	1	4

By applying the analysis using the Pearson's χ^2 test, the authors determined a statistically significant relationship between the presence of a degree and the attitude to the administrative career at university ($\chi^2 = 10,813$; $p < 0,05$).

Formal selection rules for administrative positions are determined by job descriptions. The dominant factor for subdominant positions is responsibility, discipline, and efficiency. For higher career positions within the framework of the university hierarchy, in addition to formal norms (work experience, academic degree, merit), informal selection criteria (personal sympathies, business communications, loyalty to the management, diligence) play a crucial role.

3.3. Career Strategies Based on “Merit System”

Modern trends in the development of higher education entail the identification and consolidation of key areas for improving the performance of the faculty of the university through transferring teaching staff to an effective contract. In Russian higher educational institutions, unlike their foreign counterparts, the term of the contract is limited to the period of 1 to 5 years. At the same time, according to the results obtained, the overwhelming majority of teachers in higher education conclude a one-year contract. This practice, according to the focus group study provides an increased psychological tension among the university teachers, regardless of their place in the academic ranking, provokes the feeling of frustration and uncertainty about tomorrow in academic staff. Annual competitive procedures and reduction of rates at the departments contribute to the occurrence of tension in the interpersonal and professional relations of teachers (Rogach et al, 2017). Almost a third of the respondents noted that they began to notice more often when communicating with colleagues that they had a “feeling of rivalry”, “envy” and “irritability”.

In the focus groups, it has been found that due to the introduction of an effective contract and the change in the very approach to the evaluation of teaching from the position of the research chops in the educational environment, latent conflicts began to arise associated with increased competition between teachers for vacant jobs. Moreover, the higher the individual rating of the teacher is, the more acutely the competitive struggle for “leading positions” is carried out. The lack of long-term guarantees of work, in the opinion of teachers, reduces their efficiency and effectiveness of work.

As a formal constraint for university workers building their career within the traditional teaching path, the focus group survey noted the difficulty in achieving quantitative indicators. Candidate of Science, 32 years old: “For example, the publication of a standard article in a foreign journal requires only about 150-200 dollars for initial translation, we add the payment for the publication itself to the expenses, which is about 400-1000 dollars, and we have got an impressive amount. In addition, there is a big risk of not accepting an article for publication, which makes the expenditure completely non-payable”.

The formal institutional framework for building a career based on the “merit system” includes high requirements for international publications, while low level of knowledge of a foreign language, high cost of publications, organizational fees and other expenses for participation in international conferences are becoming significant barriers for university teachers.

It has been established that the orientation of teachers towards maintaining high rates of research and building up their scientific potential, as promising areas of entry into the world scientific community, greatly reduces the quality of their teaching activity. The following provisions were established in the course of the focus groups survey: “lack of time to prepare classes”, “discomfort

during classes because of insufficient study of educational material”, “fear of additional questions from students”, etc. Thus, the teachers noted their vulnerable position on the subject.

In the focus groups, it is also found that the career aspirations of workers who build their strategies on the basis of the merit system are accompanied by informal restrictions. So, some respondents noted the absence of a formed active position in raising their academic rating, lack of readiness to maintain high rates of research activity. The stereotypes and value-normative attitudes of the faculty staff in some cases block the mechanisms of the university’s motivational policy. Among the teachers, there is some distance, the rejection of the “rating race”, the rejection of ongoing innovations.

In the opinion of the overwhelming majority of the respondents, the current trends in the development of the world scientific space do not allow us to consider the academic degree of a teacher in isolation from the dynamics of its scientometric indicators. In connection with this circumstance, age teachers in the course of the focus groups noted, in particular: “a sense of loss of credibility”, “loss of personal and professional positions”. The transition to a quantitative assessment of labor contributes to their “formation of complexes”, “lack of self-confidence”, “losing firm ground”. Often in one interpretation or another, the following statement is: “everything is now measured by the Hirsch index, the number of Scopus publications ..., which zeroes out all my teaching and scientific experience at a time”.

Table 4. Attitude to the Rating Race in the Context of Academic Status of University Teachers (N = 36)

	<i>An opportunity of entering the international scientific level</i>	<i>An opportunity of extra earnings</i>	<i>Races do not reflect a real science but develops a pseudoscience only</i>
<i>Doctor of Science</i>	2	3	4
<i>Candidate of Science</i>	4	8	2
<i>A university teacher who has no academic degree</i>	4	2	7

The value of the criterion is $\chi^2 = 6,578$, $p > 0,05$, the number of degrees of freedom is equal to 4. Accordingly, we can talk about the absence of a direct statistical relationship between the presence of an academic degree and attitude to the rating race.

The samples of role expectations, according to the chosen career trajectories, as well as the value orientations of university teachers (work, home, status, etc.) largely determine the effectiveness of the mechanisms for intensifying the research activities of the faculty of higher education organizations. In the context of the shift of teachers’ career expectations from the teaching component to the research component, as well as the introduction of quantitative indicators for assessing the activities of university workers, the overwhelming proportion of university teachers has adapted to the new conditions, “incorporating their long-term behavioral strategies into existing institutional constraints” (Khalil, 2013).

4. Conclusion

Providing the principle of complementarity of values, informal patterns of behavior to the regulatory requirements of academic community, as well as the effective functioning of the motivation system creates conditions for the development of sustainable career trajectories of the university teacher. The role of institutional factors can be explicated in the following aspects:

1. Value-normative – the formation and legitimization of norms, samples of role expectations, values of research activities. First of all, we are talking about the formation of the

prestige of teaching profession, the importance of scientific and publication activity, while respecting international publishing ethics.

2. Motivational-stimulating – the formation of conditions and specific incentives that contribute to the effective career development of teachers, providing a satisfactory ratio between the costs and remuneration of employees.

3. The synergistic aspect ensures the integration of the benefits received by teachers while reducing their costs to achieve their career goals. Realization of successful career trajectories is provided in the conditions of constructive cooperation of academics and educational institution (long-term guarantees (5 year contract), teaching load optimization, the provision of research leave for thesis writing). Another source of development of career trajectories is the internalization of relevant norms and values in the practice of interaction between the scientific and pedagogical community (horizontal links between universities, reduced competition, the formation of groups, support for young personnel).

It has been established in the focus group study, that the career strategies of a teacher of a higher education organization are formed at the intersection of three areas: a career based on the enhancement of academic degree and academic title; administrative career and merit based career. The price of each career trajectory is high, and traditionally consists of the ratio of time and money. However, the greatest effectiveness and justification of costs is achieved by intersection of two career paths (degree and merit). This is due to the devaluation of the value of the administrative resource. Within the conditions of increased bureaucratic burden on universities, involvement in the administrative hierarchy blocks the research activity of a university teacher.

References

[Abramov, 2011](#) – Abramov R.N. (2011). Menedzherializm i akademicheskaja professija: konflikt i vzaimodejstvie [Managerialism and the academic profession: conflict and interaction]. *Sociologicheskie issledovanija*, 7: 37-47. [in Russian]

[Altbach, Salmi, 2011](#) – Altbach P.G., Salmi, J. (2011). The Road to Academic Excellence: The Making of World-Class Research Universities. *World Bank Publications*, 64668.

[Bartunek et al., 2008](#) – Bartunek J., Huang Z., Walsh I. (2008). The Development of a Process Model of Collective Turnover. *Human Relations*, 61: 5-38.

[Corcoran, Goldhaber, 2013](#) – Corcoran S., Goldhaber D. (2013). Where you stand depends on where you sit: Debates over value-added and its uses. *Education Finance and Policy*, 8(3): 218-434.

[Dickinson, 2008](#) – Dickinson G. (2008). Academic tenure and the divide between legal academia and legal practice. *The Dartmouth Law Journal*, 6(3): 318-350.

[Frolova, Rogach, 2017](#) – Frolova E.V., Rogach O.V. (2017). Municipal'no-chastnoe partnerstvo v obrazovanii: infrastrukturyj aspekt [Municipal-private partnership in education: infrastructure aspect]. *Ekonomicheskie i social'nye peremeny: fakty, tendencii, prognoz*. T. 10. 1(49): 145-160. [in Russian]

[Ghezzi, Mingione, 2007](#) – Ghezzi S., Mingione E. (2007). Embeddedness, Path Dependency and Social Institutions. *Current Sociology*, 55(1): 11-23.

[Goldhaber, Walch, 2012](#) – Goldhaber D., Walch J. (2012). Strategic pay reform: A student outcomes-based evaluation of Denver's ProComp teacher pay initiative. *Economics of Education Review*, 31: 466-479.

[Hammersley, 1993](#) – Hammersley M. (1993). On the Teacher as Researcher. *Educational Action Research*, 1(3): 425-445. DOI: 10.1080/0965079930010308

[Homans, 1984](#) – Homans Dzh. (1984). Social'noe povedenie kak obmen. Sovremennaja zarubezhnaja social'naja psihologija [Social behavior as an exchange. Modern foreign social psychology]. M.: Izdatel'stvo Moskovskogo universiteta. [in Russian]

[Höhle, 2015](#) – Höhle E. (2015). From apprentice to agenda-setter: comparative analysis of the influence of contract conditions on roles in the scientific community. *Studies in Higher Education*, 40(8): 1423-1437.

[Kathryn, 2015](#) – Kathryn A. (2015). Sutherland Constructions of success in academia: an early career perspective. *Studies in Higher Education*: 1-17.

[Khalil, 2013](#) – Khalil E.L. (2013). Lock-in Institutions and Efficiency. *Journal of Economic Behavior & Organization*, 88: 27-36. DOI: 10.1016/j.jebo.2011.10.017

King, 2004 – King D.A. (2004). The scientific impact of nations. What different countries get for their research spending. *Nature*, 430: 311–316.

Kirillova, Soloshenko, 2012 – Kirillova O.V., Soloshenko N.S. (2012). Sravnitel'nyj analiz Rossii i stran Vostochnoj Evropy po publikacionnoj aktivnosti i citirovaniju [A comparative analysis of Russia and Eastern European countries publication activity and citation indexes]. *Voprosy obrazovanija*, 1: 148-175. [in Russian]

Markusova, 2008 – Markusova V.A. (2008). Publikacionnaja aktivnost' rossijskih uchenyh po BD SCI i Scopus [Publication activity of russian scientists on the databases SCI and Scopus]. *NTI*. 1(5): 21-27. [in Russian]

Mautner, 2005 – Mautner, G. (2005). The Entrepreneurial University: A Discursive Profile of a Higher Education Buzzword. *Critical Discourse Studies*, 2(2): 95-120.

Muljukin, 2012 – Muljukin O.P. (2012). Issledovanie motivom vybora nauchnoj kar'ery vo vzaimosvjazi s zadachami povysenija kachestva innovacionnoj nauchno-pedagogicheskoj dejatel'nosti rossijskih vuzov i nauchnyh organizacij [The study of the motive for choosing a scientific career in conjunction with the tasks of improving the quality of innovative scientific and pedagogical activities of russian universities and research organizations]. *Izvestija Samarskogo nauchnogo centra Rossijskoj akademii nauk*. 2(3): 564-568. [in Russian]

Must, 2006 – Must U. (2006). «New» countries in Europe – Research, development and innovation strategies vs bibliometric data. *Scientometrics*, 66(2): 241-248.

O'Flaherty, Siow, 1991 – O'Flaherty B., Siow A. (1991). Promotion lotteries. *Journal of Law, Economics & Organization*, 7(2): 401-409.

Osipjan, 2010 – Osipjan A.L. (2010). Korrupcija v poslevuzovskom obrazovanii [Corruption in postgraduate education]. *Terra ekonomika*. 8(3): 48-63. [in Russian]

Peterson, 2007 – Peterson M.R. (2007). Academic tenure and higher education in the United States: Implications for the dental education workforce in the twenty-first century. *Journal of dental education*, 71(3): 354-364.

Podgursky, Springer, 2007 – Podgursky M.J., Springer M.G. (2007). Teacher performance pay: A review. *Journal of Policy Analysis and Management*, 26(4): 909-949.

Reitz, 2017 – Reitz T. (2017). Academic hierarchies in neo-feudal capitalism: how status competition processes trust and facilitates the appropriation of knowledge. *Higher Education*. DOI: 10.1007/s10734-017-0115-3

Rogach et al., 2017 – Rogach O.V., Frolova E.V., Ryabova, T.M. (2017). Academic Competition: Rating Race. *European Journal of Contemporary Education*, 6(2): 297-307.

Rogach et al., 2016 – Rogach O.V., Frolova E.V., Kirillov A.V., Bondaletov V.V., Vinichenko M.V. (2016). Development of Favourable Learning Environment and Labor Protection in the Context of Harmonization of Social Interaction of Educational System Objects. *Iejme – mathematics education*, 11(7): 2547-2558.

Rosenbaum, 1984 – Rosenbaum J.E. (1984). Career Mobility in a Corporate Hierarchy. Orlando, Fla.: Academic Press.

Salmi, 2013 – Salmi J. (2013). The race for excellence – A marathon not a sprint. *University World News*, 254.

Song, 2008 – Song J. (2008). Tenure and asymmetric information: An analysis of an incentive institution for faculty development in research universities. *Frontiers of Education in China*, 3(2): 310-319.

Teelken, 2012 – Teelken C. (2012). Compliance or Pragmatism: How Do Academics Deal with Managerialism in Higher Education? A Comparative Study in Three Countries. *Studies in Higher Education*, 37 (3): 271-290.

Turner, 1960 – Turner R. (1960). Modes of Social Ascent Through Education: Sponsored and Contest Mobility. *American Sociological Review*, 25: 855-867.

Urpelainen, 2011 – Urpelainen J. (2011). The origins of social institutions. *Journal of Theoretical Politics*, 23(2): 215-240.

Vinkler, 2008 – Vinkler P. (2008). Correlation between the structure of scientific research, scientometric indicators and GDP in EU and non-EU countries. *Scientometrics*, 74(2): 237-254.

Vol'chik, 2013 – Vol'chik V.V. (2013). Reformirovanie rossijskoj sistemy vysshego obrazovanija: rol' mifov i institutov [The Reform of the russian system of higher education: the role of myths and institutions]. *Terra ekonomika*, 11(2): 94-103. [in Russian]

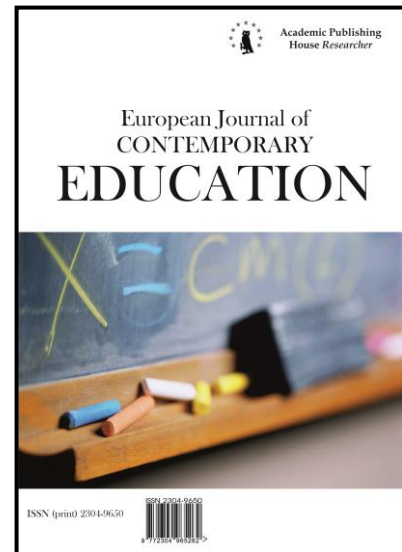
[Ylijoki, Ursin, 2013](#) – Ylijoki O.H., Ursin, J. (2013). The Construction of Academic Identity in the Changes of Finnish Higher Education. *Studies in Higher Education*, 38(8): 1135-1149.

[Zamarro et al., 2015](#) – Zamarro G., Engberg J., Saavedra J., Steele J.L. (2015). Disentangling disadvantage: Can we distinguish good teaching from classroom composition? *Journal of Research on Educational Effectiveness (Special Issue on Measuring Teacher Performance)*, 8: 84-111.



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The Role of Creativity in the Process of Competitive Teacher Training Subject to Russian Professional Standard Requirements

Alexey D. Rybkin ^{a, *}, Veronika M. Grebennikova ^a

^a Kuban State University, Russian Federation

Abstract

This article provides research results concerning the influence of creative qualities on teacher's general competitiveness level. We examined the pedagogical experiment results in strengthening teacher's competitiveness in the context of personal creative qualities development. The structure of uniquely designed creativity development program as competitiveness determinant in would be teachers was introduced. Its basic characteristics were also reviewed. Obtained data allowed to confirm the role of creativity as competitiveness determinant in would be teachers. Objective measuring tools made it possible to observe positive changes in experimental group in the context of increased competitiveness level as a result of influence on a person's creative qualities.

The results confirm the correct choice of competitiveness components and formation model of the quality under discussion in pedagogical process, which was carried out in creativity formation program as competitiveness determinant in would be teachers and the process of its implementation.

Keywords: educational standards, competences, teacher's professional standard, competitiveness, creativity, development program.

1. Introduction

More than 20 years ago there was a transition to market-oriented economy in Russia, which changed the existing structure of goals and tasks in education system. Thus, training of creative and critically thinking graduate students motivated to express creativity and innovation activity ([The Federal State Educational Standard...](#)) was offered as an example of one of the basic goals in secondary general education. Furthermore, this kind of personality can be trained only by a highly qualified and competitively active teacher possessing developed creative abilities, divergent

* Corresponding author

E-mail addresses: aleksrybk@yandex.ru (A.D. Rybkin), vmgrebennikova@mail.ru (V.M. Grebennikova)

thinking, and other personal qualities, which allow him or her to carry out professional activity successfully under present conditions.

This reformation process also affected regulatory environment of the education system. Basic principles of the Russian Federation state policy concerning education were put forward in the Federal Law no. 273-FZ “About education in the Russian Federation” ([The federal law..., 2012](#)). In the context of market-oriented transformations possibility to provide commercial educational services is one of the most significant points in this Law. In connection with this fact, educational sector can be regarded as one of the industry segments in Russian economy, which means that such economic features as competitiveness can be also applied to teachers and their pedagogical activity.

Critical changes in regulatory environment of the education system in Russia are also connected with introduction of new professional standard, namely “Educator (pedagogical activity in the sphere of pre-school, elementary general, compulsory, and secondary general education) (schoolmaster, teacher)” ([Professional standard...](#)). This standard’s content is both a characteristics of the teacher’s required qualification for carrying out professional activity and a ground for designing materials, which allow to estimate the quality of educational services provision. It is obvious that professional standard will primarily define teacher’s competitiveness.

Thus, the goal of this research is formation of competitive pedagogical staff possessing developed creative abilities with due regard to new professional standard requirements.

2. Materials and methods

In the process of studying creativity and competitiveness phenomena ([Grebennikova, Rybkin, 2017](#)) it was discovered that these integrative qualities have a number of common elements such as flexibility (of thinking), readiness to risk, eccentricity and independence of thinking, operational thinking, intellectual abilities, and mind-set. On this ground the conclusion about the given qualities correlation was made. Such discovered interrelation provides possibility to form teachers’ competitiveness in the process of their creative qualities development.

The next step featured detailed studying of “Educator (pedagogical activity in the sphere of pre-school, elementary general, compulsory, and secondary general education) (schoolmaster, teacher)” professional standard content ([Professional standard...](#)) and Federal State Educational standards of the Russian Federation higher education in the following educational programs: 44.03.01 Pedagogical education (bachelor degree) ([The order of Ministry of Education..., 2015](#)), 44.03.05 Pedagogical education (with two majors) (bachelor degree) ([The order of Ministry of Education..., 2016](#)), 44.04.01 Pedagogical education (master’s degree) ([The order of Ministry of Education..., 2014](#)) The goal of the given research was interrelation analysis of teacher’s competitiveness and creativity elements with a number of competences specified in the Federal State Educational Standards ([The order of Ministry of Education..., 2015](#); [The order of Ministry of Education..., 2016](#); [The order of Ministry of Education..., 2014](#)) labor activity, and necessary skills mentioned in the Federal Educational Standard ([Professional standard...](#)). The result of this analysis was theoretical substantiation of correlation between creativity and competitiveness elements development and formation of competences necessary for teachers, and as a consequence, successful carrying out of work in future.

Creativity development program as competitiveness determinant in would be teachers was developed on the basis of research results. A wide range of creativity formation and development methods and strategies was used in the program. They are heuristic approach ([Khutorsky, 1999](#); [Khutorsky, 2001](#)), methods of creative search, decision making, information presentation, goal-setting business technologies, analysis and solutions searching in problem situations.

FSBEI of Higher Education “Kuban State University” was used as experimental facilities for program introduction and quality estimation. Students who entered this university in 2016 to study at bachelor degree departments on educational programs 44.03.01, 44.03.02, and 44.03.05 participated in this experiment. A number of these students formed both experimental group, in which studies specified by the program were carried out, and control group, in which no such studies occurred. Experimental group consisted of bachelor degree students trained according to educational program 44.03.05 Pedagogical education (with two majors) – Economics, Law. Control group included students following pedagogical training programs but different specializations such as primary, pre-school education; history, law education; engineering

education, economic education; mathematics, informational technologies; physical education; philological education; psychological and pedagogical education.

The creativity development program as competitiveness determinant in would be teachers wasn't singled out as a separate discipline. It was integrated into already existing disciplines specified in basic and variable parts of the main educational bachelor degree program 44.03.05 Pedagogical education (with two majors) – Economics, Law. These disciplines include “Educational economics”, “World economics”, “Economic and financial education practical course”, “Business and entrepreneurship”, “Economics and Law teaching method”, “Family economics”, “Practical course on professional problem solving”, “Practical course on business problems solving”, “History”. Such variety of disciplines allowed to reach maximum coverage of competences formed during educational process and made it possible to ensure integral effect of the program on examinees.

The program content was developed on the basis of topics included into the chosen disciplines, which allowed to reach full potential of the studies forms and methods used for forming creativity and competitiveness. Within the framework of “Economic education” program some tasks were carried out in the form of interactivity combined with method of brainstorm and “635” method. Tasks featuring method of frames, methods of block table and construction of structurally logical schemes were used in the “World economics” discipline. Method of cinquain creation and case method were used for tasks within “Economic and financial education practical course” unit. Mind-mapping and “headstand” techniques were used for “Business and entrepreneurship” unit. Case method, SMART goals business technologies and “SWOT” analysis as well as “Cluster” critical thinking development technology were put in use for tasks within “Economics and Law teaching method” unit. Tasks involving case method, method of frames, method of block table and construction of structurally logical schemes, empathy method, method of client benefit matrix designing were used for “Family economics” unit. On the basis of “Practical course on professional problem solving” materials tasks involving case method were created. Students were offered to solve problems with the help of “Cluster” critical thinking development technology and morphological box method within the framework of “Practical course on business problems solving” program. Tasks prepared on the basis of such heuristic methods as symbolic vision, hypothesis, and “If...” methods were used for “History” unit.

Studies were held in 2017/2018 and 2018/2019 academic years with due regard to course schedule of disciplines involved in experimental program.

In order to estimate the effectiveness of creativity development program as competitiveness determinant in would be teachers we designed a measuring tool called “Competitiveness diagnosing test for would be teachers” (Grebennikova et al., 2017). Materials proving validity of this tool can be found at (Rybkin, 2018).

The program effectiveness estimation was carried out during monitoring of general competitiveness level development. 300 students participated in monitoring, 150 of which were part of experimental group, while 150 people belonged to control group.

Measurements were performed within the framework of the theory of latent variables measurement based on the Rasch model (Rasch, 1960). Monitoring was carried out in two steps. The first step included estimation of initial competitiveness level in both control and experimental groups before the program implementation. The second step of the research occurred after the program implementation.

Data of the monitoring was transformed to linear measures with a Rasch model for rating scales, which computes a log-odds transformation of indicators and objects, then computes differences between indicators and objects also guided by the one-parameter logistic function to establish a common dimension (Wright, Masters, 1982). A simple mathematical model is implemented for this transformation:

$$\Pi_{nix} = \frac{\exp \sum_{j=0}^x [\beta_n - (\delta_i + \tau_j)]}{\sum_{k=0}^m \exp \sum_{j=0}^k [\beta_n - (\delta_i + \tau_j)]}$$

Where β_n = object’s location parameter on the competitiveness latent trait,
 δ_i = indicator location parameter on the latent trait, and
 τ = rating scale thresholds.

Π_{nix} is the probability that any indicator δ_i will be coded X for any object β_n where X takes a value from a fixed range ($j = 0, 1, 2, 3, 4$), m = number of steps for an indicator, and $k = i_{th}$ step. The conformability of raw data to mathematical expectations was assessed with a Chi-square derived fit analysis of indicator and institutions residuals (Wright, Masters, 1982). Logit is used as a measurement unit within the framework of the theory of latent variables measurement. Logits can be converted into another scale if required.

3. Results

In early stage of monitoring we made an estimation of measuring material quality we used (Competitiveness diagnosing test for would be teachers) on the basis of chi-square criterion. It was discovered that empirical level of chi-square statistics significance for a set of indicators in this questionnaire exceeds the nominal value of 0,05 and equals 0,324. These measurement results make it possible to illustrate the indicators compatibility (the questionnaire items), which means that this tool is valid for measuring such latent variable as competitiveness.

According to the set of objectives in our research we single out the following factors under inquiry:

- Factor A – period of research, which varies at two levels (before the experiment implementation and after its implementation);
- Factor B – group, which varies at two levels (experimental and control groups).

Students’ competitiveness in this research is the yield (output variable).

Considering that the factors mentioned above are qualitative, we used analysis of variance for processing results acquired during the experiment. Results of multifactor ANOVA for competitiveness level in would be teachers depending on factors under consideration are presented in Table 1.

Table 1. Analysis of variance for competitiveness level in would be teachers depending on the program effect

Source of variation	Sum of squares	Degrees of freedom	Mean sum of squares	F	Sig. (p)
Factor A	0,478	1	0,478	4,27	0,04
Factor B	0,834	1	0,834	7,453	0,007
Interaction AB	0,853	1	0,853	7,63	0,006
Error	62,384	597	0,112		
Total	64,549	600			

Analysis data shown in Table 1 indicate that all sources of variation were statistically significant. This can be seen from the empirical significance level (Factor A – 0.04, Factor B – 0.007, Interaction AB – 0.006).

This being said, Factors AB interaction is the item of utmost interest in the context of our research goals. This interaction reflects the program impact on competitiveness development in experimental group and illustrates dynamics of this quality development in control group. Other sources of variance (Factor A, Factor B) provide the mean sample indexes. In this connection they are not examined in detail in our research.

In order to determine positive and negative dynamics of competitiveness development in control and experimental groups we should consider results obtained from analysis of variance of interaction between Factor A (period of research) and Factor B (group). The respective data can be found in [Table 2](#).

Table 2. The mean value of students' competitiveness depending on the research period and group

Factor A (Measure period)	Factor B (group)	Level of competitiveness (logits)	Standard error (logits)	95 % confidence interval	
				Low boundary	Upper boundary
Before program implementation	control	0,422	0,033	0,358	0,486
	experimental	0,421	0,078	0,268	0,573
After program implementation	control	0,384	0,032	0,321	0,446
	experimental	0,688	0,069	0,551	0,824

Data shown in [Table 2](#) make it possible to come to the following conclusions:

- before program implementation approximately equal level of competitiveness was seen both in control and experimental group (0,422 logits in control group and 0,421 logits in experimental group);
- measurement carried out after program implementation made it possible to discover significant growth (over 63 %) of competitiveness level in experimental group, going up from 0,421 to 0,688 logits;
- a slight reduce in development level of the quality under research occurred in control group.

Dynamics of creativity development in control and experimental groups is graphically shown in [Figure 1](#).

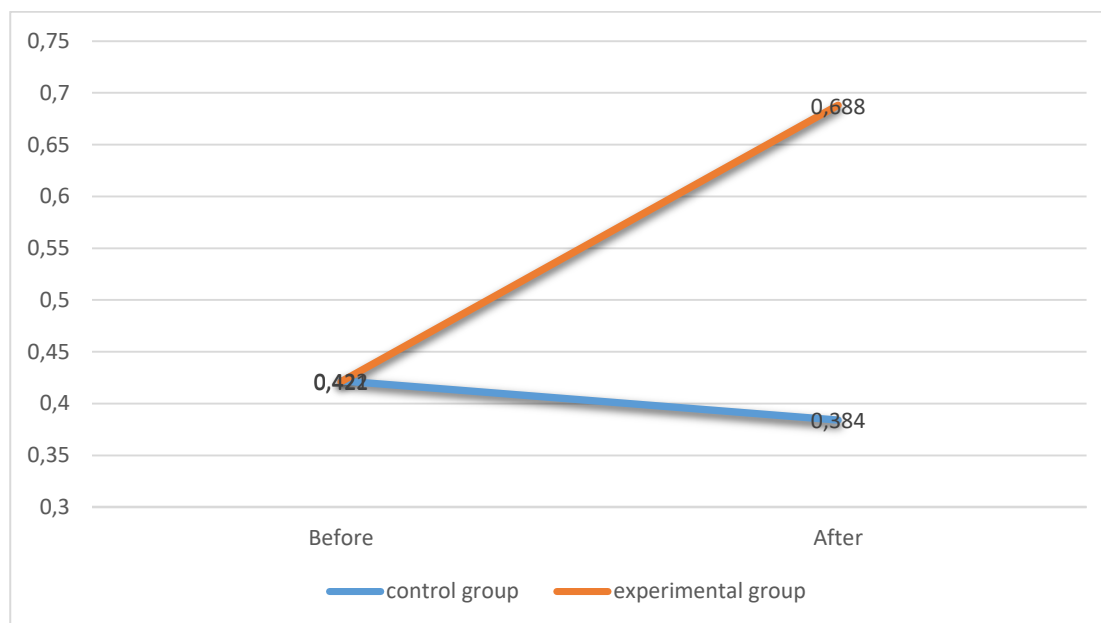


Fig. 1. Program effect

The graph on [Figure 1](#) clearly illustrates positive effect of the program on general level of competitiveness in would be teachers. Provided data make it possible to come to conclusion about effectiveness of creativity development program as competitiveness determinant in would be teachers.

4. Discussion

Despite a considerable number of theoretical studies in the context of teachers' creativity and competitiveness development, nowadays creation of programs for these qualities development is still a crucial task both in Russia and abroad.

Taking into consideration the role of a teacher in the process of creativity formation among students Afzal Sadat Hosseini (Iran) created a 70 hours' program for developing creativity in Iranian teachers. The program included theoretical and practical sections. Within the framework of theoretical section teachers were familiarized with the notion of creativity, its basic characteristics, and its development methods. Practical section included using acquired knowledge by teachers at their classes (Afzal Sadat Hosseini, 2014).

Scientific group headed by Sakipzhamal Uzakbaeva (Sakipzhamal Uzakbaeva, B. Baimukhanbetov, K. Berkimbaev, B. Mukhamedzhanov, R. Praliev) created a methodology of creative competence development in would be teachers for providing more effective professional training of teachers in Kazakhstan (Uzakbaeva et al., 2013).

In Russia T.G. Kiselyova and M.L. Zueva introduced the model of creative competence development in teachers in the context of continuing education system. They regarded ability to produce effective uniquely designed tools for achieving results in education as the highest level of a teacher's creative competence, so the authors of the model suggest to form this quality during positive teaching experience exchange, advances studies, and research activity (Kashapova et al., 2013).

D.N. Sergeeva suggested a program of teachers' creativity development in the process of conflicts resolution. The program consists of psychological studies carried out with the use of different forms and methods of work with teachers. The advantage of the program is in its positive effect not only on teachers' creativity but also on a group of teachers' personal and behavioral peculiarities such as tact, conflict tolerance etc. (Sergeeva, 2016).

"Competition science" professional training program of elected course for would be teachers created by E. V. Evplova is also of great interest. The course consists of 4 modules covering basic definitions and conceptual fundamentals of competitiveness in a would be teacher, motivation for professional pedagogical activity, competitive teacher's activity peculiarities, and usage of social-psychological interaction methods by teachers. The author suggests using various active and interactive methods of teaching for carrying out lessons within the framework of the course (Evplova, 2013).

Despite similarity between the programs mentioned above the program of creativity formation as a competitiveness determinant in would be teachers described in the article has a number of significant distinctions. The program allows to develop a set of a teacher's personal qualities being the elements of both his or her creativity and competitiveness, while the primary goal of Afzal Sadat Hosseini (Afzal Sadat Hosseini, 2014), Sakipzhamal Uzakbaeva, B. Baimukhanbetov, K. Berkimbaev, B. Mukhamedzhanov, R. Praliev (Uzakbaeva et al., 2013), T.G. Kiselyova, M.L. Zueva (Kashapova et al., 2013), D.N. Sergeeva (Sergeeva, 2016) programs is development of teachers' personal creative qualities. In "Competition science" elective course program E.V. Evplova (Evplova, 2013) specifies possibility to form and develop both creativity and competitiveness in teachers, meanwhile creative qualities development in the context of the course is regarded as one of the steps for competitiveness development in teachers, while development of these qualities within the program of creativity formation as a competitiveness determinant in would be teachers is viewed as a continuous process. Moreover, all the programs mentioned above should be grouped as a separate subject unlike the uniquely designed program of creativity formation as a competitiveness determinant in would be teachers, within the framework of which integration with subjects provided by the curriculum is suggested. The given program model has proved its effectiveness before in secondary school conditions. Materials testifying this can be found at (Rybkin, 2015; Maslak, Rybkin, 2015; Maslak et al., 2015; Maslak, Rybkin, 2015b; Rybkin, Maslak, 2016; Maslak, Rybkin, 2016; Mahova, Rybkin, 2016).

Major advantages of such program implementation model are as follows:

- absence of necessity to single out the program materials into a separate discipline, which is a significant advantage in conditions of limited study hours;
- educational process intensification doesn't lead to significant increase in classwork activity for students because study hours are not increased;

- it forms a complete image of profession they master through discovering disciplinary connection;
- it allows to produce the model of problem tasks solving using their creative potential, which will further make it possible to solve professional and study tasks with less efforts.

As for the introduced creativity development program as competitiveness determinant in would be teachers, its high flexibility can be viewed as one of its major advantages. In the context of competitiveness formation among pedagogical universities graduates the offered program structure allows to adjust it for any specialization. Necessary result can be achieved by selecting the scope of disciplines from curriculum and adding structural elements if needed. Reaching maximum coverage of competences as well as creativity and competitiveness quality components connected with them can be viewed as the program adaptation validity criterion. However, according to experimental data, even the current version of the program allows to achieve positive results. In conjunction with offered measuring tools the process of competitiveness formation and development can be made more controllable, which can be achieved by means of timely provided corrections in educational process depending on monitoring results.

The research limits are related to the fact that the sample volume is not large enough and the rates' field of study is pedagogics only. The sample volume was conditioned by possibilities of experimental facilities. In order to make the measurement more accurate it is advisable to include students studying within similar fields and programs of other educational establishments in experiment.

5. Conclusion

Materials provided in this article confirm the effectiveness of creativity development program as competitiveness determinant in would be teachers and testify opinions about the role of creativity as competitiveness determinant in would be teacher. This conclusion is based on increased competitiveness level discovered with the help of objective measuring means in the process of influencing students' creative qualities in experimental group and decreased level in control group, where creativity development was not viewed as a primary objective.

This determined and statistically significant positive dynamics of competitiveness development (63 %) in experimental group testifies correct choice of competitiveness components and the model of this quality formation in pedagogical process, which was successfully integrated into creativity development program as competitiveness determinant in would be teachers in the course of its implementation.

The research materials can be used in the process of competitiveness formation and creative abilities development in teachers, as well as in creation of disciplines educational programs and valid measuring tools.

References

Afzal Sadat Hosseini, 2014 – Afzal Sadat Hosseini (2014). The Effect of Creativity Model for Creativity Development in Teachers. *International Journal of Information and Education Technology*, 4(2): 138-142.

Evplova, 2013 – Evplova, E.V. (2013) Pedagogicheskie usloviya formirovaniya konkurentosposobnosti buduschih pedagogov professional'nogo obucheniya [Pedagogical conditions of formation of competitiveness of future teachers training]. *Kontsept*, 5: 21. [Electronic resource]. URL: <https://cyberleninka.ru/article/n/pedagogicheskie-usloviya-formirovaniya-konkurentosposobnosti-buduschih-pedagogov-professionalnogo-obucheniya> [in Russian]

Grebennikova et al., 2017 – Grebennikova, V.M., Maslak, A.A., Rybkin, A.D. (2017). Aprobirvanie oprosnika dlya izmereniya konkurentosposobnosti buduschih pedagogov [Approbation of questionnaire for measuring competitiveness in would be teachers]. Teoriya i praktika izmereniya i monitoringa kompetentsyi i drugih latentnyh peremennyh v obrazovanii: materials of XXV all Russian research and practice conference (Slavyansk-on-Kuban, June 09-10). Edited by Maslak A.A., Pozdnyakov S.A., Osipova S.A., Anisimova T.S. Slavyansk-on-Kuban: the branch of Kuban State University in Slavyansk-on-Kuban, 138 p [in Russian]

Grebennikova, Rybkin, 2017 – Grebennikova, V.M., Rybkin, A.D. (2017). Analiz suschnostnyh karakteristik fenomena "konkurentosposobnost" v aspekte podgotovki sovremennogo pedagoga [Analysis of essential characteristics of phenomenon «competitiveness»

in the aspect of preparing a contemporary teacher]. *Istoricheskaya i sotsial'no-obrazovatel'naya mysl'*, 9(5/2): 178-183. DOI: 10.17748/2075-9908-2017-9-5/2-178-183 [in Russian]

Kashapova et al., 2013 – *Kashapova, M.M., Kiselyova, T.G., Ogorodova, T.V.* (Ed.) (2013). Kreativnost' kak klyuchevaya kompetentnost' pedagoga [Creativity as a key competence of a teacher]. Yaroslavl, Indigo, 392 p. [in Russian]

Khutorsky, 1999 – *Khutorsky, A.V.* (1999). Metody` e`vristical'nogo obucheniya [Heuristic learning methods]. *Shkol'ny`e Tekhnologii*, 1-2: 233-244. [in Russian]

Khutorsky, 2001 – *Khutorsky, A.V.* (2001). Kak obuchit' tvorchestvu? [How to teach creativity?]. *Dopolnitel'noe obrazovanie*, 1: 4-10. [in Russian]

Mahova, Rybkin, 2016 – *Mahova, A.V., Rybkin, A.D.* (2016). Programma razvitiya kreativnosti lichnosti uchastshih v ramkah distsipliny "Istoriya drevnego mira" [Program of development creativity of personality in discipline «Ancient world history»]. *Istoricheskaya i sotsial'no-obrazovatel'naya mysl'*, Vol. 8(5/1): 202-207. DOI:10.17748/2075-9908-2016-8-5/1-202-207 [in Russian]

Maslak et al., 2015 – *Maslak, A.A., Rybkin, A.D., Anisimova, T.S., Pozdniakov, S.A.* (2015). Monitoring of pupils' imagination within the framework of creativity formation program. *Mediterranean Journal of Social Sciences*, 6(6), Supplement 5, Special edition, pp. 234-241.

Maslak, Rybkin, 2015 – *Maslak, A.A., Rybkin, A.D.* (2015). Monitoring lyuboznatel'nosti shkol'nikov v ramkah programmy formirovaniya kreativnykh kachestv [Pupils' curiosity monitoring within the framework of creative qualities formation program]. *Pedagogicheskoe obrazovanie v Rossii*, 10: 253-261. [in Russian]

Maslak, Rybkin, 2015b – *Maslak, A.A., Rybkin, A.D.* (2015). Monitoring of pupils' propensity to risk within the framework of creativity formation program. *Global Science and Innovation. Materials of the VI international scientific conference*, Vol. I, November 18-19, Chicago, USA. pp. 198-208.

Maslak, Rybkin, 2016 – *Maslak, A.A., Rybkin, A.D.* (2016). Monitoring interesa shkol'nikov k resheniyu slozhnykh zadach v ramkah programmy formirovaniya kreativnykh kachestv [Monitoring of pupils' interest towards complex tasks solving within the framework of creative qualities formation program]. *Sovremennye naukoymkie tehnologii*, No 4 (part 1): 41-45 [in Russian]

Professional standard... – Professional standard "Educator (pedagogical activity in the sphere of pre-school, elementary general, compulsory, and secondary general education) (schoolmaster, teacher)". [Electronic resource]. URL: <http://www.consultant.ru/law/hotdocs/30085.html/>

Rasch, 1960 – *Rasch, G.* (1960). Probabilistic models for some intelligence and attainment tests. Copenhagen: Danish Institute for Educational Research (Expanded edition, 1980. Chicago: University of Chicago Press).

Rybkin, 2015 – *Rybkin, A. D.* (2015). Osobennosti primeneniya metodov razvitiya kreativnykh sposobnostey lichnosti na urokah istorii v sredney shkole [Technique of pupils' creativity development at lessons of history in high school]. *Innovacionnaya nauka*, 8.1. [in Russian]

Rybkin, 2018 – *Rybkin, A.D.* (2018). Analiz kachestva oprosnika dlya izmereniya na lineynoy shkale konkurentosposobnosti buduschih pedagogov [Analysis of quality of questionnaire for measurement on linear scale of competitiveness of future pedagogues]. *Alma mater (Vestnik vysshey shkoly)*, 2: 77-81. DOI: 10.20339/AM.02-18.077 [in Russian]

Rybkin, Maslak, 2016 – *Rybkin, A.D., Maslak, A.A.* (2016). Formirovanie i monitoring kreativnykh sposobnostey shkol'nikov [Formation and monitoring of pupils' creative abilities]. *Kontsept, Spetsvyпуск 03, ART 76043*. [Electronic resource]. URL: <http://e-koncept.ru/2016/76043.htm> [in Russian]

Sergeeva, 2016 – *Sergeeva, D.N.* (2016). Razvitie kreativnosti pedagogov v protsesse razresheniya konfliktov [Development of educational specialist's creativity in the process of conflict resolution]. *Obrazovanie i nauka*, no. 5, p. 134. [Electronic resource]. URL: <https://cyberleninka.ru/article/n/razvitie-kreativnosti-pedagogov-v-protsesse-razresheniya-konfliktov> [in Russian]

The federal law..., 2012 – The federal law of the Russian Federation of December 29, 2012 no. 273-FZ "About education in the Russian Federation". [Electronic resource]. URL: <http://base.garant.ru/70291362/4c3e49295da6f4511a0f5d18289c6432/>

[The Federal State Educational Standard...](https://base.garant.ru/70188902/8ef641d3b80ff01d34be16ce9bafc6e0/) – The Federal State Educational Standard of secondary general education [Electronic resource]. URL: <https://base.garant.ru/70188902/8ef641d3b80ff01d34be16ce9bafc6e0/>

[The order of Ministry of Education..., 2014](http://base.garant.ru/70836032/) – The order of Ministry of Education and Science in the Russian Federation of November 21, 2014 no. 1505 “About approving of the Federal State Educational Standard of higher education in educational program 44.04.01 Pedagogical education (master’s degree)”. [Electronic resource]. URL: <http://base.garant.ru/70836032/>

[The order of Ministry of Education..., 2015](http://www.consultant.ru/cons/cgi/online.cgi?req=doc&base=LAW&n=192459&fld=134&dst=100011,0&rnd=0.4025152054868848#05387288025174886) – The order of Ministry of Education and Science in the Russian Federation of December 4, 2015 no. 1426 “About approving of the Federal State Educational Standard of higher education in educational program 44.03.01 Pedagogical education (bachelor degree)” (Registered in the Justice Ministry of Russia of January 11, 2016 no. 40536). [Electronic resource]. URL: <http://www.consultant.ru/cons/cgi/online.cgi?req=doc&base=LAW&n=192459&fld=134&dst=100011,0&rnd=0.4025152054868848#05387288025174886>

[The order of Ministry of Education..., 2016](http://www.garant.ru/products/ipo/prime/doc/71245782/#ixzz5bqrRDsaT) – The order of Ministry of Education and Science in the Russian Federation of February 9, 2016 no. 91 “About approving of the Federal State Educational Standard of higher education in educational program 44.03.05 Pedagogical education (with two majors) (bachelor degree)”. [Electronic resource]. URL: <http://www.garant.ru/products/ipo/prime/doc/71245782/#ixzz5bqrRDsaT>

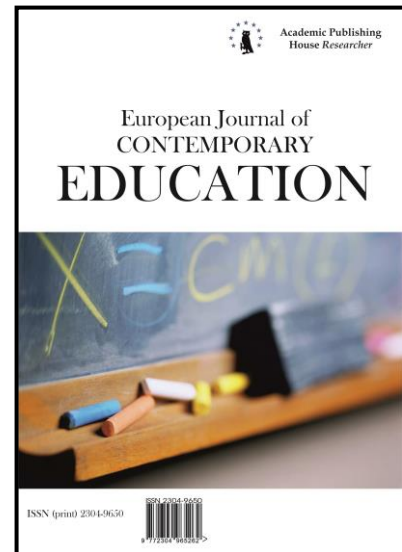
[Uzakbaeva et al., 2013](#) – *Uzakbaeva, S., Baimukhanbetov, B., Berkimbaev, K., Mukhamedzhanov, B., Pralieva, R.* (2013). To the Problem of Forming Creative Competence of Future Teachers. *Creative Education*, 4: 34-240. DOI:10.4236/ce.2013.43034

[Wright, Masters, 1982](#) – *Wright, B.D., Masters, G.N.* (1982). Rating Scale Analysis. Chicago: MESA Press.



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Formation of Cognitive Motivation in Junior School Age Children in Institutions of Supplementary Education

Maria M. Susloparova ^a, Larisa N. Ponomarenko ^{a,*}, Andrey N. Kibishev ^a, Irina V. Romanova ^a

^aVyatka State University, Kirov, Russian Federation

Abstract

The article presents conceptual ideas, experience and results of the formation of cognitive motivation in junior-school age group children in extracurricular activities institutions. Such ideas include the junior school-age children motivation's structure, characteristics, basic pedagogical conditions, educational contents, and the criteria of the cognitive motivation's formation. Novelty of the presented research is in defining the realization mechanism of pedagogical conditions for the formation of cognitive motivation in children of junior school age at institutions of supplementary education. The mechanism is based on equal relations and participation of children, parents and the pedagogue, it includes three interlocked stages: motivational-stimulating, substantive, and reflexive-evaluative. In the course of research, conventional theoretical methods as well empirical methods were used, the preferred one of which was a pedagogical experiment. The authors explored the specifics of the formation of cognitive motivation in junior school age children in institutions of supplementary education. The results of the study proved the effectiveness of the proposed concept of the formation of cognitive motivation in junior students. Finally, it was concluded that the proposed concept is feasible and promising. The developed and experimentally tested pedagogical conditions for the formation of cognitive motivation in junior school age children can be widely used in institutions of supplementary education.

Keywords: junior-school age children, cognitive motivation, pedagogical conditions, institutions of supplementary education.

1. Introduction

Today, no one needs to be convinced that teaching a foreign language to junior-school age children is an acknowledgment of an objectively existing social interest in learning foreign

* Corresponding author

E-mail addresses: vsu_pon-ko@mail.ru (L.N. Ponomarenko), maria_m_s@inbox.ru (M.M. Susloparova), akibi@mail.ru (A.N. Kibishev), ivromanova2013@rambler.ru (I.V. Romanova)

languages and confirming the importance of the subject for the implementation of promising tasks of diversified personality development.

In this regard, the subject Foreign Language, which introduces the child to humanitarian knowledge and foreign language culture, gradually enters the life of junior students from the second grade of secondary school. The studies of L.S. Vygotsky, A.A. Leont'yev (Leont'yev, 1985), A. Gesell, E. Lenneberg, E. Oxar, V. Penfield, L. Roberts and practice show that children at this age learn the language more easily than older students. At the same time, the psychological and pedagogical analysis of teaching a foreign language in primary school indicates that there is a problem of retaining the initial interest in the language and the formation of a stable cognitive motivation for this subject. The emergence of this problem is primarily associated with a small number of study hours allocated to this subject and the lack of specific recommendations on the formation of cognitive motivation for a foreign language in modern junior students.

Therefore, realizing the importance and necessity of learning a foreign language and the formation of sustainable motivation of younger students to a foreign language, parents see the need of their children for additional and effective classes in this subject. In connection with the problem that has arisen, parents turn to institutions of supplementary education, whose significance both for a person and the society on the whole has been growing lately.

In supplementary education institutions, the child's cognitive motivation acquires new stimuli for its development due to the variety of content, activity forms, and communication. State requirements on supplementary education are aimed at designing educational programs as a means of developing the child's cognitive motivation, abilities, formation of his/her personal culture, his/her introduction to universal human values in the process of joint activities with peers and adults alike.

2. Materials and methods

The aim of the study was to develop, substantiate and test the pedagogical conditions for the cognitive motivation formation in junior-school age children in institutions of supplementary education. The study addressed the following tasks: to identify the specifics of the cognitive motivation formation in junior-school age children in institutions of supplementary education; to develop and substantiate the pedagogical conditions for the cognitive motivation formation in junior-school age children in institutions of supplementary education; to test these pedagogical conditions for the cognitive motivation formation in junior-school age children.

To achieve the set objectives, the following research methods were used: theoretical analysis of philosophical, psychological, pedagogical and methodical literature on the research problem; survey-diagnostic and ascertaining methods (conducting polls, testing, interviewing, and observation); ascertaining and formative experiments; methods of statistical processing of the research results.

The experimental research study was conducted at Private Educational Institution (PEI) *The Social and Psychological Assistance Center for Children, Teenagers and Youths (Ulybka (Smile) and Mashen'ka children's studios)* in the city of Kirov, Russia. 60 children of junior-school age took part in the experiment: 30 – in the experimental groups, 30 – in the control ones. The study was conducted from 2003 through 2006 and included three stages.

At the first stage (2003–2004), a theoretical analysis of psychological, pedagogical and methodical literature on the research topic was carried out. At this stage, the object, subject, purpose, tasks and the working hypothesis of the research were determined, the ascertaining experiment was conducted. At the second stage (2004–2006), the organization and conduct of experimental work on the implementation of pedagogical conditions for the cognitive motivation formation in children of junior-school age institutions of supplementary education were carried out. At the third stage (April 2006 – October 2006), analysis, synthesis and systematization of the research results, statistical processing of the results of the experimental work were carried out.

Scholars studied the problem of motivation formation from various viewpoints: psychological (B.G. Ananiev (Ananiev, 1980), V.G. Aseyev, L.I. Bozhovich, V.K. Vilyunas (Vilyunas, 1990), I.A. Zimnyaya (Zimnyaya, 2004), Ye.P. Il'in, V.I. Kovalev (Kovalev, 1988), M.Sh. Magomed-Eminov, A.K. Markova, V.S. Merlin, P.V. Simonov, D.N. Uznadze, A.A. Fayzullayev, P.M. Yakobson (Yakobson, 1969) et al.); unity of mind and act (L.S. Vygotskiy (Vygotskiy, 1991), P.Ya. Gal'perin, A.N. Leont'yev (Leont'yev, 1975), S.L. Rubinshteyn et al.); theory of holistic process of personality

formation (M.A. Danilov (Danilov, 1960), A.A. Kirsanov et al.); from the pedagogical viewpoint, as one of the paramount factors affecting the efficiency of the educational process (Yu.K. Babanskiy (Babanskiy, 1985), A.S. Belkin, O.S. Grebenyuk, V.S. Danyushenkov (Danyushenkov, 1994), A.K. Dusavitskiy, N.G. Morozova, V.V. Repkin, G.I. Shchukina (Shchukina, 1979) et al.)

Analysis of psychological and pedagogical research works showed that the formation of a personality, i.e. its ability to form educational activity, the incentive to learn, the need for its own self-change began at the junior-school age. According to many researchers, at this very age restructuring of the emotional-motivational aspect occurs, it becomes more complex, there are also changes in the hierarchy of motives (L.I. Bozhovich (Bozhovich, 1986), A.K. Dusavitskiy (Dusavitskiy, 1978), M.V. Matyukhina (Matyukhina 1984) B.B. Elkonin (Elkonin, 1974).

Formation of learning motives in general and cognitive motivation in particular, in children junior school age is one of the most important tasks of learning. On the one hand, junior school age children are characterized by a low level of cognitive motivation, on the other hand, this age is sensitive for the formation of this motivation, since it is during this period that at this very age restructuring of the emotional-motivational aspect occurs, it becomes more complex, there are also changes in the hierarchy of motives. Moreover, the motivational sphere of junior school age children, due to its dynamism, presents great opportunities for the formation of their cognitive motivation, so necessary for effective learning.

We have studied the structure of cognitive motivation in children of junior school age, which structure we view as a set of processes that are significant for the personality of the junior student. One can define the following components of the cognitive motivational structure of junior school age children: incentive, activity-related, and emotional-evaluative.

The incentive component focuses on the object, on a certain activity and is responsible for the successful action, for the transformation of a given action into a personal, meaningful and creating a positive attitude act, where the behavior required of the child is connected with his inner motives and values. The activity-related component makes it possible to determine the degree of activity of the junior school age child in his actions and his attitude to the content, nature and activity methods. The emotional and evaluative component reflects child's emotional experiences related to the performed activities and his own attitude towards his actions.

Analyzing the cognitive motivation structure of junior school age children, we determine its criteria and formation levels. To evaluate the completeness of cognitive motivation formation in junior school age children we consider the following criteria: the cognitive need, cognitive interest, the prevailing activity motive, personal significance, the prevailing activity nature, intellectual activity, emotions, and reflection.

Based on the research done by A.K. Markova (Markova, 1990), G.I. Shchukina (Shchukina, 1971), T.I. Shamova (Shamova, 1982), we relate the levels in the completeness of cognitive motivation formation in junior school age children to their attitude towards learning activity: the first level – neutral (passive) motivation, the second level – positive situational motivation, the third level – positive stable motivation, the fourth level – positive transforming motivation, the fifth level – personal creative motivation (Table 1).

Table 1. Characteristics of the levels and criteria of the completeness of the cognitive motivation formation in junior school age children

Criteria	Levels				
	1	2	3	4	5
Cognitive need	Absence of or a slight need for new impressions	The need for new experiences, attractive practical activities	The need for new knowledge, practical activities, there is a need for mental activity	The need for intellectual activity in mental act	The need for creativity, research activities, self-improvement

Cognitive interest	Situational curiosity rarely occurs and is short-lived	Situational interest, curiosity about the entertaining activity, Not requiring a lot of effort, in most cases game forms	Situational cognitive interest, curiosity, not only about the game forms, but also about more complex, effortful forms; there is interest in new facts	Sustained cognitive interest in various areas of knowledge, in content and methods of activity	Sustained cognitive interest in the content and methods of activity, in creativity, in self-education
Prevailing motive	Unsustainable narrowly social learning motives, the prevailing motives are those of avoiding problems, punishment	Situational narrowly social known learning motives, related to the superficial outward result, the prevailing motives are such as how to earn the teacher's praise, or that of parent, how to be better than the peers	Relatively sustainable cognitive motives, the desire to learn new things.	Sustainable developed activity-related cognitive motives, the prevailing motive is to learn new things in classes, to overcome difficulties	Sustainable developed activity-related cognitive motives, the prevailing motives are those of self-improvement and self-development
Personal significance	Absence of personal significance awareness, as the student doesn't understand the reason for learning a foreign language	Awareness of personal significance in the study of academic subjects correlates with the desire to get good grades, praise.	Personal significance begins to acquire a conscious character and is associated with the opportunity to take part in interesting practical activities.	Personal significance is of conscious nature and associated with the opportunity to acquire the skills and abilities that are necessary for successful activity now and in the future.	The personal significance in a certain activity, related to the possibility of expressing oneself, of self-improvement is clearly understood.
Prevailing nature of activity	Passivity in the performed activities; difficulty in performing activity by example	Handling activity based on templates and examples; when faced with difficulties, there is no desire to overcome them independently; in attractive activities there is a desire to step aside from the example	The ability to perform tasks without a pattern or example, with modified conditions; facing difficult tasks there's explicit readiness to perform them, but only with the help from a teacher or parents	Ability to reformatory and partially research activity based of the task, partial independence in the search for the means to solve the problem; there is a desire to create a product of creative activity, although with some external help	Creativity and autonomy in performing the activities prevail. Children offer original ways of solving the problem; they use additional sources of information to solve the problem; they independently make products of creative activity

Intellectual activity	Passive attitude to activity, fast-to-come fatigue	Activity is manifested only in certain situations, attractive activities; however, the ability to ask questions is still absent	Activity manifests itself in various deeds, but there is a ready switching to a lighter activity; children are able to ask questions on the learned topic, but are not yet able to ask questions aimed at finding the missing/lacking information	There is a reformatory activity; good performance; the desire to perform difficult tasks and solve problems; children are able to ask various questions	There is creative activity; children are able to stay active for a long time; the express very high performance; there is the desire to get into the essence of phenomena and their interconnection; theoretical understanding of phenomena is present
Emotions	Absence of emotional manifestations or negative emotions associated with boredom, self-doubt	Unsustainable positive emotions occur during the performance of activities, if there are no difficulties and in emotionally attractive situations; there is easy switching to more vivid emotional stimuli, that are not related to studying.	Positive emotions, enthusiasm, joy prevail, however, when confronted with difficulties children can display negative emotions and discontent. In general, there is a positive attitude towards learning.	There is vivid manifestation of sustained positive emotions, perseverance in overcoming the arising difficulties, optimistic spirit	There is absence of negative emotional manifestations even in cases of failure, an optimistic attitude in any situation, highly positive attitude towards the performed activities and to other people. Belief in oneself and one's own strength now and in the future.
Reflection	They put blame on other persons and circumstances. Inability to judge oneself from another person's perspective, no wish to analyze one's own actions	Self-assessment of some actions is possible, failures are explained by the difficulty of the assignments or the fact that the assignment is incomprehensible.	An unbiased assessment of one's own failures, if they were insignificant, is possible, child happily analyzes his/her successes.	Child objectively assesses his/her own successes and failures, however, he/she looks for the possibilities for change not in themselves, but outside.	There is pronounced objective self-evaluation and self-analysis; failures are explained by one's own errors; there are attempts for self-improvement planning

Analysis of psychological and pedagogical literature demonstrated, that the issue of the cognitive motivation formation has been studied, mainly in relation to general education.

Meanwhile, in the institutions of supplementary education, as practice shows, conditions for the cognitive motivation formation in junior school age children can be created.

Analysis of tasks, functions and basic ideas of the supplementary education (Asmolov, 1977; Gorsky, 1999; About development strategy..., 1995) has made it possible for us to determine the specific of the cognitive motivation formation in junior school age children in these institutions. It is determined by the fact that there is the possibility of integrating gaming, leisure-time and creative activities into the educational process. Junior school age children are given a free choice of the type of classes and the pedagogue, their own educational trajectory, corresponding to the individual characteristics of the method, pace and mode of activity. A small number of children in a group makes it possible to individualize the cognitive motivation formation process. The educational process in the institutions of supplementary education provides parents with the opportunity to directly participate in training sessions through the joint fulfilling of tasks, both at the training session and in the process of joint development of home projects, as well as while working on the “personal achievements album”.

The nature of the cognitive motivation in junior school age children, as well as the specifics of its formation in supplementary education institutions, determined the choice of pedagogical conditions aimed at the cognitive motivation formation in junior-school age children in these institutions.

Having studied the psychological and pedagogical literature (Yakovlev, 2004; Evladova, 2002), and having analyzed the practical works, we assumed that the necessary pedagogical conditions for the cognitive motivation formation in junior school age children in supplementary education institutions may be the following:

- creation of a specially organized spatial subject-related environment based on the needs and interests of junior schoolchildren at each class-session;
- ensuring a conscious triune interaction of all participants in the educational process (children-parents-pedagogue);
- the use of a set of tasks of a problem-creative nature, ensuring maximum practical use of acquired knowledge in gaming, leisure and creative activities;
- the use of the pedagogical potential of a substantive assessment including a verbal-figurative analysis of the activity performed or being performed, both by the child and the pedagogue.

The implementation of the pedagogical conditions for the cognitive motivation formation in junior school age children in supplementary education institutions includes three interrelated and interdependent stages: motivational-stimulating, substantive and reflexive-evaluative. Each stage we conditionally correlated with the implementation of a particular condition.

The first stage – the stimulating one, is aimed at the formation of the incentive component of cognitive motivation, which includes the following aspects: cognitive need, cognitive interest, prevailing activity-related motive, and personal significance. At this stage, the first condition was implemented, and namely, the creation of a specially organized spatial subject-related environment based on the needs and interests of junior schoolchildren at each class-session. The formation of children's interest and creative abilities is based on the creation of a range of possibilities for searching, modeling and experimenting with various materials, which, at the same time, make it possible to make the activity more “lively”. It can be a variety of balls, toy construction sets, skittles, multifunctional soft toy modules. With the help of the above-mentioned playthings, it is possible to create a new, special environment, which meets the objectives of this very class-session in the supplementary education institutions. At the same time, children and their parents can also take part in creating a comfortable and fascinating setting. It is of special importance to us to set up an achievements presentation area, where children could present their posters (personal or collective) as well as their projects.

The goal of the substantive stage, the second one, is to increase the level of intellectual activity; which activity is aimed at in-depth understanding of the essence of phenomena, their interrelation, at the process of obtaining knowledge; stimulation of creative activity. At this stage, the second and third conditions were carried out. Building a conscious triune interaction involves the inclusion of parents in joint activities on the cognitive motivation formation in children. Parents-pedagogue interaction occurred in the following instances:

- a poll among parents;
- counseling for parents on the cognitive motivation formation as well as on other issues of interest to them (personal, collective);
- openness of all class-sessions (parents either take an active role or look on).

The triune interaction of all the participants: children, their parents and the pedagogue was carried out through the following means:

- creating co-creative situations at the sessions;
- co-doing the homework (work on projects);
- keeping *personal achievement albums/diaries/logs* of each child.

The interrelated tasks include situations of interest, search-and-game tasks (based of well-known psychology mind-agility tasks); communication-oriented speech games; language games (spelling, lexical, phonetic and grammar ones); fairy tale and role-playing/acting. When conducting the sessions, the joint activities of children and their parents were organized in such a way that the child and the adult could act *on an equal footing*. Our experience has allowed us to conclude that the motivation of the junior school age child directly depends on the motivation of his/her parents, if a certain activity is of interest and importance to the parents, then it becomes of interest and importance to the child as well.

The third stage, the reflexive-evaluative one, is tied in with the analysis of the outcome as compared with the set objective, followed by the performance evaluation. At this stage, the fourth condition was implemented – the use of the pedagogical potential of a substantive assessment, which assessment includes a verbal-figurative analysis of the activities performed or being performed by both the junior school age child and the pedagogue. To implement this condition, we created certain situations in which junior schoolchildren could analyze and evaluate their actions, the outcomes of their work, the changes taking place in themselves, describe their emotions.

The pedagogical conditions for the cognitive motivation formation were tested in the process of our experimental work, which was carried out in three stages:

The first stage is the ascertaining experiment. At this stage, the work experience of supplementary education pedagogues was studied and summarized; the data on the level of cognitive motivation in junior school age children were collected and processed; a pedagogical conditions implementation mechanism was developed.

At the second stage (the formative experiment), the pedagogical conditions for the cognitive motivation formation in junior school age children in supplementary education institutions were implemented; we analyzed and corrected the preliminary results.

At the third stage (the closing experiment), the data of the ascertaining and the closing experiments were compared, and the effectiveness of the tested pedagogical conditions for the cognitive motivation formation in children of junior-school age institutions of supplementary education was analyzed.

To monitor the degree of cognitive motivation formation in junior school age children, we used certain picked diagnostic methods, that helped us study the states of the cognitive motivation component. In choosing theses diagnostic methods, we opted for them to overlap each other, creating conditions for achieving objectivity and reliability of the indicators of interest to us. The results of the cognitive motivation components formation study were made up of various data types, which made it possible to obtain versatile information about the formation degree of both a separate component and the formation degree of the cognitive motivation itself (Table 2).

Table 2. Diagnostic methods of criteria for the formation of the cognitive motivation in junior school age children in SEI

Num.	Criteria	Diagnostic methods
1.	Cognitive need	The Cognitive need approach proposed by V.S. Yurkevich (Ilyin, 2003).
2.	Cognitive interest	The Unfinished sentences approach proposed by G. I. Schukina (Shchukin, 1971).
3.	Prevailing motive	The Stepway of incentives approach by N.V. Elfimova (Elfimova, 2003).
4.	Personal significance	The Thermometer scale approach by N.V. Elfimova (Elfimova, 2003).
5.	Prevailing activity nature	The free choice of tasks approach, developed based of the envelopes technique by G.I. Shchukina (Shchukina 1971).
6.	Intellectual activity	Our questionnaire for teachers and parents, observation of students, the Ask questions, Choose a task techniques.
7.	Emotions	The technique we proposed meant that children had to +(plus)-mark the emotions and feelings they felt while performing various tasks. We used the data from the children's My Mood and My Success diaries.
8.	Reflection	We developed a questionnaire, which we asked our students to fill out once they had finished a task (or at the end of a half year period), we had conversations with parents, from which we learned about the children's reaction to their own successes or failures.

3. Results and discussion

The sample consisted of 8-9 year-old children, attending the Ulybka (Smile) and Mashen'ka children's developing studios in Kirov, Russia. All students (60 8-9 year-old children) were divided into two groups according to the ascertaining experiment data. Each of the groups had the optimally equivalent quantitative and qualitative composition of students: there were 30 students in the experimental group and 30 students in the control group.

In the course of the formative experiment, in the experimental group, the suggested pedagogical conditions for the cognitive motivation formation in junior school age children were implemented, while the control group was taught without these conditions. To ensure the identity of the experiment conditions, one and the same teacher conducted classes throughout the complete term of the experiment.

The evaluation results of the cognitive motivation formation junior school age children are presented in tables (Tables 1-4) and figures (Figures 1, 2). The tabulated values are given as a percentage.

Table 3. The dynamics of the cognitive motivation formation in the control group

Levels Criteria	At the beginning of the experiment					At the end of the experiment				
	1	2	3	4	5	1	2	3	4	5
Cognitive need	10	17	37	30	6	6	20	40	28	6
Cognitive interest	17	27	20	30	6	10	23	20	37	10

Prevailing activity motive	13	30	33	24	0	13	30	27	27	3
Personal significance	6	10	14	60	10	3	14	20	53	10
Prevailing nature of activity	20	17	43	20	0	17	23	46	14	0
Intellectual activity	10	23	47	17	3	0	27	53	14	6
Emotions	17	13	23	34	13	13	24	30	30	6
Reflexive skills	24	27	40	6	3	17	24	46	10	3

Table 4. The dynamics of the cognitive motivation formation in the experimental group

Levels Criteria	At the beginning of the experiment					At the end of the experiment				
	1	2	3	4	5	1	2	3	4	5
Cognitive need	6	27	37	27	3	0	13	17	60	10
Cognitive interest	20	24	33	13	10	6	10	17	50	17
Prevailing activity motive	17	37	23	20	3	10	6	20	54	10
Personal significance	10	6	24	54	6	0	10	13	64	13
Prevailing nature of activity	17	13	40	27	3	10	17	20	47	6
Intellectual activity	13	27	40	20	0	3	23	27	37	10
Emotions	20	13	30	20	17	7	10	43	17	23
Reflexive skills	27	24	30	13	6	6	10	20	54	10

Table 5. Dynamics of cognitive motivation in the control and experimental group

Levels	The beginning of the experiment, control group	The end of the experiment, control group	The beginning of the experiment, experimental group	The end of the experiment, experimental group
1	0	0	6	0
2	17	13	23	6
3	60	57	41	37
4	23	27	27	47
5	0	3	3	10

If we consider the generalized results of the experiment, then in the control group there were 17 % of level 2 students, 60 % – level 3, and 23 % – level 4. At the end of the experiment, the number of students of level 2 and level 3 decreased by 4 % and 3 %, respectively. The number of students of levels 4 and 5 of cognitive motivation increased by 4 % and 3 %.

In the experimental group at the beginning of the experiment there were 6 % of level 1 students, 23 % – level 2, 41 % – level 3, 27 % – level 4, and 3 % of level 5. At the end of the experiment, the values for levels 4 and 5 increased by 20 % and 7 %. There were no more students of level 1 of cognitive motivation, the decrease was noted for levels 2 and 3 by 17 % and 4 %.

General analysis values of growth and decline trends at various levels makes it possible to draw certain conclusions about the dynamics of cognitive motivation. In the control group, changes toward improvement were insignificant and unsustainable; in the experimental group, on the contrary, 4 out of 8 values showed growth at levels 4 and 5, 1 value displayed growth at levels 3, 4 and 5, 2 values were noted to grow at levels 2, 4 and 5, and 1 value demonstrated growth at levels 3 and 5. This fact supports the idea of the uniformity and regularity of the process of the cognitive motivation formation in junior school age children in the experimental group.

These findings are confirmed by linear diagrams, which show the nature of the dynamics of the phenomenon under study (Figure 1, Figure 2). The linear diagrams show that the cognitive motivation demonstrated the most rapid development in the experimental group.

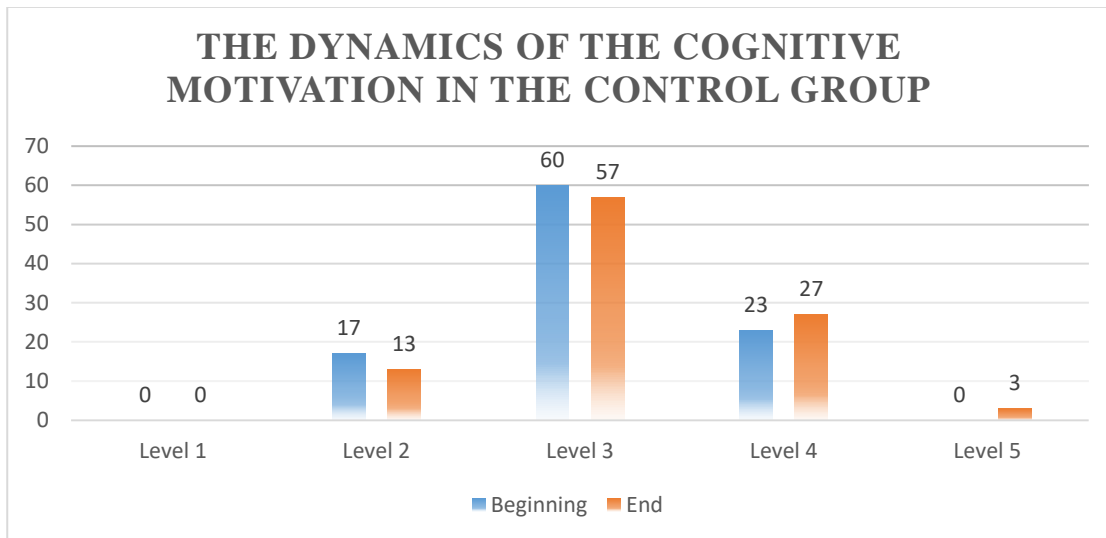


Fig. 1. The dynamics of cognitive motivation in the control group

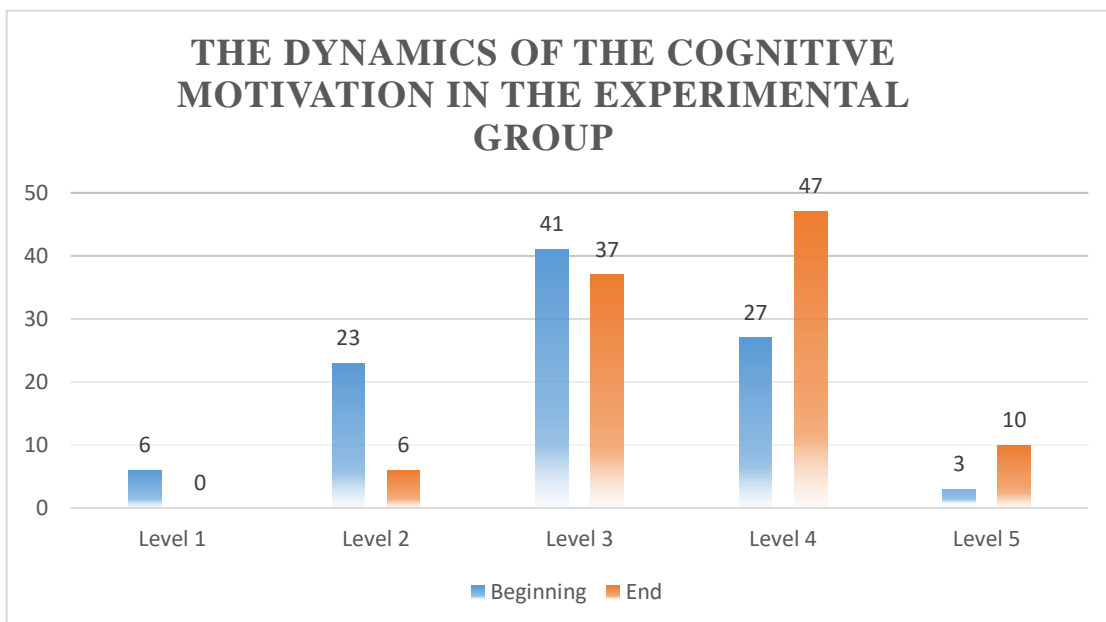


Fig. 2. The dynamics of cognitive motivation in the experimental group

To test the accuracy of the experimental data, let us compare the G-values (Ermolaev, 2003).

Table 6. Number of shifts in the control group

Number of shifts in the group	Scale								Total
	1	2	3	4	5	6	7	8	
Positive	2	10	7	5	5	8	3	7	47
Negative	2	1	4	6	7	2	9	1	32
Null	26	19	19	19	18	20	18	22	161
Total of non-null shifts (n)	4	11	11	11	12	10	12	8	79

Table 7. Number of shifts in the experimental group

Number of shifts in the group	Scale								Total
	1	2	3	4	5	6	7	8	
Positive	22	23	19	11	8	15	11	21	130
Negative	0	0	0	0	0	0	0	0	0
Null	8	7	11	19	22	15	19	9	110
Total of non-null shifts (n)	22	23	19	11	8	15	11	21	130

Let us formulate a hypothesis for the experimental group:

H₀: A shift toward improvement in the cognitive motivation is random.

H₁: A shift toward improvement in the cognitive motivation is nonrandom.

The sum total of eight scales is n = 130; the typical shift is positive; there are no negative shifts, i.e. G_{emp} = 0; the critical statistical value is taken from statistical tables:

$$G_{cr} = \begin{cases} 55, & \text{at } p = 0.05 \\ 51, & \text{at } p = 0.01 \end{cases}$$

Insofar as G_{emp} < G_{cr} then hypothesis H₀ leans toward an alternative hypothesis H₁ i.e. the shift toward improvement of the cognitive motivation values, based on the scales total can be considered nonrandom.

It can be concluded that the shift towards improvement of cognitive motivation values after the experiment is nonrandom for each scale, the probability of it being so is 95 % and 99 % by the sum total of eight scales.

Let us formulate hypotheses for the control group.

H₀: A shift toward improvement in the cognitive motivation is random.

H₁: A shift toward improvement in the cognitive motivation is nonrandom.

The sum total of eight scales is n = 79; the typical shift is positive; there are 32 negative shifts, i.e. G_{emp} = 32; the critical statistical value is taken from statistical tables:

$$G_{cr} = \begin{cases} 31, & \text{at } p = 0.05 \\ 28, & \text{at } p = 0.01 \end{cases}$$

Insofar as G_{emp} > G_{cr} then hypothesis H₀ is accepted, i.e. the shift toward improvement of the cognitive motivation values, based on the scales total can be considered random.

It can be concluded that the shift towards improvement of cognitive motivation values in the control group is random for practically all scales, the probability of it being so is 95 % and 99 % by the sum total of eight scales.

Since no significant changes occurred in the control group, while there was registered a pronounced positive shift in the experimental group, it can be stated that the differences in the degree of the positive shift in the control and experimental groups are trustworthy.

However, it should be noted that although there has been found a pronounced positive shift on all scales, there have also been registered null shifts (Table 8):

Table 8. Number of null shifts

Scale	1	2	3	4	5	6	7	8	total
% of null shifts	26.7	23.3	36.7	30.0	73.3	50.0	63.3	30.0	45.8

This means that for a certain part of the subjects no changes have occurred.

Moreover, there are no negative shifts on any of the scales, i.e. the experiment has had no negative effect. The confidence level about the results and conclusions reaches 95 % and even 99 %.

Thus, we can conclude about the appropriateness of using the proposed pedagogical conditions for the formation of cognitive motivation in junior school age children at supplementary education, since the data obtained from the final experiment and their statistical processing demonstrate, that the level of cognitive motivation among junior school age children of the experimental group has increased during the formative experiment.

4. Conclusion

The study has formulated and implemented pedagogical conditions for the cognitive motivation formation in junior school age children in institutions of supplementary education. The implementation of these conditions is based on equal relations and equally active participation of children, their parents and the pedagogue. It includes three interrelated and interdependent stages: motivational-stimulating, substantive and reflexive-evaluative one. The implementation of conditions is aimed at shaping the cognitive need and interest, wide cognitive motives, children's awareness of learning a foreign language for themselves personally, organizing creative and productive activities, forming intellectual activity, filling the children with positive emotions, developing their ability to self-analyze, and nurturing their self-respect.

The experiment results the trustworthiness of the positive dynamics of the cognitive motivation formation in junior school age children of the experimental groups and make it possible for us to track changes in the degrees of the children's cognitive motivation formation within the period of the formative experiment.

References

[About development strategy...](#), 1995 – O razvitii dopolnitel'nogo obrazovaniya detey v usloviyakh obshcheobrazovatel'nogo uchrezhdeniya [About development of supplementary education of children in a general education institution]. *Collected legal documents*, 1995: 30-37.

[Ananiev, 1980](#) – *Ananiev, B.G.* (1980). Struktura individual'nogo razvitiya kak problema sovremennoy pedagogicheskoy antropologii [The structure of individual development as a problem of modern pedagogical anthropology]. Selected psychological works in two volumes. Volume 2. M.: Pedagogika. 286 p.

[Asmolov, 1977](#) – *Asmolov A.G.* (1977). Dopolnitel'noye obrazovaniye kak zona blizhayshego razvitiya obrazovaniya v Rossii: ot traditsionnoy pedagogiki k pedagogike razvitiya [Supplementary education as a zone of the nearest development of education in Russia: from traditional pedagogy to development pedagogy]. *Vneshkol'nik*, 9: 6-8.

[Babanskiy, 1985](#) – *Babanskiy, Yu.K.* (1985). Metody obucheniya v sovremennoy obshcheobrazovatel'noy shkole [Methods of teaching in a modern secondary school]. M.: Prosveshcheniye. 208 p.

[Bozhovich, 1986](#) – *Bozhovich, L.I.* (1986). Lichnost' i yeye formirovaniye v detskom vozraste [Personality and its formation in childhood]. M.: Prosveshcheniye. 464 p.

[Danilov, 1960](#) – *Danilov M.A.* (1960). Protsses obucheniya v sovetskoy shkole [The learning process in the Soviet school]. M.: Uchpedgiz. 299 p.

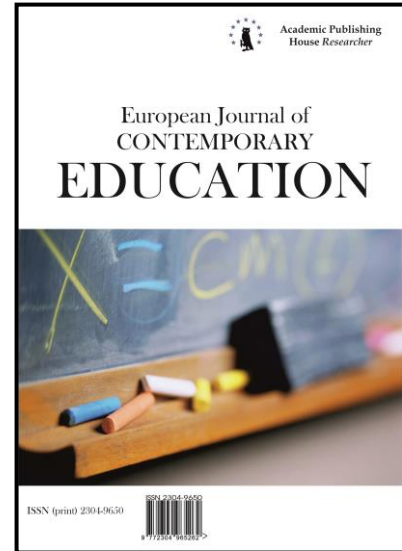
[Danyushenkov, 1994](#) – *Danyushenkov, V.S.* (1994). Tselostnyy podkhod k metodike formirovaniya poznavatel'noy aktivnosti uchashchikhsya pri obuchenii fizike v bazovoy shkole [Holistic approach to the formation of students' cognitive activity in teaching physics in basic school]. M.: Prometey. 208 p.

- Dusavitsky, 1978 – *Dusivitsky, A.K.* (1978). Zagadka ptitsy Feniks [The mystery of the Phoenix Bird]. M.: Znanie. 128 p.
- Elfimova, 2003 – *Elfimova, N.V.* (2003). Psikhologicheskoye obsledovaniye detey doshkol'nogo – mladshogo shkol'nogo vozrasta [Psychological examination of children of preschool - junior school age]. M.: UMK Psikhologiya. 349 p.
- Elkonin, 1974 – *Elkonin, D.B.* (1974). Psikhologicheskiye voprosy formirovaniya uchebnoy deyatel'nosti v mladshem shkol'nom vozraste [Psychological issues in the formation of educational activities in primary school age]. M.: Znanie. 64 p.
- Ermolaev, 2003 – *Ermolaev, O.Yu.* (2003). Matematicheskaya statistika dlya psikhologov [Mathematical statistics for psychologists]. M.: Moscow Psychological and Social University Flint. 336 p.
- Evladova et al., 2002 – *Evladova, E.B., Loginova L.G., Mikhailova N.N.* (2002). Dopolnitel'noye obrazovaniye detey [Supplementary education for children]. M.: Vldos. 352 p.
- Gorsky, 1999 – *Gorsky, V.A.* (1999). Sistema dopolnitel'nogo obrazovaniya detey [System of supplementary education for children]. *Dopolnitel'nogo obrazovaniya detey*, 3, 4: 6-17.
- Ilyin, 2003 – *Ilyin, E.P.* (2003). Motivatsiya i motivy [Motivation and motives]. SPb.: Piter. 512 p.
- Kovalev, 1988 – *Kovalev V.I.* (1988). Motivy povedeniya i deyatel'nosti [Motives of behavior and activity]. M.: Prosveshcheniye. 68 p.
- Leont'yev, 1975 – *Leont'yev, A.N.* (1975). Deyatel'nost'. Soznaniye. Lichnost' [Activity Consciousness. Personality]. M.: Politizdat. 304 p.
- Leont'yev, 1985 – *Leont'yev A.A.* (1985). Psikhologicheskiye predposylki rannego ovladeniya inostrannym yazykom [Psychological background of early mastering a foreign language]. *Inostrannyye yazyki v shkole*, 5: 24-29.
- Markova et al., 1990 – *Markova, A.K., Matis T.A., Orlov A.B.* (1990). Formirovaniye motivatsii ucheniya [Formation of learning motivation]. M.: Prosveshcheniye. 192 p.
- Matyukhina 1984 – *Matyukhina, M.V.* (1984). Motivatsiya ucheniya mladshikh shkol'nikov [The learning motivation in junior-school age children]. M.: Pedagogika. 144 p.
- Shamova, 1982 – *Shamova, T.I.* (1982). Aktivizatsiya ucheniya shkol'nikov [Learning activation of school students]. M.: Pedagogika. 208 p.
- Shchukina, 1971 – *Shchukina, G.I.* (1971). Problema poznavatel'nogo interesa v pedagogike [The problem of cognitive interest in pedagogy]. M.: Pedagogika. 352 p.
- Shchukina, 1979 – *Shchukina, G.I.* (1979). Aktivizatsiya poznavatel'noy deyatel'nosti uchashchikhsya v poznavatel'nom protsesse [Activation of students' cognitive activity in the cognitive process]. M.: Prosveshcheniye. 179 p.
- Vilyunas, 1990 – *Vilyunas, V.K.* (1990). Psikhologicheskiye mekhanizmy motivatsii cheloveka [Psychological mechanisms of human motivation]. M.: Izd-vo MSU. 288 p.
- Vygotskiy, 1991 – *Vygotskiy, L.S.* (1991). Pedagogicheskaya psikhologiya [Pedagogical psychology]. M.: Pedagogika. 480 p.
- Yakobson, 1969 – *Yakobson, P.M.* (1969). Psikhologicheskiye problemy motivatsii povedeniya cheloveka [Psychological problems of human behavior motivation]. M.: Prosveshcheniye. 317 p.
- Yakovlev, 2004 – *Yakovlev, D.E.* (2004). Organizatsiya i upravleniye deyatel'nost'yu uchrezhdeniya dopolnitel'nogo obrazovaniya detey [Organization and management of the institution of supplementary education for children]. M.: Airis-press. 128 p.
- Zimnyaya, 2004 – *Zimnyaya, I.A.* (2004). Pedagogicheskaya psikhologiya [Pedagogical psychology]. M.: Logos. 384 p.



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Management of Educational Services Promotion in the Field of Higher Education (the Example of "Russian State Social University")

Ekaterina A. Vetrova ^a, Elena E. Kabanova ^{a,*}, Natalia V. Medvedeva ^a, Evgeniya E. Jukova ^a

^a Russian State Social University, Russian Federation

Abstract

The present article describes the main tools for promoting the educational services in the Russian State Social University, such as advertising in the media, outdoor advertising, exhibitions and fairs, open days, master classes, round tables, conferences and seminars, internet advertising, social networks, communities in social networks, and university website.

The main difficulties faced by the experts in the field of marketing of educational services of "Russian State Social University" were studied. The peculiarities of attracting applicants to certain higher educational institutions in Russia are the most interesting, in connection with changes in the structure of the recruitment of applicants to educational institutions of higher professional education of the Russian Federation.

In recent years, quite a lot of measures have been taken in the development of marketing communications of educational institutions. But usually these measures do not work, because every year there is a reduction in budget places for the most popular training areas among the applicants. In this regard, a well-developed analysis of existing approaches in the field of promoting educational services, and identifying the most effective educational marketing directions necessary for the formation of a positive image of universities is indispensable.

Keywords: applicants, promotion of educational services, educational marketing, marketing communications, advertising, open days, conferences, workshops, website, higher education, educational programs, media reputation.

1. Introduction

In the modern world, education is not just a service, but a product that is actively promoted for profit; this is because education is an integral part of our life, which shapes our future and our

* Corresponding author

E-mail addresses: cool90@list.ru (E.E. Kabanova), eavetrova@yandex.ru (E.A. Vetrova), nmedvedeva1984@mail.ru (N.V. Medvedeva), nahratovae@rgsu.net (E.E. Jukova)

professional skills, and therefore, demands the labor market. Education is responsible for the sustainable development of society, its culture, and the development of society as a whole (Kabanova, Vetrova, 2018).

Currently, in a market economy, any product or service needs to be promoted. Promotion is one of the main factors for the effectiveness of a company or organization since the success of selling a product or service to an end depends on the customers. Thus, it is very important to understand such a thing as the promotion of a product or service; therefore, D.A. Shevchenko defines promotion as a set of various marketing measures, efforts, actions through advertising, PR, personal sales, sales promotion and the use of other marketing communications undertaken by manufacturers, sellers of goods or services, intermediaries in order to increase (Shevchenko, 2001).

In Moscow, school graduates face the question of choosing a higher educational institution every year. The interest of applicants is directed mainly to the most popular educational institutions in the media and the Internet. At the same time, sometimes when choosing an educational service, random factors play a role, which are often considered irrational in marketing theory (imitation, suggestion, etc.) (Silaeva, 2012). As a result, the lack of objective information about higher education institutions often leads to the fact that the choice of an applicant is not based on the real situation, but rather on the image that is created about it. Accordingly, one of the most important activities of modern universities should be educational marketing. With the help of educational marketing technologies, more effective implementation of the mission of the institution occurs: the greatest resources absorb, both financial and non-financial and the effectiveness of marketing activities increases in general (Stachowski, 2011). According to many foreign researchers, the use of marketing is necessary for analyzing, planning and controlling social change issues (Cihovska, 2013; Donovan, Henley, 2010).

Considering the opinion of experts on the account of the promotion, and promotion of educational services in universities, Kosyakov M.A. believes that “it is literate marketing of services, implemented in the educational sphere and taking into account all the specifics of this institution, that not only convey to the general public information about the strengths and opportunities of an educational institution but also serve as a motivator and an additional source of its development. In fact, marketing is exactly the tool that connects the consumer and the manufacturer, allowing the first to find the most suitable option, and the latter to understand what the consumer needs, and what direction to work in order to improve their product or service in order to make it better, and therefore, more fully satisfy the demands of those very consumers” (Kosyakov, 2015).

The popularity of an institution of higher education depends on its corporate culture, the reputation of the institution in the media, and the brand of the institution. According to I. Groshev, V. Yuryev “when choosing a higher educational institution, the consumer of educational services is forced to focus on the authority of the leadership, the established reputation and brand, which are formed under the influence of the university’s corporate culture” (Groshev, Yuryev, 2010).

Prokhorov A.M. believes that “the most effective way to promote educational services is the use of statistics, which is supported by the Internet service provider (ISP), i.e. the use of log files. The log files contain all the available information for each user request: domain, date and time of the visit, the user’s actions in the educational site as a whole, the request file, which link he reached to the server, which browser he uses and on which platform (the contents of the log -file is determined by its format).

Now the most promising method that helps to track user actions on an educational site is considered a method using cookies. Cookies are files located on the user’s computer and allow the web server to identify the user’s browser” (Prokhorova, 2015).

According to the authors, the main factors for promoting educational services are the competent development of marketing services and focus on consumer demand, as well as the creation of a brand, a positive reputation and image of an educational institution.

The consolidation of efforts that the state and society create and gives direction and content for the educational policy has recently become increasingly important (Rogach, 2017).

2. Analysis of recent publications on the problem. Questions of theoretical and methodological nature, as well as the conceptual apparatus for managing the promotion of educational services in the field of higher professional education are reviewed in the works of Russian authors such as Bykharova G.D., Starikova L.D. (2010), Novatorov V.E. (2015),

Groshev I.V., Yuryev V.M. (2010), Polyakova O.V. (2013), Shevchenko D.A. (2001), Prokhorova A.M. (2015).

A significant amount of work by Russian and foreign scientists is devoted to the system of higher education in the Russian Federation and the development of educational services, such as E.V. Andryushina, N.O. Lutsenko (2014), S.V. Vikhareva (2010), N.R. Kamynina, A.O. Grudzinsky (2017), R.V. Kupriyanov (2014), S.I. Plaksy (2014), A.A. Plisova (2017), O.V. Rogach (2017), A.A. Solovov (2016), N.V. Bagrova (2017), M.E. Pankratova, N.Y. Rasheva (2014), M.V. Maksimenko, N.N. Kryzhevskaya (2018), A.A. Ilyashenko (2017).

However, in spite of a large number of scientific and practical developments in the field of analysis of the promotion of educational services, current issues that reveal the limitations that impede the promotion of educational services in higher educational institutions are not fully investigated. The opinion of applicants in the context of the choice of a future educational institution has not been studied enough.

2. Materials and methods

The empirical basis of the study was the results of a sociological study conducted by the authors in the summer of 2018 on the basis of the Admissions Committee of the Russian State Social University (RSSU). The respondents were applicants of the faculty of management of the RSSU (N = 60). A systematic probabilistic sampling was used. The basis of selection is a list of applicants entering the Faculty of Management, in alphabetical order. Respondents were used based on the list of the total population at intervals (K = 14). Alphabetical lists are displayed equally as reliable hit in the sample of all units of the total population. Research tools – questionnaire. The purpose of this study was to assess the applicant's awareness of the RSSU, as well as to identify factors hindering the promotion of the university and the promotion of its educational services and products.

The results of the survey of applicants showed that in the modern conditions for successful promotion of the university, it is necessary to create a competent marketing service that will take into account the full range of advantages of the university in the educational services market, study all the interests of applicants, analyze their requests on the Internet and social networks, and conduct a competent advertising campaign.

The results of the study allowed to identify the relationship between the advertising company, marketing communications of the university, master classes of the faculty of management, open doors and the demand for educational services of the university.

The authors used the counting method for the Pearson χ^2 test. The number of degrees of freedom is 6. The value of the χ^2 criterion is 64.126. The critical value of χ^2 at a significance level of $p = 0.01$ is 16.812. The relationship between the factor and the performance features is statistically significant at a significance level of $p < 0.01$.

When conducting research, in addition to the survey, general scientific research methods were used, based on general principles, in order to apply general laws to specific factors related to educational activities of higher educational institutions, special and in-depth study of aspects of analyzing statistical data, the method of analogy, synthesis and extrapolations.

When writing an article, such theoretical level methods as modeling, systematization, classification, formalization and other methods were widely used, on the basis of which the level of demand for methods of promoting educational services among applicants of the RSSU management faculty was investigated, factors affecting the choice of a higher educational institution were ordered, spheres of application of acquired knowledge, skills and competencies in further professional activities.

In addition, the information base served as the results of studies of the All-Russian Center for the Study of Public Opinion (VTsIOM) on the topic “Teenager in a social network: standard of life - or a danger signal?” (March 2019), the Public Opinion Foundation (FOM) on the topic “Source news and media confidence” (January 2019) ([All-Russian Center for the...; Public Opinion Foundation \(FOM\)...](#)).

3. Results

In today's market conditions, marketing communications include advertising, sales promotion, personal sales, PR, exhibition and fair activities, direct mail, and so on. All marketing

communications can be divided into advertising services or goods through the media and sales promotion.

The most frequently used marketing communications tools used by Moscow universities include: advertising in the press, advertising on television and radio, outdoor advertising, printed and souvenir products, exhibitions and fairs related to education, open days, master classes, scientific conferences and seminars, internet advertising and other forms of communication over the Internet, the creation and maintenance of a university website, pages and communities on social networks, etc. In addition, the location of a university in the city, its infrastructure, the degree of equipment of its audiences, the presence of branded audiences, and availability of free Internet in the university are important.

An important place is occupied by PR, contributing to the expansion of the educational space of an educational institution, its integration into a single global educational space. It is necessary to build your own image, which should not be formed due to unplanned news about the university.

"Russian State Social University" uses various channels to promote educational services: publications and advertising in the media, visiting schools and directly informing schoolchildren – future applicants, having a competently built university website, creating and distributing advertising booklets, calendars, souvenirs, participating in educational exhibitions, and open days. As a result, studies were conducted between the advertising campaign, marketing communication, open doors and Eastern-educated services (Table 1).

Table 1. Analysis of contingency tables using the chi-square test

Factor sign	Productive attribute		Amount
	Yes	No	
Information about the choice of university for admission received from relatives and friends	16	44	60
Information about choosing a university for admission is obtained from Internet sources	36	24	60
Information on the directions of preparation of the RSSU obtained at the open days	20	40	60
Open days are a significant source of information for admission	20	40	60
Master Classes held at the open days are important and useful.	56	4	60
Have you visited the RSSU sites at various educational exhibitions and forums?	37	23	60
Is the RSSU website convenient and informative?	48	12	60
Is the RSSU location convenient?	43	17	60
Total	220	200	420

According to the results of the study, the main way of obtaining information from applicants when choosing the RSSU was the Internet, including various social networks and online communities (36 respondents). This is largely due to the fact that the Internet space is now becoming the most popular source of information, especially among young people. This thesis is confirmed by the results of the polls conducted by the VTSIOM and the Public Opinion Foundation. The most popular source of information among young audiences, according to the FOM survey, are news sites on the Internet (57 %). Forums, blogs, social networking sites are of interest to 38 % of respondents, which indicates the great potential of this information channel for

young people. Moreover, the majority of adolescents (98 %), according to VTSIOM data, use the Internet daily, 89 % go to social networks almost every day.

However, in the process of choosing a future educational institution, an applicant is interested in the opinion of not only the media, but also family members, friends, neighbors, future colleagues, and specialists in the field of higher education. The personal opinion of the authoritative interlocutor for the applicant is very important when choosing a university. Most often, future students rely on the opinion of parents and acquaintances and the so-called "rumors" about a particular educational institution. In particular, 16 respondents said they know about the university and its areas of training from friends and relatives.

One of the most important tools for promoting the university is the open door days, which are held throughout the year in order to interest and attract future students. At the Russian State Social University, these events are held once a month at the main sites of the Russian State Social University, besides, there are also open days of open doors. Open days are designed to increase the demand for educational services and strengthen the position of the university in the educational market. However, as the survey of applicants showed, only 20 respondents answered that they had learned about the directions of the preparation of the university on open days. Accordingly, only a third of the polled open door days represent a significant source of information for admission. It is obvious that in modern conditions, the traditional forms of attracting applicants are not in demand since information exchange mainly takes place in the Internet space. Consequently, in order to increase the demand for educational services and strengthen the positions of the university in the educational market, it is necessary to interact with applicants mainly using information and communication technologies (Eroshkin et al., 2017).

In addition, the RSSU organizes competitions for schoolchildren, various conferences and round tables that are open to future applicants. On the basis of the RSSU, preparatory courses are held for all comers.

The RSSU also actively participates in ongoing educational exhibitions and showrooms, which contributes to the promotion of educational services. This is confirmed by the results of the survey: more than half of respondents (62 %) visited and went to the sites of the RSSU in various educational forums.

Special attention should be paid to the site of the RSSU, as it is the main link in the promotion of the product – an educational service. The RSSU website has a separate tab for "applicants", where you can get detailed information about educational programs, the order of admission, events held. Applicants positively evaluate the RSSU website: for 48 respondents, the site turned out to be convenient in finding important information. They also mark the speed of searching for the necessary information and the availability of its presentation.

The location of the university also plays a very important role, because depending on the distance from the center, the presence of metro stations and social infrastructure facilities, the applicant chooses whether he can get to school, and whether it will be convenient for him or not. The RSSU has an excellent location, which in itself is another tool for attracting future students. Thus, according to the survey, almost all respondents when choosing a future place of study care about the location of the educational institution. The convenience of the RSSU location was positively evaluated by 43 applicants.

4. Discussion

Analysis of the research results indicates that at present, universities should carry out a competitive struggle for future applicants in the field of higher education due to competent and thoughtful marketing. Recently, the prevailing view is that image and marketing is needed only by large corporations, and it is not available to institutions in the field of higher education. But this does not at all mean that marketing is not attainable for them. On the contrary, it is extremely important and necessary.

Institutions in the field of higher education with a long history of development and vast experience, have strong and effective brands that almost do not need to be promoted, but at the same time it is necessary to use new marketing tools to attract the most highly trained applicants to maintain a leading position in the higher education market.

Special attention should be paid to improving the Media Index of the university, which is an indicator of the qualitative state of the information field formed by the media around the person,

company, and brand. Accordingly, the increase in the value of Media Index indicates the creation in the media of a positive image from universities. Currently, the top lines of media ranking of Russian higher educational institutions, compiled by Medialogia in June 2018, are expected to be occupied by universities with a long history, such as Moscow State University, Lomonosov, RANEPa, SPSU, and MGIMO. The exception is the National Research University Higher School of Economics, whose leading positions are primarily due to its extensive research activities, extensive expert work and active international cooperation. In particular, the media reputation of the university in June 2018 was influenced by expert publications on raising the retirement age, the results of research presented in the report of the National Research University Higher School of Economics and the World Bank, and the theses of the report of the National Research University Higher School of Economics on life expectancy of Russians.

Thus, the experience of the National Research University Higher School of Economics demonstrates that the formation of a positive image of a university can take shape not only thanks to a historically developed brand, but also an active information and communication policy. Permanent brand management should be one of the key areas of such a policy since brand awareness and quality of service have a significant impact on brand loyalty to educational institutions (Syed Ali Abbas, 2019).

The main factors for the formation of a positive image of universities can be:

- formation of long-term profitable contacts with foreign educational institutions;
 - formation of the mobility of university teachers;
 - practical training with the further employment of graduates;
 - positive feedback from students;
 - development of the university site;
 - Large selection of faculties;
 - the creation of basic departments in the university leading companies in the labor market;
- High-quality educational process.

For decent competition and prospective development of a university, it is necessary to create a high-quality educational service, and not strive to attract the consumer of the service just to get paid and increase funding. It is necessary to properly allocate funds for improving the quality of the educational process, improving the infrastructure of the university.

5. Conclusion

"Russian State Social University" actively works to promote its educational services and use all possible tools. Less effective tools today are publications and advertising in the media, as today's young people increasingly prefer to receive information about the university either through "live" communication with relatives and friends at the Open Days and master classes or via the Internet using the website of the university and social networks.

An important place is occupied by the corporate website of the university. Because, depending on its convenience, brightness, and relevance, future students are impressed. With the help of the site, the applicant should receive all the necessary information about the university, namely the description and availability of all educational programs, terms, and conditions of admission. A modern educational website is a communication structure that unites all levels of external and internal interactions, presenting them on the Internet. In addition, advertising on the Internet is important; such as posting information about the RSSU services on industry portals; blogging RSSU.

One of the important factors for attracting applicants is the formation of a positive image of the university, which, as research has shown, is now largely dependent on media reputation. Accordingly, in order to improve the media ranking of universities, it is necessary not only to actively develop the Internet space by promoting official websites but also to expand areas of research and development, increase publication activity, respond to social order. Thus, the entire educational policy of the university, which should be aimed at all stakeholders, largely depends on a properly designed and implemented educational marketing initiative. Only in this case will trust be established between all interested parties, which directly leads to an increase in the retention of customers and the income of the organization (Manea, Purcaru, 2017).

But, despite the wide range of marketing tools, not all higher education institutions use the full range of means of promoting educational services. This is mainly due to the limited funding available in this area. Marketing of educational services is not yet fully developed. PR-events are not always targeted and often – this is a common advertisement. Educational marketing of universities should provide not only the study of the educational market, but also promote effective human resources management, which together with material and information resources stimulate the synergistic effect of educational services and ensure the achievement of the mission of the educational organization (Gorghiu et al., 2019).

Thus, in modern conditions of active development of information technologies, higher education institutions need to create information and communication strategies using educational marketing technologies aimed at enhancing media reputation and creating a positive image of the organization, which will contribute to the promotion of educational services and attraction of new entrants.

References

- Aleksandrov, 2013 – Aleksandrov, A.Y. (2013). Organizaciya uchebnogo processa v vuze v usloviyah perekhoda na novye obrazovatel'nye standarty [The organization of educational processes in higher educational institutions]. *Vestnik Chuvashskogo Universiteta*, 2: 111-115. [in Russian]
- All-Russian Center for the... – A teenager in a social network: the norm of life – or a danger signal? The data of the All-Russian Public Opinion Research Center. 2019. [Electronic resource]. URL: <https://wciom.ru/index.php?id=236&uid=9587>
- Andryushina, Lutsenko, 2014 – Andryushina, E.V., Lutsenko, N.O. (2014). Gosudarstvennaya politika rf v oblasti obrazovaniya [State policy in the field of education]. *Vlast* ', 7: 77-81. [in Russian]
- Bagrova, 2017 – Bagrova, N.V. (2017). Aktual'nye problemy rossijskogo obrazovaniya: puti ih resheniya i modernizaciya obrazovaniya [Actual Problems of Russian Education: Ways of Their Solution and Modernization of Education]. *Sovremennye problemy social'noj raboty*, 4 (12): 84-89. [in Russian]
- Bykharova, Starikova, 2010 – Bykharova, G.D., Starikova, L.D. (2010). Obrazovatel'nyj marketing [Educational Marketing]. *Akademia*, 206 p. [in Russian]
- Cihovska, 2013 – Cihovska, V. (2013). Social Orientation of Marketing Concept. *Journal of Positive Management*, 4 (1): 52-62.
- Donovan, Henley, 2010 – Donovan, R., Henley, N. (2010). Principles and Practice of Social Marketing: An International Perspective. *Cambridge University Press*, 485 p.
- Eroshkin et al., 2017 – Eroshkin, S.Y., Kameneva, N.A., Sukhorukov, A.I., Kovkov, D.V. (2017). Conceptual system in the modern information management. *Procedia Computer Science*, 103: 609-612.
- Gorghiu et al., 2019 – Gorghiu, G., Petrescu, A.A.A., Enache, R.C. (2019). The Secondary Education Institutions. *11th LUMEN International Scientific Conference Communicative Action & Transdisciplinarity in the Ethical Society*, 145-155.
- Groshev, Yuryev, 2010 – Groshev, I.V., Yuryev, V.M. (2010). Vuz kak ob'ekt brendinga [University as an object of branding]. *Vysshee obrazovanie v Rossii*, 1: 23-29. [in Russian]
- Ilyashenko, 2017 – Ilyashenko, A.A. (2017). Process razvitiya vysshego ekonomicheskogo obrazovaniya v Zapadnoj Evrope i Rossii v ramkah Bolonskogo processa [The process of development of the bologna process]. *Ekonomika i sotsium*, 2 (33): 1333-1341. [in Russian]
- Kabanova, Vetrova, 2018 – Kabanova, E.E., Vetrova, E.A. (2018). The Practice of Implementing Bologna Process in the Russian Federation: Trends and Consequences. *European Journal of Contemporary Education*, 7 (3): 511-520.
- Kamynina, Grudzinsky, 2017 – Kamynina, N.R., Grudzinsky, A.O. (2017). Rossiya v Bolonskom processe: cel' – povyshenie konkurentosposobnosti vysshego obrazovaniya [Russia in the Bologna Process: The goal is increasing the higher education competitiveness]. *Vysshee obrazovanie v Rossii*, 8/9(215): 22-31. [in Russian]
- Kosyakov, 2015 – Kosyakov, M.A. (2015). Marketing obrazovatel'nyh uslug: za i protiv [Marketing Educational Services: Pros and Cons]. *Upravlenie ekonomicheskimi sistemami: elektronnyj nauchnyj zhurnal*, 5 (77): 1-13. [in Russian]

Kupriyanov, 2014 – Kupriyanov, R.V., Vilensky, A.A., Kupriyanova, N.E. (2014). Bolonskij process v Rossii: osobennosti i trudnosti realizacii [Bologna Process in Russia: Specifics and difficulties of implementation]. *Vestnik Kazanskogo Tehnologicheskogo Universiteta*, 20 (17): 412–416.

Maksimenko, Kryzhevskaya, 2018 – Maksimenko, M.V., Kryzhevskaya, N.N. (2018). Samostoyatel'naya podgotovka dvuhurovneвого vysshego obrazovaniya v sisteme obrazovaniya [Independent training in the system]. *Kant*, 1 (26): 6770. [in Russian]

Manea, Purcaru, 2017 – Manea, N., Purcaru, M. (2017). The evolution of educational marketing. *Annals of Spiru Haret University*, 17(4):37-45.

Novatorov, 2015 – Novatorov, V.E. (2015). Koncepciya social'nogo marketinga: istoriya, teoriya, tekhnologiya [Societal Marketing Concept: history, theory, technology]. *Planeta Muziki*, 384 p. [in Russian]

Pankratova, Rasheva, 2014 – Pankratova, E.M., Rasheva, N.Yu. (2014). Problemy integracii rossijskogo vysshego obrazovaniya v evropejskoe obrazovatel'noe prostranstvo i puti ih resheniya [Problems of integration of Russian higher education into the European Educational Space and ways to solve them]. *Uridicheskie zapiski*, 1: 132-137. [in Russian]

Plisova, 2017 – Plisova, A.A. (2017). Organizaciya informacionnogo vzaimodejstviya so studentami v ramkah informacionno-obrazovatel'noj sredy vuza [The Organization of Information Interaction with the Students Within the Educational Environment of the University]. *Uchenye zapiski Rossijskogo gosudarstvennogo social'nogo universiteta*, 6(145): 124–131. [in Russian]

Polyakova, 2013 – Polyakova, O.V. (2013). Mekhanizm upravleniya prodvizheniem [Promotion Management Mechanism]. *Izvestiya Tul'skogo gosudarstvennogo universiteta. Ekonomicheskie i yuridicheskie nauki*, 1: 72-81. [in Russian]

Prokhorov, 2015 – Prokhorov, A.M. (2015). Analiz povedeniya pol'zovatelej s pomoshch'yu metodov internet-marketinga, kak sposob prodvizheniya obrazovatel'nyh uslug [Analysis of user behavior using Internet marketing techniques as a way to promote educational services]. *Nauka, tekhnika i obrazovanie*, 1 (7): 36-38. [in Russian]

Public Opinion Foundation (FOM)... – Source of news and media confidence. The data of the Public Opinion Foundation. 2019. [Electronic resource]. URL: <https://fom.ru/SMI-i-internet/14170>

Rogach et al., 2017 – Rogach, O.V., Frolova, E.V., Medvedeva, N.V., Ryabova, T.M., Kozyrev, M.S. (2017). State and public management of education: Myth or reality. *Espacios*. 38 (25): 15.

Rogach et al., 2017 – Rogach, O.V., Ryabova, T.M., Frolova, E.V. (2017). Analysis of problems in managing the innovative development of secondary education in modern Russia. *Integration of Education*, 4 (89): 669-682.

Shevchenko, 2001 – Shevchenko, D.A. (2001). Marketingovyje kommunikacii obrazovatel'nyh uslug (na primere RGGU) [Marketing communications of educational services (for example, RSUH)]. *Prakticheskij marketing*, 3: 9-14. [in Russian]

Silaeva, 2012 – Silaeva, V. (2012). Marketingovyje issledovaniya na rynke obrazovatel'nyh uslug kak instrument povysheniya konkurentosposobnosti VUZa [Marketing research in the market of educational services as a tool to improve the competitiveness of the university]. *Vestnik Bryanskogo gosudarstvennogo universiteta*, 3(2):143-147.

Solovov, 2016 – Solovov, A.A. (2016). Podgotovka bakalavrov: problema vostrebovannosti vypusnikov na rynke truda [Training of bachelors: The problem of demand for graduates in the labor market]. *Vestnik Samarskogo universiteta. Istoriya, pedagogika, filologiya*, 3(1): 58-64. [in Russian]

Stachowski, 2011 – Stachowski, C.A. (2011). Educational Marketing: A Review and Implications for Supporting Practice in Tertiary Education. *Educational Management Administration & Leadership*, 39 (2): 186-204.

Syed Ali Abbas, 2019 – Syed Ali Abbas (2019). Brand Loyalty of Higher Education Institutions. *Marketing and Management of Innovations*, 1: 46-56.

Vikhareva et al., 2010 – Vikhareva, S.V., Vozhennikova, N.V., Smirnova, O.G. (2010). Studenty i rabotodateli o dvuhurovnej sisteme podgotovki i kachestve universitetskogo obrazovaniya [Students and employers about the two-level system of preparation and quality of university education]. *Inzhenernoe obrazovanie*, 6: 10-17. [in Russian]



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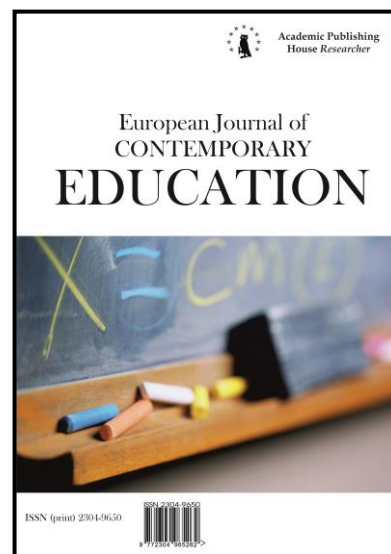
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Teachers' Professional Digital Literacy Skills and Their Upgrade

Ján Záhorec ^{a,*}, Alena Hašková ^b, Michal Munk ^b

^a Comenius University in Bratislava, Slovak Republic

^b Constantine the Philosopher University in Nitra, Slovak Republic

Abstract

In the paper there are presented results of a research inquiry of current state and perspectives of primary and lower level of secondary school teachers' professional development (ISCED1 – ISCED3) in Slovakia with a focus on improvement and further development of their didactic technological competences. In frame of the presented research significance of the use of the digital means and various interactive educational activities in teaching processes to increase the efficiency of education was assessed. This significance was assessed from the point of view of different aspects of the education process. Analysis of the specified aspects of the teaching process, from the point of view of which the contribution of the use of the digital means in teaching processes, was done on the basis of a screening of teachers' opinions, in dependence on the segmentation factors sub-category of the teaching staff and length of teaching practice of the teacher.

Keywords: teacher training, teacher continuous education, teacher professional profile, didactic technological competences, digital technologies.

1. Introduction

Research done over the last 40 years about the impact of computer and digital technologies on teaching and learning processes and students' learning achievements proves their positive influence on various aspects of education. As it is presented in the literature review study commissioned by the Scottish Government (2015) there are many research projects which indicate that digital didactic means can support and contribute to specific educational priorities as raising attainment, tackling inequalities and promoting inclusion, improving transitions into employment, enhancing parental engagement, and improving the efficiency of the education system. More qualitative studies have identified how improvements in attainment are achieved. From a wide study of primary and secondary schools in England that were early adopters in using digital

* Corresponding author

E-mail addresses: zahorec@fedu.uniba.sk (J. Záhorec)

learning and teaching, Jewitt *et al.* (2011) concluded that using digital educational resources provided learners with more time for active learning in the classroom; with more opportunity for active learning outside the classroom, as well as providing self-directed spaces, such as blogs and forums, and access to games with a learning benefit; with opportunities to choose the learning resources; the resources provided safer spaces for formative assessment and feedback. Beside that technology engages and motivates young people (Higgins *et al.*, 2012). Research done by Chien *et al.* (2014) has shown that students in school are having high expectation on ICT integration in classroom as the new generation are born and grown with technologies and could be define as the digital – native phenomenon. The younger the students, the higher their expectation are on ICT integration in classroom (Ghavifekr, Rosdy, 2015). To the integration of mobile technologies and web applications into education a number of other other researches point, too (Aljraiwi, 2017; Karsenti, Fievez, 2013; Montrieux *et al.*, 2015; Kongsgården, Krumsvik, 2016).

The European Union is also aware of the need to synchronize education with the social and cultural context of the reality we are living in. This is why it places considerable emphasis on the use of technology in education, as the social and cultural bases of education are strongly influenced by the rapid development of new technologies and the broad infiltration of information and communication technologies into each area of human life (EU, 2001; Králik, Tinley, 2017; Ambrozy *et al.*, 2017).

At the same time to the above mentioned, we have to be aware of the fact that the key factor to achieve any benefit resulting from the implementation and use of any technology at school are teachers (Černočová 2003; Chen *et al.*, 2009; Ghaith, Yaghi, 1997; Groff, Mouza, 2008). Use of digital didactic means in teaching (e.g. tablets or interactive boards) brings a meaningful pedagogical change to the classical classroom learning (Lewin *et al.*, 2008) but positive effects of the use of these means are depending on teachers' professional skills to use these means in school subjects they teach appropriately. Research from the authors Skutil *et al.* (2017) shows that most teachers use technology to extend visual perceptions (48 %) or as a supplement to interpretation as a backdrop (38 %). Other researches show that in relation to the teachers' professional performance technology has become a carrier or source of interpretation and testing tool (Krumsvik *et al.*, 2013; Krumsvik *et al.*, 2016).

Integrating innovative technology during classroom practices inevitably demands teachers to acquire new technological and pedagogical skills (Clark, Luckin, 2013). According to research of Montrieux *et al.* (2015), teachers need skills to be able to transform the learning content, the so-called Technological Pedagogical Content knowledge (TPACK) (Koehler, Mishra, 2009). It is not whether technology is used (or not) which makes the difference, but how well the technology is applied by teachers to support teaching and learning processes. Definitely it is the teacher who ultimately influences the enhancement of the learning environment and how the studies show (O'Malley *et al.*, 2013), the better training in this field teachers undergo, the greater achievements they will obtain.

2. Background of the research and its goals

Didactic technological competences have been an integral part of the professional competence profile of a teacher, abstractedly from the subject the teacher has been teaching. In general, these competences can be defined as teacher's skills to use material and technical teaching means in teaching processes of the school subject s/he teaches. It is clear that content of these competences has been time depending and while in the past it was changing only slowly, currently, under the influence of the rapid development of the digital technologies, it is changing very fast. With respect to the newest digital technologies, didactic technological competences of a teacher can be defined as her/his professional digital literacy skills to use digital teaching tools and their applications in real practice of education of the taught subject.

Main goal of the presented research was to identify requirements and needs of the practicing (in-service) teachers' for upgrading their professional digital literacy skills (i.e. their didactic technological competences). The identification of the requirements and needs was based on the screening survey of the teachers' opinions about significance of the use of various interactive means in teaching process for selected specific aspects of education. Additional to that, also monitoring of the ways the teachers use interactive educational activities and digital means in their teaching practice was included into the screening survey.

3. Research sample and methodology of the research

Research sample of the carried out screening survey consisted of 173 teachers – participants of teacher continuous education. These were primary and secondary school teachers representing primary and secondary schools in three of eight regions of Slovakia (Nitra region, Trnava region and Bratislava region). A detailed description of the research sample is summarized in Table 1. As main characteristics to describe composition of the research sample were used the factors gender, lengths of the teacher's teaching practice and category and sub-category of the teaching staff to which the concerned teacher belongs according to the legislation rules. Slovak legislation (Law No. 317/2009 on Teaching Staff and Specialists and its Amendments) distinguishes 7 categories of the teaching staff, which are teacher, vocational education teacher (supervisor), governess, teacher assistant, foreign lecturer, sport school/classroom trainer, accompanist, and in relation to the regional schools (ISCED1 – ISCED3) it categorizes teachers in three sub-categories, which are (a) *primary education teacher*, (b) *lower secondary education teacher* and (c) *upper secondary education teacher*.

Table 1. Description of the research sample

Factor	Factor category value	Absolute number	Relative number
Gender	male	15	8.67 %
	female	158	91.33 %
Length of teaching practice	up to 5 years (including)	46	26.59 %
	from 5 up to 20 years (incl.)	87	50.29 %
	more than 20 years	40	23.12 %
Category of the teaching staff	teacher	156	90.17 %
	governess	17	9.83 %
Sub-category of the teaching staff	teacher of primary level of education (ISCED 1)	68	43.59 %
	teacher of lower level of secondary education (ISCED 2)	69	44.23 %
	teacher of upper level of secondary education (ISCED 3)	19	12.18 %

As Table 1 shows, from the total number of the 173 research sample members 68 of them were teachers of primary level of education (ISCED 1), 69 were teachers of lower level of secondary education (ISCED 2) and 19 of them were teachers of upper level of secondary education (ISCED 3). It can be also seen that a half of the research sample (50.29 %) were teachers with pedagogical practice from 5 to 20 years.

To screen the teachers' opinions about significance of the use of various interactive means in teaching process for selected specific aspects of education and to monitor the ways in which the teachers use interactive educational activities and digital means in their teaching practice a questionnaire was created, which the members of the research sample – the groups of the primary and secondary school teachers attending the teacher continuous education – were asked to fulfil.

In the questionnaire the respondents of the screening survey (members of the research sample) expressed their opinions and assessments to the use of various interactive educational activities and digital means in teaching processes taking into consideration different aspects of the teaching process. The assessment was done through a four-point scale, i.e. by assessments from 1 to 4 points (1 – *insignificant, unimportant, without any influence*, 2 – *rather insignificant, rather unimportant, rather without influence*; 3 – *rather significant, rather important, rather with influence*, 4 – *significant, important, with influence*). A choice of the neutral, emotionally indifferent attitude towards the given questions/statements was not included because we wanted

to force the respondents to express themselves clearly and exactly. Each respondent's response to the particular ordinary items was recorded, i.e. we recorded the scale values by which the respondent evaluated impact of the interactive educational activities and digital means on the selected aspects (components) of the teaching process (the level of his/her agreement or disagreement with the given statements on the observed phenomena, or the positive or negative assessment stated at the particular item). The selected aspects of the teaching process are presented in Table 2. De facto in Table 2 presented thirteen aspects C1 – C13 represent the particular questionnaire items.

Table 2. Overview of the teaching process aspects in relation to which contribution of the use of the interactive education activities and digital means to increase teaching efficiency was observed

Aspect	Observed phenomenon
C1	<i>increase of pupils` motivation</i>
C2	<i>increase of pupils` interest in the taught subject</i>
C3	<i>increase of pupils` activity during the lesson</i>
C4	<i>development of pupils` creativity</i>
C5	<i>pupils` easier understanding of the presented new subject matter</i>
C6	<i>longer-term retention of the presented subject matter</i>
C7	<i>increase of the pupils` skills to apply the acquired knowledge in practical task solving</i>
C8	<i>increase of the taught subject popularity (favour)</i>
C9	<i>increase of pupils` mutual co-operation</i>
C10	<i>increase of pupils` "spirit of competitiveness"</i>
C11	<i>positive influence on pupils` disciplined behaviour</i>
C12	<i>increase of the positive classroom climate</i>
C13	<i>development of pupils` digital literacy</i>

In the next questionnaire item the respondents were to mark from the offered item menu maximum three from seven software applications (or from six given as the seventh alternative answer was open-ended giving the respondents a possibility to state some other, by them used, software product), which they use most often to create their own interactive educational activities for their pupils. In the menu following software applications were listed:

- a) ActivInspire
- b) Flow!Works
- c) SMART Notebook
- d) Prezi
- e) Mindomo
- f) FreeMind

In relation to the „most often used“ applications they were asked to specify „rank“ of these three most often used means (by marking their position I, II, III, where I was for the most often used one).

Of course, we were aware of the fact, that not all teachers create their own teaching materials of this kind. To avoid any misleading, untrue responses of the respondents, additionally to the above-mentioned possibilities of the responses (a – f), there were included three another alternative possibilities (g – i) to respond to this question, and these were:

g) I do not create my own interactive educational activities for pupils but I use some taken over from open sources or from my colleagues.

h) I do not create my own interactive educational activities for pupils but I take over some from open sources or from my colleagues and modify them.

i) I do not create any interactive educational activities and I neither use any.

The questionnaire was designed with the view of enabling to transfer teaching qualitative aspects, related to the use of selected software applications and digital teaching objects, into the quantitative ones, what opens broader evaluation possibilities based on the use of different

methodologies of the quantitative oriented research (Alt, 2018; Bray, Tangney, 2017; Aleandri, Refrigeri, 2014; Brooks et al., 2014).

At the same time with the development of the questionnaire, questionnaire administration and evaluation rules were elaborated, too.

The questionnaire administration lasted from October 2018 till February 2019. The total number of the addressed teachers, participants or the continuous teacher education was 210, but from this number only 173 responded or fulfilled the distributed questionnaire completely. So the questionnaire response rate was 83.3 %, what also proves topicality and usefulness of the solved issue.

4. Data processing

Evaluation of the teachers' assessments of the use of the interactive educational activities and digital means in teaching processes to increase its efficiency was analysed according the sub-categories the teachers belong to and according the length of their teaching practice. So we had to analyse divergences of the average values of the scores of the respondents assessments given the aspects C1 – C13 aimed at assessment of the significance of the use of various interactive educational activities and digital means in teaching processes to increase its efficiency in dependence to the factor SUB-CATEGORY OF THE TEACHING STAFF and the factor LENGTH OF TEACHING PRACTICE.

The above mentioned means that in frame of the statistical processing of the collected research data, 13 particular null hypotheses, connected with the 13 aspects C1 – C13 presented in Table 2 (components of the teaching process), were tested. Ones they were tested in dependence on the factor SUB-CATEGORY OF THE TEACHING STAFF and the second time in dependence on the factor LENGTH OF TEACHING PRACTICE.

In general the null hypothesis (representing all 13 particular hypotheses) for the case of testing the first dependence was:

Ho: Respondents' assessments of the significance of the use of various interactive educational activities and digital means in teaching processes for the selected specific aspect of education C_i ($i = 1 - 13$) C does not depend on the level of the factor SUB-CATEGORY OF THE TEACHING STAFF.

And the null hypothesis (again representing relevant 13 particular hypotheses) for the case of testing the second dependence was:

Ho: Respondents' assessments of the significance of the use of various interactive educational activities and digital means in teaching processes for the selected specific aspect of education C_i ($i = 1 - 13$) C does not depend on the level of the factor LENGTH OF TEACHING PRACTICE.

The particular null hypotheses in both cases were tested on the 5 % significance level through both parametric and nonparametric tests.

As to the questionnaire item C14, collected data at this item were evaluated based on the absolute and relative frequencies recorded at particular alternative responses both in differentiation of the stated rank as well as without this differentiation (i.e. based on the cumulative frequencies of the recorded responses without their differentiation into the groups according the stated ranks).

5. Results and discussion

Dependence of the research data on the factor SUB-CATEGORY OF THE TEACHING STAFF

At first we tested dependence of the respondents' assessments of the given aspects of education C1 – C13 on the segmentation factor of the respondents which was SUB-CATEGORY OF THE TEACHING STAFF.

The general null hypothesis to test the dependence of the research data on the factor SUB-CATEGORY OF THE TEACHING STAFF was

Ho: Respondents' assessments of the significance of the use of various interactive educational activities and digital means in teaching processes for the selected specific aspect of education C_i ($i = 1 - 13$) C does not depend on the level of the factor SUB-CATEGORY OF THE TEACHING STAFF

and in frame of this general hypothesis 13 particular null hypothesis for the teaching aspects C1 – C13 (components of the teaching process) given in Table 2 were tested in successive steps.

Following results of one-way ANOVA as well as its nonparametric alternative Kruskal-Wallis ANOVA null hypotheses were not rejected in case of the variables (aspects) C1 (*increase of pupils` motivation*), C2 (*increase of pupils` interest in the taught subject*), C3 (*increase of pupils` activity during the lesson*), C4 (*development of pupils` creativity*), C7 (*increase of the pupils` skills to apply the acquired knowledge in practical task solving*), C8 (*increase of the taught subject popularity/favour*), C9 (*increase of pupils` mutual co-operation*), C10 (*increase of pupils` “spirit of competitiveness”*) and C13 (*development of pupils` digital literacy*), i.e. these variables do not depend on the factor SUB-CATEGORY OF THE TEACHING STAFF. Statistical dependence was proved only for the items C5 (*pupils` easier understanding of the presented new subject matter*), C6 (*longer-term retention of the presented subject matter*), C11 (*positive influence on pupils` disciplined behaviour*) and C12 (*increase of the positive classroom climate*). Descriptive statistics of the final score of the respondents assessments given to these variables (aspects C5, C6, C11, C12) are presented in Table 3 which comprises more detailed statistical view on the examined issues in dependence on the segmentation of the respondents – teachers into one of the four above-mentioned categories, (*primary education teacher* (a), *lower secondary education teacher* (b) and *upper secondary education teacher* (c)). Moreover in the table there are presented also descriptive statistics (values of the mean, standard deviation, standard error of the mean estimate and 95 % confidence interval for the average value of the scale of the final score) of the given factors overall, i.e. for the whole research sample, without any segmentation of the respondents on the factor SUB-CATEGORY OF THE TEACHING STAFF (TS-Cat).

Table 3. Descriptive statistics of the aspects (components of education) C5, C6, C11 and C12

Aspect C5	Factor value	N	Mean	Standard deviation	Standard error	Confidence Interval for the Mean	
						-95.00 %	+95.00 %
Total		173	3.329	0.611	0.046	3.238	3.421
TS-Cat	a	85	3.459	0.524	0.057	3.346	3.572
TS-Cat	b	69	3.203	0.632	0.076	3.051	3.355
TS-Cat	c	19	3.211	0.787	0.181	2.831	3.590

Aspect C6	Factor value	N	Mean	Standard deviation	Standard error	Confidence Interval for the Mean	
						-95.00 %	+95.00 %
Total		173	3.225	0.674	0.051	3.124	3.327
TS-Cat	a	85	3.388	0.599	0.065	3.259	3.518
TS-Cat	b	69	3.072	0.649	0.078	2.917	3.228
TS-Cat	c	19	3.053	0.911	0.209	2.613	3.492

Aspect C11	Factor value	N	Mean	Standard deviation	Standard error	Confidence Interval for the Mean	
						-95.00 %	+95.00 %
Total		173	2.699	0.910	0.069	2.563	2.836
TS-Cat	a	85	2.965	0.837	0.091	2.784	3.145
TS-Cat	b	69	2.449	0.916	0.110	2.230	2.670
TS-Cat	c	19	2.421	0.902	0.207	1.987	2.856

Aspect C12	Factor value	N	Mean	Standard deviation	Standard error	Confidence Interval for the Mean	
						-95.00 %	+95.00 %
Total		173	2.821	0.920	0.070	2.683	2.959
TS-Cat	a	85	3.000	0.873	0.096	2.812	3.188
TS-Cat	b	69	2.623	0.925	0.111	2.4009	2.845
TS-Cat	c	19	2.737	0.991	0.227	2.259	3.215

Results of the dot estimation of the average scores of the assessments of the particular aspects` significance show that the group of the respondents – *primary education teachers* (a) in comparison to other two group of the respondents, *lower secondary education teachers* (b) and *upper secondary education teachers* (c), responded to all of the four tested education components (C5, C6, C11 a C12) more positively. Average values of the scores of the respondents' assessments of the C5, C6, C11 and C12 education components significance are from the scale range 2 (*rather insignificant*) – 4 (*definitely significant*) from the maximal scale value 4, while majoritarian part of these components (aspects) was evaluated by the respondents on the level *rather significant* (scale value 3). The tabulation (Table 3) of the results of the respondents' assessments of the level of the influence of the use of interactive educational activities and digital means on the specific aspects of education C5, C6, C11, C12 shows that the lowest average score was recorded in case of the aspect C11 at which the respondents expressed their opinions on the positive influence of the use of interactive educational activities and digital means on pupils` disciplined behaviour. According to the group of the respondents – *upper secondary education teachers* (c) the intervention of the interactive educational activities and digital means into the education process has not any adequate influence on the positive behaviour affecting at teaching time (2.42). The achieved results have been quite surprising as there were expected more positive opinions of the respondents in the context of the observed means influence on this aspect of education. However the obtained result can be a consequence of the age category of the upper secondary school pupils and the relevant ways of teaching the teachers use in relation to this age category of the educants.

On the contrary, the highest average score was recorded at the aspects C5 (3.46) and C6 (3.39) in case of the group of the respondents – *primary education teachers*. The results indicate that the teaching has an object-lesson and attractive character for the pupils of the respective age category (based on the given possibility to enter actively into the object lesson teaching to both the teacher and the pupils).

In general quite satisfactory finding is the fact that the average score values obtained at the particular groups of the respondents for all the items was not bellow the scale value 2.

Final standard deviation values of the respondents' assessments of the particular aspects C5, C6, C11 and C12 are not much different. The confidence interval estimation for the mean score values of the particular aspects ranged from the value 1.99 even to the value 3.59. In frame of the used scale this means evaluation of the significance of the intervention of the interactive educational activities and digital didactic means in the teaching process in range from *rather insignificant* up to *definitely significant*.

To look at the obtained statistical results in more detail, the most heterogeneous responses were recorded at the aspect C12 in case of the group of the respondents – *upper secondary education teachers*. The achieved standard deviation value 0.99 means the greatest heterogeneousness of this group of the teaching staff in their statements related to the significance of the pedagogical intervention of interactive educational activities and attractive electronic teaching materials into the upper secondary education (ISCED 3) to increase the positive classroom climate during the lesson. All the same a higher heterogeneousness of the responses occurred also in case of the assessment of the aspect C12 (standard deviation 0.93) and C11 (standard deviation 0.92) done by the *lower secondary education teachers*. Based on the interval estimation of the means, the score average values of the responses to these components ranged from the value 2.56 even to the value 3.21 (aspect C12 assessed by the respondents – *upper secondary education teachers*), from 2.40 to 2.85 (aspect C12 assessed by the *lower secondary education teachers*), from 2.23 to 2.67 (aspect C11 assessed by *lower secondary education teachers*).

The lowest value of the standard deviation (0.52 and 0.60 respectively) was found out at the assessments of the aspects C6 (range 3.26 – 3.52) and C5 (range 3.35 – 3.57) done the group of the respondents – *primary education teachers*. This means the lowest variability of the given statements to the specified teaching aspects given by the sub-category of the teaching staff *primary education teachers*. In case of the given group at assessments of these aspects there was recorded also the lowest value of the average score (C5 – 3.46; C6 – 3.39).

After the rejection of the null hypothesis, we were interested whether there are or there are not statistically significant differences among the assessments of the aspects C5, C6, C11 and C12 stated by the particular groups of the respondents in dependence on the factor SUB-CATEGORY

OF THE TEACHING STAFF, and if yes, then between which levels (particular sub-categories) of this factor they occur.

Identification of the homogeneous groups in dependence on the factor SUB-CATEGORY OF THE TEACHING STAFF was done by means of the multiple comparison of the particular couples of the teaching staff sub-categories. In frame of each of the tested components C5, C6, C11 a C12 two homogeneous groups were identified. Overview of the relevant results is presented in Table 4.

Table 4. Identification of the homogeneous groups

Factor	Aspect C5			Factor	Aspect C6		
TS-Cat	Mean	1	2	TS-Cat	Mean	1	2
b	3.20	****		c	3.05	****	
c	3.21	****	****	b	3.07	****	
a	3.46		****	a	3.39		****

Factor	Aspect C11			Factor	Item C12		
TS-Cat	Mean	1	2	TS-Cat	Mean	1	2
c	2.42	****		b	2.62	****	
b	2.45	****		c	2.74	****	****
a	2.96		****	a	3.00		****

Based on the multiple comparison (Table 4) statistically significant differences were identified between the categories of the teaching staff *primary education teacher* (a) and the rest of the categories, i.e. *lower secondary education teacher* (b), *upper secondary education teacher* (c), in case of the items C6 and C11. In case of the items C5 and C12 statistically significant differences were identified only between the categories of the teaching staff *primary education teacher* (a) and *lower secondary education teacher* (b) of the factor SUB-CATEGORY OF THE TEACHING STAFF. Statistically significant differences among the assessments of the respondents to the given components in frame of the particular homogeneous groups were not proved. In frame of the identified homogeneous groups the respondents of the particular group (teaching staff sub-category), regardless of the factors GENDER, LENGTH OF TEACHING PRACTICE, CATEGORY OF THE TEACHING STAFF – *teacher* or *governess*, responded to each of the four observed aspects (education components C5, C6, C11, C12) more or less identically. At each of the four observed aspects the group of the respondents of the SUB-CATEGORY OF THE TEACHING STAFF *lower secondary education teacher* (b) achieved the total mean even identical to the final mean of the group of the respondents of the SUB-CATEGORY OF THE TEACHING STAFF *upper secondary education teacher* (c).

With respect to the identified normality variance, assumption of the variance equality for one-way ANOVA was tested by means of the non-parametric Levene’s test. Results of this test did not proved failure of the assumption of the variance equality for any of the observed items C1 – C13.

Not to decrease standard of the statistical test proofs in relation to the obtained research data, there was applied also a non-parametric alternative to one-way ANOVA, which is Kruskal-Wallis ANOVA. As the results were the same, they can be taken as robust.

Test results of the aspects C5, C6, and C11, C12, i.e. of the relevant given aspects of the teaching process, according to the factor SUB-CATEGORY OF THE TEACHING STAFF are visualised at the graphs of the mean and interval estimation (Figure 1 and Figure 2). As the range of the interval estimation of the scale value mean for the aspect C5 (*pupils` easier understanding of the presented new subject matter*) shows (Figure 1), the most homogeneous assessments of the respondents were recorded at the group of the respondents – *primary education teachers* (a). On the contrary, *lower secondary education teachers* (b) and *upper secondary education teachers* (c) assessed the given aspects comparatively heterogeneously. Similar situation can be seen also in case of the teachers’ reactions related to the aspect C6 (*longer-term retention of the presented subject matter*).

Results of the repeated measure analysis (Table 4) confirmed statistical significance of the assessment differences among the categories *primary education teacher* (a) and *lower secondary education teacher* (b) of the factor SUB-CATEGORY OF THE TEACHING STAFF for the aspect C5. This is proved also in Figure 1, in which the interval estimations of the scale value mean in case of the respondent group – *primary education teachers* (a) and the respondent group – *lower secondary education teachers* (b) do not overlap, or they overlap only partially. By contrast, it does overlap in case of the group of the respondents – *upper secondary education teachers* (c) with the two other groups (*primary education teachers* (a) and *lower secondary education teachers* (b)), between which statistically significant differences in the respondents' assessments were not proved.

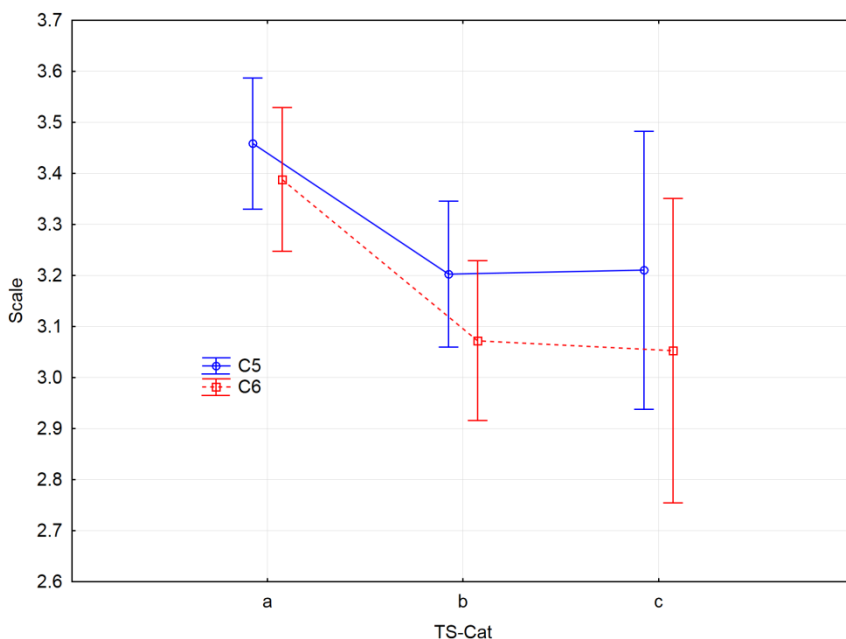


Fig. 1. Dot and interval estimation of the assessments stated at the aspects C5 and C6 in dependence on the factor SUB-CATEGORY OF THE TEACHING STAFF

Identification of the homogeneous groups in case of the specified teaching aspects C11 – *positive influence on pupils' disciplined behaviour* and C12 – *increase of the positive classroom climate* according to the SUB-CATEGORY OF THE TEACHING STAFF factor category value is visualised by the graph of the mean and interval estimation in Figure 2.

From the point of view of the respondent differentiation according to their affiliation to some of the SUB-CATEGORY OF THE TEACHING STAFF factor value, the highest mean score value at the assessment of the both education components (aspects C11 and C12) was recorded at the group of the respondents – *primary education teachers* (a). At this teaching staff group the value of the total mean reached significantly the highest value, what is 2.96 (C11) or 3.00 (C12) respectively. From the range of the interval estimation of the scale value mean at both of these components it can be seen that the most homogeneous assessments of the three tested variables were recorded just in case of this group of the respondents. On the contrary, comparatively more heterogeneous assessments were recorded in case of the group of the respondents – *lower secondary education teachers* (b) as well as in case of the group of the *upper secondary education teachers* (c).

Test results proved statistical significance of the assessment differences in case of the aspect C11 between the group of *primary education teachers* (a), what is the case of the second homogeneous group, and the other two observed groups – *lower secondary education teachers* (b) and *upper secondary education teachers* (c), i.e. the first homogenous group. This can be seen also in the graphical visualisation of the whole situation in Figure 2, where the interval estimation of the scale value mean in case of the group of the respondents – *primary education teachers* (a) does not overlap, or it overlaps only partially, with the two other tested groups, i.e. with the group of the respondents – *lower secondary education teachers* (b) and the group of the respondents – *upper*

secondary education teachers (c). On the contrary, the graphs overlap in case of the respondent groups *upper secondary education teachers (c)* and *lower secondary education teachers (b)*, between which the statistically significant differences were not proved. In frame of the mentioned homogeneous groups respondents assessed this aspects of education almost in the same way.

As to the statistical significance of the differences between the assessments, the same situation as was recorded at the aspect C5, was identified also at the aspect C12, i.e. significant differences between the assessments given by the respondents of the *primary education teachers* group (a) and the *lower secondary education teachers* group (b) were recognized also in case of the aspect C12 (Figure 1). This fact is visible also on the graphical visualisation presented in Figure 2, where the interval estimation of the scale value mean for the group of the respondents *primary education teachers* (a) does not overlap just only with the value of the tested factor SUB-CATEGORY OF THE TEACHING STAFF *lower secondary education teacher* (b). On the contrary, in case of the group of the respondents *upper secondary education teachers* (c) it overlaps with both other tested values of the factor – *lower secondary education teachers* (b) and *primary education teachers* (a), between which no statistically significant differences of the respondents' assessments were proved.

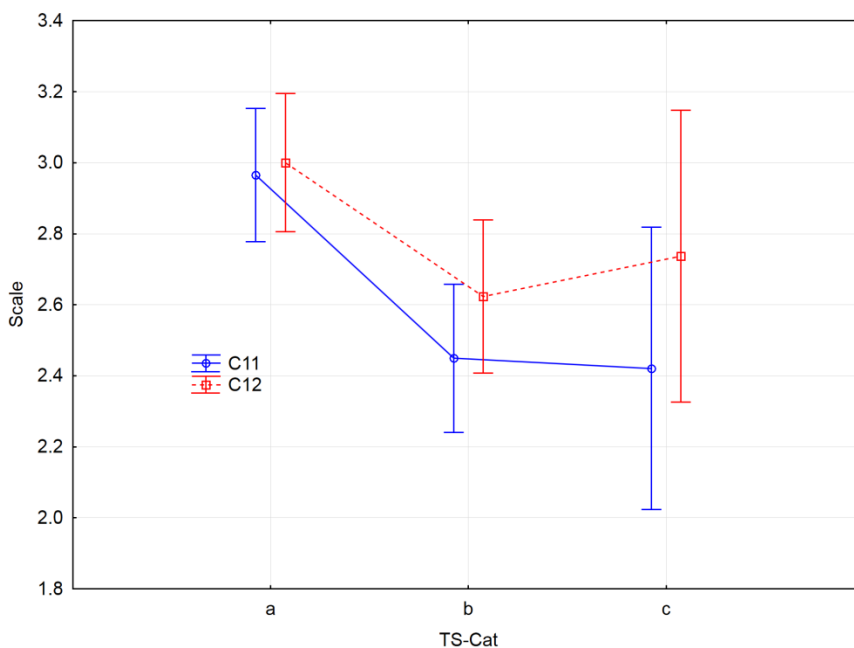


Fig. 2. Dot and interval estimation of the assessments stated at the aspects C11 and C12 in dependence on the factor SUB-CATEGORY OF THE TEACHING STAFF

Dependence of the research data on the factor LENGTH OF TEACHING PRACTICE

Further we tested dependence of the respondents' assessments of the given aspects of education C1 – C13 on the other segmentation factor of the respondents, and that was LENGTH OF TEACHING PRACTICE (factor LTP). This means that the attention was given to divergences of the mean score values of the respondents' assessments of the significance of the pedagogical intervention of various interactive educational activities and digital teaching facilities to increase efficiency of the specified aspects C1 – C13 in dependence on the respondents' length of teaching practice. According this segmentation factor three groups of respondents (values of the LTP factor) were differentiated, and these according Table 1 were: (a) *pedagogical employees with the length of teaching practice up to 5 years (including)*, (b) *pedagogical employees with the length of teaching practice from 5 up to 20 years (including)* and (c) *pedagogical employees with the length of teaching practice more than 20 years*.

Tests of the general null hypothesis

Ho: Respondents' assessments of the significance of the use of various interactive educational activities and digital means in teaching processes for the selected specific aspect of

education C_i ($i = 1 - 13$) C does not depend on the level of the factor *LENGTH OF TEACHING PRACTICE*

concretized in successive steps for the given teaching aspects $C_1 - C_{13}$ did not reject any of the 13 particular null hypothesis.

Following the information presented in different professional literature sources (Kalaš, 2011; Clarke, Svanaes, 2014; Pešaković et al., 2014; Ifenthaler, Schweinbenz, 2013; Vanderlinde, van Braak, 2011; Adomavičius et al., 2004; Markauskaite, 2003) it was supposed that also this segmentation factor, factor *LENGTH OF TEACHING PRACTICE*, could influence in some way or even cause differentness of the assessments of the given aspects C_i stated by the relevant groups of teachers. But following the results of one-way ANOVA as well as its nonparametric alternative Kruskal-Wallis ANOVA null hypotheses were not rejected in case of all 13 variables (aspects $C_1 - C_{13}$), i.e. these variables do not depend on the factor *LENGTH OF TEACHING PRACTICE*. Results of the research data processing did not prove statistical dependence on the value of the factor variable *LENGTH OF TEACHING PRACTICE* for any of the aspects C_i . So it cannot be stated that the length of teachers' teaching practice would have any influence on differentness of the ways in which the teachers assess contribution of the pedagogical intervention of the interactive educational activities and digital means in teaching processes to the improvement of the observed selected teaching aspects (and consequently through them to teaching efficiency increase).

For the sake of brevity, as an example of the research data descriptive statistic processing and their evaluation, there are presented only results of several selected aspects C_i in detail in Table 5. Specifically there are presented results of the assessments of the aspects C_1 (*increase of pupils' motivation*), C_2 (*increase of pupils' interest in the taught subject*), C_5 (*pupils' easier understanding of the presented new subject matter*), C_8 (*increase of the taught subject popularity, its favour*), C_9 (*increase of pupils' mutual co-operation*), C_{11} (*positive influence on pupils' disciplined behaviour*) a C_{12} (*increase of the positive classroom climate*). Thereinafter we focus more only on a global interpretation of the results obtained within this part of the research.

Table 5. Results of the descriptive statistics of the aspects C_1 , C_2 , C_5 , C_8 , C_9 , C_{11} and C_{12}

Aspect C_1	Factor value	N	Mean	Standard deviation	Standard error	Confidence Interval for the Mean	
						-95.00 %	+95.00 %
Total		173	3.589595	0.527507	0.040106	3.510433	3.668758
LTP	a	46	3.695652	0.510754	0.075307	3.543977	3.847327
LTP	b	87	3.563218	0.521651	0.055927	3.452039	3.674397
LTP	c	40	3.525	0.554122	0.087614	3.347783	3.702217
Aspect C_2	Factor value	N	Mean	Standard deviation	Standard error	Confidence Interval for the Mean	
						-95.00 %	+95.00 %
Total		173	3.456647	0.633029	0.048128	3.361649	3.551646
LTP	a	46	3.521739	0.657914	0.097004	3.326363	3.717115
LTP	b	87	3.448276	0.605376	0.064903	3.319253	3.577299
LTP	c	40	3.4	0.671775	0.106217	3.185156	3.614844
Aspect C_5	Factor value	N	Mean	Standard deviation	Standard error	Confidence Interval for the Mean	
						-95.00 %	+95.00 %
Total		173	3.32948	0.61104	0.046457	3.237781	3.421178
LTP	a	46	3.369565	0.488021	0.071955	3.224641	3.514489
LTP	b	87	3.321839	0.673316	0.072187	3.178336	3.465342
LTP	c	40	3.3	0.607644	0.096077	3.105666	3.494334
Aspect C_8	Factor value	N	Mean	Standard deviation	Standard error	Confidence Interval for the Mean	
						-95.00 %	+95.00 %

Total		173	3.358382	0.61842	0.047018	3.265576	3.451187
LTP	a	46	3.304348	0.591404	0.087198	3.128723	3.479973
LTP	b	87	3.402299	0.655208	0.070246	3.262655	3.541943
LTP	c	40	3.325	0.572332	0.090494	3.141959	3.508041

Aspect C9	Factor value	N	Mean	Standard deviation	Standard error	Confidence Interval for the Mean	
						-95.00 %	+95.00 %
Total		173	2.815029	0.777896	0.059142	2.698291	2.931767
LTP	a	46	2.76087	0.873938	0.128855	2.501342	3.020397
LTP	b	87	2.908046	0.772073	0.082775	2.743495	3.072597
LTP	c	40	2.675	0.655842	0.103698	2.465252	2.884748

Aspect C11	Factor value	N	Mean	Standard deviation	Standard error	Confidence Interval for the Mean	
						-95.00 %	+95.00 %
Total		173	2.699422	0.909798	0.069171	2.562889	2.835955
LTP	a	46	2.869565	0.832898	0.122804	2.622225	3.116906
LTP	b	87	2.724138	0.984646	0.105565	2.514281	2.933994
LTP	c	40	2.45	0.782829	0.123776	2.199639	2.700361

Aspect C12	Factor value	N	Mean	Standard deviation	Standard error	Confidence Interval for the Mean	
						-95.00 %	+95.00 %
Total		173	2.820809	0.919571	0.069914	2.68281	2.958809
LTP	a	46	2.782609	0.96409	0.142147	2.496309	3.068908
LTP	b	87	2.816092	0.958787	0.102793	2.611747	3.020437
LTP	c	40	2.875	0.790569	0.125	2.622164	3.127836

Average values of the scores of the respondents' assessments of all aspects C1 – C13 fall within the scale range 3 (*rather significant*) – 4 (*definitely significant*) from the maximal scale value 4. Even at nine of the 13 aspects (C1, C2, C3, C4, C5, C6, C7, C10 and C11) the highest assessment (mean) was achieved in case of the group of the respondents – *pedagogical employees with the length of teaching practice up to 5 years* (a), in case of 3 aspects (C8, C9 and C13) the highest assessment (mean) was achieved in case of the group of the respondents – *pedagogical employees with the length of teaching practice from 5 up to 20 years* (b), and in case of one aspect (C12) the highest average score value resulted from the assessments stated by the group of respondents – *pedagogical employees with the length of teaching practice more than 20 years* (c).

The lowest variability (standard deviation 0.49) was recorded at the assessments of the aspect C5 (range 3.22 – 3.51) done by the group of the respondents – *pedagogical employees with the length of teaching practice up to 5 years*. On the other hand the most heterogeneous assessments (standard deviation 0.98) were recorded in vase of the group of the respondents – *pedagogical employees with the length of teaching practice from 5 up to 20 years* and their assessment of the aspect C11 (range 2.51 – 2.93).

In general, results of this part of the research declared teachers' positive attitude towards the use of the modern technologies in education processes, and surprisingly they consider the impact of the use of these technologies in teaching on efficiency of the education to be very significant, and that independently on the length of their teaching practice. The teachers perceive the use of these didactical means in education as a contingency to increase *pupils' motivation* (C1 = 3.59) and *activity during the lesson* (C3 = 3.50) in an attractive and interest-holding way, and so totally as well to increase *pupils' interest in the taught subject* (C2 = 3.46). At the same time a very positive finding is that also the teachers with the length of their teaching practice above 20 years are aware of the fact that the use of modern (interactive/digital) technologies in education is currently a necessity due to the social pressure for individual's information and communication technology literacy.

Current state of the use of interactive and digital means in teaching at schools

Besides the already above presented items (focused on the education components C1 – C13), in the questionnaire designed for the purpose of our research survey there was included one additional questionnaire item to monitor and assess ways the (primary and secondary school) teachers use interactive educational activities and digital means in their teaching practice. In this item (C14) the respondents were asked to mark from the offered item menu maximum three from seven software applications, which they use most often to create their own interactive educational activities for their pupils (see in chapter 2, part methodology of the screening). In relation to the „most often used“ applications they were asked to specify „rank“ of these three most often used means (by marking their position I, II, III, where I was for the most often used one). Overview of the main results of this part of the research is summarised and presented in [Table 6](#).

For those teachers, who do use no of the offered software products or do not use any interactive means of teaching in their teaching practice, the questionnaire item C14 included three other alternatives to respond to this question (item C14), and these were:

g) I do not create my own interactive educational activities for pupils but I use some taken over from open sources or from my colleagues.

h) I do not create my own interactive educational activities for pupils but I take over some from open sources or from my colleagues and modify them.

i) I do not create any interactive educational activities and I neither use any.

From the research sample of 173 respondents, 39 teachers stated one of these responses (g – 23 = 13.29 %; h – 7 = 4.05%, i – 9 = 5.20 %) and the rest of them (134 = 77.47 %) specified at least one of the offered product as an application which they really do use in their teaching practice.

[Table 6](#) presents absolute and relative frequencies of the particular responses (according their statements on the rank I, II and III) of the whole research sample to the questionnaire item C14, without any differentiation of the respondents according to the factor SUB-CATEGORY OF THE TEACHING STAFF nor LENGTH OF TEACHING PRACTICE. Relative frequencies presented to each of the ranks I – III refer always to the sum of the absolute frequencies recorded to the corresponding rank.

Table 6. Frequencies of the respondents' responses to the question C14

Response	Frequencies – rank I		Frequencies – rank II		Frequencies – rank III	
	Absolute frequency	Relative frequency	Absolute frequency	Relative frequency	Absolute frequency	Relative frequency
a	73	54.48 %	25	20.00 %	27	21.43 %
b	9	6.72 %	29	13.00 %	17	13.49 %
c	22	16.42 %	10	8.00 %	17	13.49 %
d	4	2.98 %	10	8.00 %	11	8.73 %
e	14	10.45 %	20	16.00 %	28	22.22 %
f	12	8.95 %	31	24.00 %	26	20.64 %

Note to Table 6:

a – *ActivInspire*; b – *Flow!Works*; c – *SMARTNotebook*; d – *Prezi*; e – *Mindomo*; f – *FreeMind*; g – *I do not create my own interactive educational activities for pupils but I use some taken over from open sources or from my colleagues*; h – *I do not create my own interactive educational activities for pupils but I take over some from open sources or from my colleagues and modify them*; i – *I do not create any interactive educational activities and I neither use any*.

As the presented results show, the software application, which the teachers use most often to create various interactive teaching materials and learning activities for their pupils at primary and secondary schools, is unquestionably *ActivInspire* (see in [Table 6](#) frequency of its use recorded on each of the ranks I – III), used to whiteboard *ActivBoard*. To the second most often used application (see the same in [Table 6](#)) can be assigned two software products, and these are *FreeMind* and *Flow!Works*. In a less significant frequency the teachers use also *Mindomo*.

Results of this part of the research without differentiation of the ranks of the three most often used software applications stated by the respondents are graphically visualised in Figure 3. The total sum 100 % is related to the total sum of the statements at the given software applications (unles Table 6 without differentiation of the rank of their statements), and so – as the respondents could mark 1, 2 or 3 of the responses – the total sum does not represent the number of the respondents but the number of by them stated particular answers. The results presented in the graph altogether confirm the results.

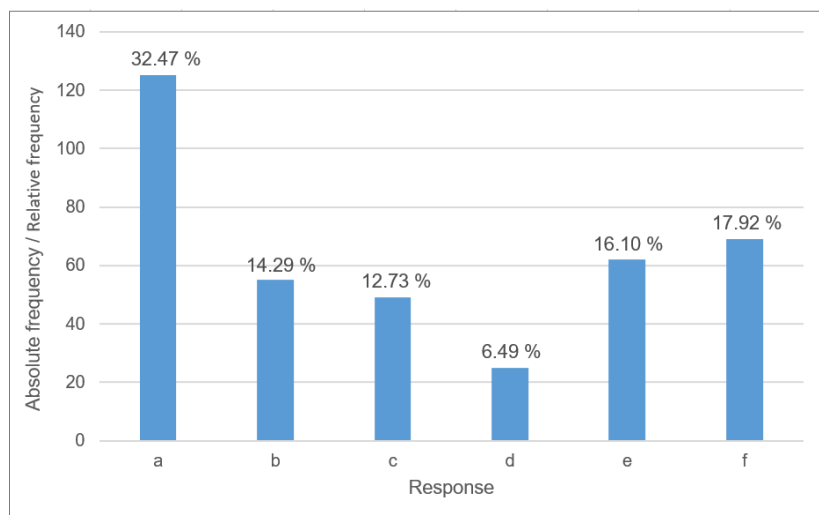


Fig. 3. Total frequencies of the particular responses to the question C14 on the most often used software applications

6. Conclusion

It is very beneficial for the pedagogical employees, if the institutions providing continual education of in-service teachers follow their current educational needs and respond to them offering the teachers adequate study programs or courses of further education. Of course, also the pre-graduate teacher training should respond to these needs, i.e. faculties of education should modified those parts of their teacher training study programs within which the didactic technological competences of the teacher trainees (as an integral part of the professional competence profile of a teacher) are formed and developed.

The results of the particular parts of the carried out research point out to current needs of primary and secondary school teachers regarding their professional digital literacy skills, i.e. in focus on which topics and issues they would need to upgrade these skills (and at the same time teaching of which topics and issues should be included or reinforced in the curricula of the tertiary teacher training study programs). As the results have showed, to these topics and issues belong mainly the use of software products *ActivInspire*, *FreeMind*, *Flow!Works* and *Mindomo* in teaching and learning processes. Moreover, it shows to be profitable to include more courses/study subjects devoted to the didactical and methodological preparation of teacher trainees in the use of the digital interactive means in teaching into their study programs.

To the situation in Slovakia, very similar situation is also in the Czech Republic. As Neumajer states (Neumajer, 2012), majority of the accredited courses of further continual education of teachers in the Czech Republic is aimed rather at acquiring elemental or advance skills to work with the digital technologies (in frame of the technological aspects of these means). But the teachers lack an adequate offer of courses aimed at methodological aspects of the use of these didactic means in education. Moreover there is also an absolute lack of education programs and courses which would present to the teachers object lesson practical examples how the modern interactive digital technologies can be used in teaching particular school subjects.

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References

- Adomavičius et al., 2004 – Adomavičius, J., Bareiša, E., Keršiene, V., Sekliuckis, V. (2004). Modernization of information technologies studies at university level. *Informatics in Education*, 3(1), 3-18.
- Aleandri, Refrigeri, 2014 – Aleandri, G., Refrigeri, L. (2014). Lifelong Education and Training of Teacher and Development of Human Capital. *Global conference on linguistics and foreign language teaching* (LINELT 2014). Elsevier. *Procedia – Social and Behavioral Sciences*, 136, 1-564.
- Aljraiwi, 2017 – Aljraiwi, S.S. (2017). The Effect of Classroom Web Applications on Teaching, Learning and Academic Performance among College of Education Female Students. *Journal of Education and Learning*, 6(2).
- Alt, 2018 – Alt, D. (2018). Science teachers' conceptions of teaching and learning, ICT efficacy, ICT professional development and ICT practices enacted in their classrooms. *Teaching and Teacher Education*, 73, July, 141-150. DOI: <https://doi.org/10.1016/j.tate.2018.03.020>
- Ambrozy et al., 2017 – Ambrozy, M., Valčo, M., Bhattarai, S. (2017). The Ethical Aspect of Scientific Interest in Selected Physical Theories. *Communications–Scientific Letters of the University of Žilina*, 4(19), 79-84.
- Bray, Tangney, 2017 – Bray, A., Tangney, B. (2017). Technology usage in mathematics education research – A systematic review of recent trends. *Computers & Education*, 114, November, 255-273.
- Brooks et al., 2014 – Brooks, E. P., Borum, N., Rosenørn, T. (2014). Designing Creative Pedagogies Through the Use of ICT in Secondary Education. *International Conference on Education & Educational Psychology 2013* (ICEEPSY 2013). *Procedia – Social and Behavioral Sciences*, Volume 112, 7 February 2014, 35-46.
- Clark, Luckin, 2013 – Clark W., Luckin R. (2013). What the research says iPads in the classroom. London: Institute of Education University of London.
- Clarke, Svanaes, 2014 – Clarke, B., Svanaes, S. (2014). An update literature review on the use of tablets in education Tablets for Schools. UK: Family Kids & Youth.
- Černochová, 2003 – Černochová, M. (2003). Příprava budoucích e-učitelů na e-instruction (Training of e-Teachers for an e-Instruction), Praha: ASIS.
- EU, 2001 – EU (2001). Report from the Commission of 31 January 2001: The concrete future objectives of education systems [Electronic resource]. URL: http://europa.eu/legislation_summaries/education_training_youth/general_framework/c11049_en.htm.
- Ghaith, Yaghi, 1997 – Ghaith, G., Yaghi, H. (1997). Relationships among experience, teacher efficacy, and attitude toward the implementation of instructional innovation. *Journal of Teaching and Teacher Education*, 13, 451-458.
- Ghavifekr et al., 2015 – Ghavifekr, S., Rosdy, W.A.W. (2015). Teaching and Learning with Technology: Effectiveness of ICT Integration in Schools. *International Journal of Research in Education and Science*, 1(2).
- Groff, Mouza, 2008 – Groff, J., Mouza, C.A. (2008). Framework for addressing challenges to classroom technology use. *AACE Journal*, 16, 21-46.
- Higgins et al., 2012 – Higgins, S., Xiao, Z., Katsipataki, M. (2012). The Impact of Digital Technology on Learning: A Summary for the Education Endowment Foundation (full report). UK: Durham University.
- Chen et al., 2009 – Chen, F.H., Looi, C.K., Chen, W. (2009). Integrating technology in the classroom: a visual conceptualization of teachers' knowledge, goals and beliefs. *Journal of Computer Assisted Learning*, 25(5): 470-88.
- Chien et al., 2014 – Chien, S.P., Wu, H.K., Hsu, Y.S. (2014). An investigation of teachers' beliefs and their use of technology based assessments. *Computers in Human Behavior*, 31, 198-210.

Ifenthaler, Schweinbenz, 2013 – Ifenthaler, D., Schweinbenz, V. (2013). The acceptance of Tablet-PCs in classroom instruction: The teachers' perspectives. *Computers in Human Behavior*, 29(3), 525-534.

Jewitt et al., 2011 – Jewitt, C. et al. (2011). The use of learning platforms to organise learning in English primary and secondary schools. *Learning, Media and Technology*.

Kalaš, 2011 – Kalaš, I. (2011). Spoznávame potenciál digitálnych technológií v predprimárnom vzdelávaní. Bratislava: Ústav informácií a prognóz školstva.

Karsenti, Fievez, 2013 – Karsenti, T., Fievez, A. (2013). The iPad in education: uses, benefits, and challenges – A survey of 6,057 students and 302 teachers in Quebec, Canada Montreal, QC: CRIFPE.

Koehler, Mishra, 2009 – Koehler, M.J., Mishra P. (2009). What is technological pedagogical content knowledge? *Contemporary Issues in Technology and Teacher Education*, 9(1), 60-70.

Kongsgården, Krumsvik, 2016 – Kongsgården, K., Krumsvik, R.J. (2016). Use of tablets in primary and secondary school – a case study. *Nordic Journal of Digital Literacy*, 04(11).

Králík, Tinley, 2017 – Králík, R., Tinley, S.J. (2017). Kierkegaard's ethics as an answer to human alienation in technocratic society. *Communications-Scientific Letters of the University of Žilina*, 1(19): 25-29.

Krumsvik et al., 2013 – Krumsvik, R.J., Egelandstal, K., Sarastuen, N.K., Jones, L.Ø., Eikeland, O.J. (2013). Sammenhengen mellom IKT-bruk og læringsutbytte (SMIL) i videregående opplæring. [The relationship between ICT use and learning outcomes (SMIL) in secondary education]. Oslo: Kommunesektorens organisasjon (KS).

Krumsvik et al., 2016 – Krumsvik, R.J., Jones, L.Ø., Øfstegaard, M., Eikeland, O.J. (2016). Upper Secondary School Teachers' Digital Competence: Analysed by Demographic, Personal and Professional Characteristics. *Nordic Journal of Digital Literacy*, 11(3): 143-164. DOI: 10.18261/issn.1891-943x-2016-03-02

Law No. 317/2009 – Law No. 317/2009 on Teaching Staff and Specialists and its Amendments [Electronic resource]. URL: <https://www.minedu.sk/data/att/2918.pdf>

Lewin et al., 2008 – Lewin, C., Somekh, B., Steadman, S. (2008). Embedding interactive whiteboards in teaching and learning: The process of change in pedagogic practice. *Education and Information Technologies*, 13(4), 291-303.

Literature Review... – Literature Review on the Impact of Digital Technology on Learning and Teaching – Research Finding. Scottish Government.

Markauskaite, 2003 – Markauskaite, L. (2003). Critical review of research findings on information technology in education. *Informatics in Education*, 2(1), 65-78.

Montrieux et al., 2015 – Montrieux, H., Vanderlinde, R., Schellens, T., De Marez, L. (2015). Teaching and Learning with Mobile Technology: A Qualitative Explorative Study about the Introduction of Tablet Devices in Secondary Education. *PLoS ONE* 10(12): e0144008. DOI: <https://doi.org/10.1371/journal.pone.0144008>

Neumajer, 2012 – Neumajer, O. (2012). Další vzdělávání učitelů v oblasti ICT. Metodický portál [5. 6. 2012]. Dostupné z: <http://spomocnik.rvp.cz/clanek/16139/dalsi-vzdelavani-ucitelu-v-oblasti-ict.html>

O'Malley et al., 2013 – O'Malley, P. et al. (2013). Effectiveness of Using iPads to Build Math Fluency.

Pešaković et al., 2014 – Pešaković, D., Flogie, A., Aberšek, B. (2014). Development and Evaluation of a Competence-based Teaching process for Science and Technology Education. *Journal of Baltic Science Education*, 13(5), 740-755.

Skutil et al., 2013 – Skutil, M., Manénová, M., Čermáková, L. (2013). ICT as a Didactic Tool and Its Use in the Educational Process. *International Journal of e-Education, e-Business, e-Management and e-Learning*, 3(4), August.

Vanderlinde, R., van Braak, 2011 – Vanderlinde, R., van Braak, J. (2011). A New ICT Curriculum for Primary Education in Flanders: Defining and Predicting Teachers' Perceptions of Innovation Attributes. *Journal of Educational Technology & Society*, 14(2), 124-35.



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Factorial Analysis to Measure Anxiety towards Mathematics: an Empirical Study in High School

Teresa Zamora-Lobato ^a, Arturo García-Santillán ^{b,*}, Violetta S. Molchanova ^c

^a Universidad de Xalapa, Mexico

^b Universidad Cristóbal Colón, Campus Calasanz, Mexico

^c International Network Center for Fundamental and Applied Research, Washington, USA

Abstract

The aim of study focused in identify if there are a set of variables that explain the level of anxiety towards mathematics in Telebachillerato students. For this, the test designed by Muñoz and Mato-Vázquez (2007) was used. The test comprises by 24 items with 5 dimensions. In order to get data, were surveyed 201 regular students enrolled in the academic year 2018. The reliability and internal consistency of the instrument is $\alpha = 0.7921$ in this study. The main findings show that the level of anxiety towards mathematics in the students is generated into the institution because the evaluations and their temporality are given precisely in the classrooms where numbers and mathematical operations are study.

Keywords: anxiety, mathematics, students.

1. Background of study

When we hear about mathematics, some people associate it with feelings of fear, anxiety, and hatred. Some people even point out that they can show rejection or emotional blockage (Mato, De la Torre 2010, Eccius, Lara-Barragán, 2016).

The interest to discover not only the attitude towards mathematics but also its level of performance has been so much that in 1997 the Program for the International Evaluation of Students is created (PISA) which is promoted by the Organization for Economic Cooperation and Development (OECD). This program is applied every three years and serves as education and learning development when evaluating science, reading and mathematics competencies in 15-year-old students (OECD, 2017).

* Corresponding author

E-mail addresses: agarcias@ucc.mx (A. García-Santillán),
teresa_zamora76@hotmail.com (T. Zamora-Lobato)

The high participation demand for the evaluation of non-members of the [OECD](#) has given rise to the PISA pilot project for Development (PISA-D) with the only objective that this be inclusive when evaluating students with ages ranging from 14 to 16 years, in the non-school system and that is mostly accessible to those countries with medium and low incomes that will be incorporated after 2021 ([OECD, 2017](#)).

It is necessary to identify what is understood by mathematical competence to be able to measure what is being evaluated on these young people and discover which areas make the young student more anxious when facing a mathematical event, evaluation or mathematical problem.

The concept of mathematical competence according to PISA 2015 includes the ability to reason, formulate, use and interpret those tools, procedures and mathematical facts in which decisions are issued after having analyzed the phenomena that occur in the world ([OECD, 2017](#)).

Mathematics is important in a person's life because it is by means of numbers that an order, logic and reason are given to the events that occur in their environment. Therefore when PISA 2015 evaluated young people, the percentage of Mexican students by level of performance in mathematics shows 26 % below level 1, 31 % is at performance level 1, 27 % at level 2, 13 % at level 3 and only 4 % is at performance level 4, this according to the National Institute for the Evaluation of Education ([INEE, 2016](#)).

Therefore, those Mexican students who obtained a performance below level 1 will only be able to carry out basic mathematical operations and using only whole numbers, making mathematics likely to be useless in the future to develop thoughts of abstract analysis and make decisions that bring them closer to greater opportunities or benefits in their productive life ([INEE, 2016](#)). If these were the results in middle school, how will the level of mathematics performance in basic education be?

The National Plan for Learning Evaluation ([PLANEA, 2018](#) for its acronyms in Spanish) applied a test to 1,623,135 Mexican sixth grade students in both official and private schools.

The results are not encouraging in the area of mathematics, 59 % are in level 1 insufficient domain, which means that children will solve basic operations, calculate regular perimeters and interpret bar graphs; 18 % is in level 2 basic domain, where they can solve operations with decimal numbers, calculate perimeters of irregular figures and calculate percentages.

On the other hand, 15 % is in level 3 satisfactory domain, where they can solve operations with fractions, recognize situations where it is required to calculate perimeters and identify the mode in a set of data; only 8 % is in the level 4 outstanding domain where they solve operations with decimals, fractions and conversions, calculate perimeters and areas of regular and irregular figures and can calculate the average and median of a set of data.

The lowest average score in mathematics by state in Mexico was obtained by the state of Guerrero with 453 points, in second place is Tabasco with 479 points and the third place corresponds to Veracruz with 487 points. The highest average score was obtained by the states of Aguascalientes with 533 points, Mexico City with 534 points and Jalisco with 535 points.

The results also show a comparison of the evaluation between the years 2015-2018, where the highest average score in both years in the area of mathematics is obtained by the girls with five more points in 2018 with an average of 507 points and the boys with one more point in 2018 with 499 points ([PLANEA, 2018](#)).

Unlike the results presented in PISA 2015 where the boys are those who obtained 7 points more than the girls and it increases in students with a high level of performance with 16 points ([OECD, 2016](#)).

A similar result regarding gender is that obtained in the Plan 2017 evaluation in the Upper Secondary Education (EMS), where the boys obtain an average score in the area of mathematics of 513 and the girls obtain 488 points, therefore, it is the boys who get a higher score in the education and learning of mathematics.

Likewise, it is reported that it is the girls who are in level 1 of performance with 70.5 %, with respect to the boys who are in that level with a 61.4 %, which means that it is the girls who present greater difficulty to carry out operations with fractions, variables or unknown quantities, as well as difficulty analyzing the relationship between these two variables.

In terms of age, those who are studying middle and high school on a regular basis obtain a higher score in mathematics, that is, those who are 16 years old or less with an average of 514 points, unlike those who study it but whose age is 19 years or more, showing an average of

467 points, which implies a low score for those who are older due to various factors such as having dropped out of school, changing residence, failing some school cycles or postponing entry to school (PLANEA, 2017).

It is important to note the relevance given to these evaluations, which serve as an indicator of the current level of teaching and learning of mathematics in Mexican education. However, the following question arises: will it be possible that the level of performance shown derives from the attitude that the student has towards mathematics?, that is, will the low level of performance be due to what the student believes, feels and does in the presence of mathematics?

The concern to know more about the attitude that young people show towards mathematics is not recent, there are different seminal authors (Sarason et al., 1958; Aiken, Dreger, 1961; Richardson, Suinn, 1972; Aiken, 1976; Fennema, Sherman, 1976; Michaels, Forsyth, 1977; Sepie, Keeling, 1978; Sandman, 1980; Roberts, Bilderback, 1980; Brassell et al., 1980; Plake, Parker, 1982; Wise, 1985; McConghy, 1985, 1987; Auzmendi, 1991; Satake, Amato, 1995; Suinn, Winston, 2003; Mato, 2006; Muñoz y Mato, 2007; Adelson, McCoach, 2011; García-Santillán et al., 2013, 2015, 2016, 2017, 2018) who start this journey to discover the variables that underlie mathematical anxiety.

Likewise, they show empirical evidence providing greater knowledge about the possible causes and effects, which makes it possible to develop action plans to improve students' attitudes towards mathematics.

The construct of mathematical anxiety includes those factors such as attitudes, thoughts or beliefs and emotions that exert in the individual, the tendency to react with rejection, panic, anguish or fear, nervousness or stress in the presence or manipulation of numbers, taking a mathematics class and/or performing mathematical tasks/operations (Richardson, Suinn, 1972; Furner, Berman, 2003, Bursal, Paznokas, 2006, Rosário et al., 2008).

For the aforementioned, this study seeks to answer the following research question: what is the set of variables that explain mathematical anxiety in students from a rural Telebachillerato in the state of Veracruz? In addition, it seeks to answer which the dimensions that exert greater mathematical anxiety in students are.

So, the objective of this study is: to analyze the set of variables that explain mathematical anxiety in students from a rural Telebachillerato in the state of Veracruz. Similarly, it seeks to demonstrate the dimensions that exert greater mathematical anxiety in students. For this purpose it is necessary to analyze and discuss the theoretical and empirical foundations that have explained this construct.

2. Theoretical revision

In 1952, Mandler and Sarason sought to discover the effects that generate anxiety when facing different situations, so they designed an instrument to evaluate the symptoms of anxiety experienced by individuals. Their findings showed that anxiety was more evident in relevant tasks than in those that were not and the level of anxiety was reduced when the task was satisfactorily fulfilled.

This was the starting point so that later on, more scales related to anxiety were elaborated (Sarason et al., 1958) and where anxiety that was present before an evaluation in general began to emerge (Richardson, Suinn, 1972; Sarason, 1977, 1984).

Along with previous research Feierabend (1960) defines attitude as the predisposition of a person to respond either negatively or positively to a situation or to another person. However, that attitude was focused on the effects caused on the individual when in the presence of mathematics, and also points out that the findings of gender difference to solve mathematical problems were not due to any mental deficiency, skills or knowledge but by the attitude they showed to solve them.

After Aiken and Dreger (1961) designed an instrument to identify the mathematical attitude, they discovered that attitudes will be affected when individuals have some experience with mathematics. They also notice a difference in gender: unlike men, attitude in women predicts mathematical achievement.

Both anxiety and mathematical attitude have been extensively researched and for this purpose several scales have been designed that demonstrated an acceptable Cronbach Alpha (AC α) reliability index (Table 1 and 1b).

Table 1. Attitude and Anxiety Scales towards Mathematics

Escales	Items	AC α
TASC - Sarason, Davidson, Lighthall, & Waite (1958)	30	0.85
Attitude toward Math Scale– Aiken & Dreger (1961)	20	0.94
MARS - Richardson & Suinn (1972)	98	0.89, 0.96
Debilitating Anxiety Scale towards Mathematics – Sztela (1973)	10	0.83
Attitude Scales towards Mathematics – Aiken (1974)	21	0.95, 0.85
Attitude Scales towards Mathematics – Fennema & Sherman (1976)	108	0.89
Attitudes to Mathematics Questionnaire – Michaels & Forsyth (1977)	44	0.51, 0.61, 0.78
Anxiety Scale towards Mathematics – Sepie & Keeling (1978)	20	0.90
Inventory of Attitudes towards Mathematics – Sandman (1980)	28	0.69, 0.89
Inventory of Attitudes towards Mathematics – Roberts & Bilderback (1980)	33	0.93, 0.95
Anxiety Scale towards Mathematics – Cruise & Wilkins (1980)	51	0.67, 0.94
Mathematics Anxiety Questionnaire – Meece (1981)	19	0.81
MASC - Plake and Parker (1982)	22	0.97
Attitudes towards Statistics -Wise (1985)	29	0.92, 0.90
Attitude Scales towards Mathematics – McConghy (1985, 1987)	14	0.79

Source: Own elaboration based on the literature review.

Table 1b. Attitude and Anxiety toward Math scales

Escales	Items	CA α
SMARS – Alexander and Martray (1989)	25	0.71
Scale of Attitudes towards Statistics and Mathematics - Auzmendi (1991)	25	0.87, 0.92
EAHM-V – Bazán and Sotero (1998)	31	0.90
MARS, Mathematical Anxiety Scale, brief version – Suinn and Winston (2003)	30	0.96
Mathematics Anxiety Questionnaire of Muñoz and Mato (2007)	24	0.95
Attitudes towards mathematics – Alemany and Lara (2010)	37	0.92
Inventory of Attitude towards Mathematics short version – Lim and Chapman (2013)	19	0.93
Scale Attitude towards Mathematics, short form, – Yasar (2014)	19	0.96
Scale of Attitudes towards Mathematics – Palacios, Arias and Arias (2014)	32	0.95

Source: Own elaboration based on the literature review

From the information shown in [Tables 1](#) and [1b](#), we can observe the diversity of scales that have been developed over these years with respect to anxiety and attitude towards mathematics, showing its acceptable reliability index and factorial structure shown by these instruments.

Mathematics has been part of our lives since childhood, and gives us training, helping us to rationally expand our decisions in our minds for day-to-day perception ([Camarena-Gallardo, 2014](#)). However, this topic has been addressed by several researchers for a long time, since the perception of mathematics does not always have an answer, but occasionally generates stress or anxiety ([Gi et al., 2006](#)).

Fennema and Sherman (1976) designed a Likert-type scale to measure attitudes towards exact sciences, which is comprised of 108 items divided into 9 factors that provide the confidence that men and women have towards learning mathematics, success in learning, the attitudes of the father/mother towards the study of mathematics, and even the attitudes of the teacher towards the study of mathematics.

On the other hand, Galbraith and Hines, (1998, 2000) as well as different scientists have modified this scale trying to measure other factors that people present more frequently towards the subject of mathematics, for example: the link of computers and mathematics, trust, etcetera.

Following the premises outlined above, there are different approaches to the theoretical studies that try to explain the performance of students in exact sciences. In this case we can mention the works of Dreger and Aiken (1957) where they identify different factors or emotional reactions towards arithmetic and mathematics and based on that phenomenon, they designed a set of instruments to measure anxiety

In this sense, Fennema and Sherman (1976) consider mathematical anxiety as part of the attitude and as a sub-construct within the attitude towards mathematics. Therefore, in their empirical research they indicate that students, who experienced less anxiety towards mathematics, were those who also had a more favorable attitude. However, they clarify that it is not enough with the disposition that a student has to get a mathematical learning, pointing out that the attitude is "a feeling of anxiety, terror, nervousness and associated physical symptoms that arise when doing mathematics".

In a theoretical approach it can be observed that students' anxiety towards mathematics has been a subject studied in different areas and levels: Dutton and Blum (1968) also conducted surveys with variables, such as state trait anxiety, confidence, in the same way in secondary education and university students ([Muñoz, Mato, 2007](#); [Pérez-Tyteca et al., 2009](#)).

In a similar way, García-Santillán, Edel and Escalera-Chávez (2010) designed an instrument called EAPH.MF which is formed by 31 items in conjunction with a Likert-type scale, having as a primary objective the measuring of attitudes and perception of financial mathematics through the history of mathematics, simulators, computer programs and virtual learning variables.

Over time, several models or constructs are being created, such as the work of Pérez-Tyteca (2012) that determines anxiety, self-analysis and utility in mathematics, while developing measurements to show whether there is interaction among them resulting in a statistically significant association.

Later in another study, Eccius-Wellman and Lara-Barragan (2016) developed a questionnaire with 20 items in a Likert-type scale on mathematical anxiety, in which one can analyze attitudes, emotions and beliefs towards that topic.

Derived from the aforementioned theoretical-empirical arguments, the methodological procedure to be followed is described in the following lines.

3. Method

The empirical study is of non-experimental design, since the independent variables (X) were not manipulated, this in order not to condition the results (Y) and their generalization. The application of the questionnaire and the collection of data is cross-sectioned, its analysis and interpretation was done in a single moment of the study. This research focuses on identifying factors that generate anxiety towards mathematics in students, so it is a correlational explanatory study, in order to discover the set of underlying variables that explain this phenomenon from the model proposed by Muñoz and Mato (2007).

Population

The key informants are students of Upper Secondary Education level in Veracruz, Ver., in a Telebachillerato of municipal scope, which is part of the School Supervision in Veracruz (2017) that depends on the Telebachillerato General Direction.

The students surveyed in the Telebachillerato belong to the public sector. The school has three grades of study, so general high school is completed in 3 years and only in the morning shifts (Centros Educativos, 2017).

The population surveyed is approximately of 200 to 211 students enrolled in the semester of the school period July-December 2017. Students' ages range from 13 to 20 years, and are studying in the Telebachillerato Adolfo Ruíz Cortines, belonging to the municipality of Veracruz, Ver.

Among the inclusion criteria that were taken into account is that the students were registered at the time of the survey, that they are studying the first, third and fifth semester and that they voluntarily accept to answer the questionnaire. At all times they were told that the data collected would be treated confidentially so they were not asked to write down their names, only the sociodemographic data.

Sample

For this study, a stratified simple random sample was considered at the beginning. However, as the application of the test developed, we were asked by the school authorities to apply the questionnaire to as many students as possible since it would be convenient for them. Therefore, the sample was extended to a census since at all times it was intended to survey all the students enrolled and who were present in the telebachillerato facilities. Under this consideration, the sample was not probabilistic for convenience, having succeeded in surveying ± 211 students in total, which were supervised in case any doubts arouse these were solved at that moment. In the end, ten surveys had to be discarded due to failures in filling in.

Instrument

For the purposes of this empirical study, an Anxiety towards Mathematics Questionnaire designed by Muñoz and Mato is used (2007) whose internal consistency Cronbach alpha was originally 0.9504 and consists of 24 statements which are integrated into the following dimensions that determine the anxiety towards mathematics (Table 2):

Table 2: Test Structure by dimensions

Dimensions	Items
Anxiety before the evaluation	1, 2, 8, 10, 11, 14, 15, 18, 20, 22, 23
Anxiety in the face of temporality	4, 6, 7, 12
Anxiety in the understanding of mathematical problems	5, 17, 19
Anxiety in front of numbers and mathematical operations	3, 13, 16
Anxiety in real-life mathematical situations	9, 21, 24

Source: Taken from Muñoz and Mato (2007)

The following sociodemographic profile is included in the applied questionnaire: gender, age and school grade. The questionnaire is a Likert-type scale with an answer option ranging from 1 to 5, where 1 means nothing and 5 means a lot.

3. Statistical procedure

For data analysis, it is first necessary to check their reliability and internal consistency, to subsequently verify if the data are normally distributed. Another assumption is the randomness hypothesis, which is necessary to verify it from the test of runs of the mean. In this way, if the data present a multivariate normality, the factorization is carried out using the Exploratory Factor Analysis (EFA).

The steps to follow for the analysis of the data start first with the measurement of their reliability. We know that if the Cronbach alpha index (AC) is closest to 1, it will have greater reliability, being an acceptable value what Hair et al. (2009), whose pointing out that from 0.80 it

is a good internal consistency although > 0.7 is accepted according to the theoretical criterion. Therefore AC can be established as a function of the number of items and the average of the correlations between the items: $\alpha = \frac{N * \bar{r}}{1 + (N - 1) * \bar{r}}$

Where: N = Number of items, \bar{r} = is the average correlation between the items.

Then to verify the null hypothesis that establishes that the sample was extracted from a population with normal distribution, the analysis of the data is carried out using the Kolmogorov-Smirnov test, using the D statistic, which suggests the maximum difference: $D = \max |F_n(x) - F_o(x)|$

where: $F_n(x)$ corresponds to the sampling distribution and $F_o(x)$ is the theoretical function that corresponds to the normal population on which the null hypothesis is based.

Then the criterion to be considered is, if the sample is large in its composition (without excluded data) and its randomness is demonstrated, then the number of runs (R) could be approximated by a normal distribution of parameters.

Therefore it is known that: $\sigma_R = \sqrt{\frac{2n_1n_2(2n_1n_2 - n)}{n^2(n-1)}}$ So we have to: $Z = \frac{R + c - \mu_R}{\sigma_R}$

Where: $c = 0.5$ si $R < \mu_R$ y $c = 0.5$ si $R > \mu_R$

Subsequently, to perform the EFA, the calculation procedure of Bartlett's Sphericity Test with Kaiser, χ^2 with $n - 1$ is followed from the following expression:

$$\chi^2 = - \left[n - 1 - \frac{1}{6} (2p + 5) \ln |R| \right] = - \left[n - \frac{2p + 11}{6} \right] \sum_{j=1}^p \log(\lambda_j)$$

That satisfies the following expression:

$$\left[n - \frac{2p + 11}{6} \right] \log \frac{\left[\frac{1}{p-m} \left(\text{traz} R^* - \left(\sum_{a=1}^m \lambda_a \right) \right) \right]^{p-m}}{\frac{|R^*|}{\prod_{a=1}^m \lambda_a}}$$

Where: n = sample size; p = number of variables; ln = natural logarithm and R = correlation matrix

Similarly, from the transformation of the determinant in the correlation matrix, the power of the correlations between the analyzed variables can be identified according to:

$$d_R = \left[n - 1 - \frac{1}{6} (2p + 5) \ln |R| \right] = - \left[n - \frac{2p + 11}{6} \right] \sum_{j=1}^p \log(\lambda_j)$$

Where: n = sample size; ln = natural logarithm, = values belonging to R $\lambda_j (j = 1 \dots p)$ and R = correlation matrix

The KMO and MSA values are given by:

$$KMO = \frac{\sum_{j \neq i} \sum_{i \neq j} r_{ij}^2}{\sum_{j \neq i} \sum_{i \neq j} r_{ij}^2 + \sum_{j \neq i} \sum_{i \neq j} r_{ij}^2(p)} \quad MSA = \frac{\sum_{i,j} r_{ij}^2}{\sum_{i,j} r_{ij}^2 + \sum_{i,j} r_{ij}^2(p)}; i = 1, \dots, p$$

Where: $r_{ij}(p)$ = Is the partial correlation coefficient of the correlation between the variables X_i and X_j in all cases.

In this way, to test the null hypothesis, we take the critical value of χ^2 calculated, if it is greater than the value of tables, we have evidence for the rejection of H_0 , otherwise we cannot reject it.

Finally, the components are extracted according to the criterion of eigenvalues > 1 and its corresponding commonality whose sum is the percentage of variance explained from:

$$h_i^2 = \text{Var} \left(\sum_{j=1}^k a_{ij} F_j \right) \dots y \dots \Psi_i = \text{Var}(u_i) \quad y \quad \text{Var}(X_i) = \sum_{j=1}^k a_{ij}^2 + \Psi_i = h_i^2 + \Psi_i; i = 1, \dots, p$$

4. Data analysis

To answer the questions and achieve the objectives set out in this research, the following hypotheses are tested:

Hi1 There is a set of variables that explain the mathematical anxiety in students of a rural Telebachillerato of the State of Veracruz.

Ho1. There is not a set of variables that can explain the level of anxiety towards mathematics in students of a rural Telebachillerato of the State of Veracruz.

In addition, we try to contrast the normality and randomness hypothesis of the data, hence: Ho2: The sample comes from a population with normal distribution, Hi2: The sample does not come from a normal distribution, likewise: Ho3: The sample is random, Hi3: The sample is not random.

The data obtained related to the student's profile about gender and age, are described first:

Table 3. Gender

GENDER		Frequency	Percentage	Percentage valid	Percentage accumulated
Valid	MAN	132	65.7	65.7	65.7
	WOMAN	69	34.3	34.3	100.0
	Total	201	100.0	100.0	

Tabla 4. AGE

AGE		Frequency	Percentage	Percentage valid	Percentage accumulated
Valid	from 12 to 15	3	1.5	1.5	1.5
	>16 <TO 20	88	43.8	43.8	45.3
	>21 <TO 23	106	52.7	52.7	98.0
	>TO 30	4	2.0	2.0	100.0
	Total	201	100.0	100.0	

The highest percentage in terms of gender was among males (65.7 %) and in age, the concentration was between 16 and 23 years of age, almost 96.5 %. Subsequently, we aimed to validate the database to measure its internal consistency, hence table 5 shows the value obtained from Cronbach's alpha ($\alpha=0.792$) which is acceptable in the theoretical terms suggested by Hair et al. (2009).

Table 5. Summary of the processing of the cases

		N	%	Cronbach's alpha	N dimensions
Cases	Valid	201	100.0	0.792	5
	Excluded ^a	0	.0		
	Total	201	100.0		

a. Deletion by list is based on all the procedure variables.

To verify the null hypothesis that establishes that the sample was extracted from a population with normal distribution, the analysis of the data is carried out using the Kolmogorov-Smirnov test, using the D statistic, which suggests the maximum difference: $D = \max |F_n(x) - F_o(x)|$

Where: $F_n(x)$ corresponds to the sampling distribution and $F_o(x)$ is the theoretical function that corresponds to the normal population on which the null hypothesis is based.

Table 6. Kolmogorov-Smirnov test for a sample

		1	2	3	4	5
N			201	201	201	201
parameters	Medium	33.0547	11.3234	7.3333	8.2189	5.0597
normal ^{a,b}	Deviation					
	Standard	10.26655	4.43508	3.07625	3.18620	2.44876
Maximum	Absolute	0.067	0.092	0.125	0.125	0.203
differences	Positive	0.067	0.092	0.125	0.125	0.203
extreme	Negative	-0.062	-0.053	-0.079	-0.086	-0.200
Test statistic		0.067	0.092	0.125	0.125	0.203
Sig. Asymptotic (bilateral)		0.029 ^c	0.000 ^c	0.000 ^c	0.000 ^c	0.000 ^c

a. The test distribution is normal. b. It is calculated from data. c. Correction of significance of Lilliefors. Where (1) ANSIEV; (2) ANSITEM; (3) ANSICOPM; (4) ANSINOM and (5) ANSISIT.

As shown in Table 6, the asymptotic significance of the five variables have values $a < 0.05$, which evidently shows the non-normality of the data. However, there are some theoretical foundations that suggest that if it were the case, some tests should be performed to support the exploratory analysis of the data (Gorsuch, 1983; Pett et al., 2003, Hair et al., 2009, García-Santillán, 2017).

In this way, Table 7 shows the matrix of correlations between the variables of the empirical model that is analyzed.

Table 7. Correlation matrix^a

Correlation	ASIEV	ANSITEM	ANSICOPM	ANSINOM	ANSISIT
ASIEV	1.000	0.804	0.693	0.779	0.330
ANSITEM		1.000	0.700	0.801	0.352
ANSICOPM			1.000	0.706	0.472
ANSINOM				1.000	0.348
ANSISIT					1.000

a. Determinants = .036

From the visual revision to the correlations, these present very acceptable values, considering that it is suggested that these are greater than 0.30, so it is considered that the data matrix presents good correlation, in addition the value of the determinant ($dr = 0.036$) is very close to zero, which supports this test and to a large extent to the completion of the exploratory factor analysis (Pett et al., 2003; Hair et al., 2009).

Therefore, it is necessary to evaluate these correlations by means of the Bartlett's sphericity test, with the idea of evaluating the null hypothesis that indicates that there is no correlation between the variables and that it is an identity matrix. From its result we could know if the data matrix presents a degree of correlation that is statistically significant (Hair et al., 2009; Bartlett, 1950).

Table 8. KMO Test and Bartlett's Sphericity Test

Kaiser-Meyer-Olkin measure of sampling adequacy		0.857
Bartlett's sphericity test	Aprox. Chi-squared	654.190
	gl	10
	Sig.	0.000

The result described in Table 8 gives evidence of the good correlation of the variables with the value obtained from Chi2 of 654.19 with 10 degrees of freedom, which is greater than the table Chi2 of 18307 with 10 gl. In addition, the value of the KMO index > 0.8 is very acceptable. Similarly,

the MSA index is calculated to assess the suitability of the sample for each variable, whose values are interpreted very similarly to the KMO (Table 9).

Table 9. Anti-image matrices

Anti-image correlation	ASIEV	ANSITEM	ANSICOPM	ANSINOM	ANSISIT
ASIEV	0.855 ^a				
ANSITEM		0.840 ^a			
ANSICOPM			0.881 ^a		
ANSINOM				0.859 ^a	
ANSISIT					0.849 ^a

a. Measures of sampling adequacy (MSA)

As observed in Table 9, the MSA values obtained in all cases are greater than 0.8, which exceeds the suggested theoretical threshold of > 0.5, giving statistical evidence of a matrix that presents a good correlation between the variables under study. After that, the component and commonality matrix is now presented, as well as the total variance explained. The criterion followed is that of self-value > a 1, since it is a technique that allows us to obtain the total variance explained by those factors that are obtained and that are greater than 1 (Hair et al., 2009; Pett et al., 2003).

Table 10. Component matrix^a

Dimensions	Component 1	Communalities
ASIEV	0.893	0.798
ANSITEM	0.905	0.819
ANSICOPM	0.867	0.752
ANSINOM	0.899	0.808
ANSISIT	0.540	0.292

Extraction method: analysis of main components. to. 1 extracted components.

Table 11. Total variance explained

Component	Inicial Eigenvalues			Σ extraction of loads squared		
	Total	% variance	of% accumulated	Total	% variance de	% accumulated
1	3.470	69.405	69.405	3.470	69.405	69.405
2	0.809	16.182	85.588			
3	0.312	6.219	91.806			
4	0.220	4.403	96.209			
5	0.190	3.791	100.000			

Extraction method: analysis of main components.

To test the null hypothesis that establishes that the sample is random, the analysis of runs is carried out. This test gives us evidence about the existence or not of randomness, considering that a reduced number of runs would be a sample that the data were not extracted at random (Table 10)

Table 10. Runs Test

	ASIEV	ANSITEM	ANSICOPM	ANSINOM	ANSISIT
Test Value ^a	33.0547	11.3234	7.3333	8.2189	5.0597
Cases < Test Value	108	107	113	111	134
Cases > Test Value	93	94	88	90	67
Total Cases	201	201	201	201	201
Number of runs	93	93	104	99	89
Z	-1.129	-1.147	0.582	-0.201	-0.212
Sig. Asymptotic (bilateral)	0.259	0.251	0.560	0.841	0.832

a. Medium

As shown in [Table 10](#), the value of the critical level of bilateral asymptotic significance exceeds 0.05 in the five analyzed variables, so we cannot reject the independence hypothesis, that is, the cases studied are random

Data discussion and conclusions

The core part of this study was to focus on analyzing the attitude that students show towards mathematics, based on the hypothetical assumption that there is a structure that underlies the explanation of the phenomenon of anxiety in student populations, and for this specific case, in students of a Telebachillerato within the rural context.

In the data analysis, the procedure to test the basic assumptions of normality and randomness was followed, and in a very special way, the internal consistency of the instrument.

Given the apparent absence of normality of the data matrix, the use of the factor analysis technique was based on the correlation matrix, which showed a high correlation and a really low determinant close to zero ([Gorsuch, 1983](#); [Pett et al., 2003](#); [Hair et al., 2009](#)).

With this data supporting the decision of the use of EFA, we proceeded to calculate the Bartlett sphericity test and the Chi², as well as the MSA values to provide new statistical elements in support for the use of factor analysis ([Hair et al., 2009](#); [Bartlett, 1950](#)).

In this way we proceed to the discussion of the result, being the most significant finding the obtaining of a single component whose factorial loads and the proportion of the variance reflected in their commonality (Ψ), explain the 69.4 % of the assimilable variance of the phenomenon that it is studied, that in this case it is the anxiety that students of a Telebachillerato show towards mathematics.

As we can see in [table 10](#), the greater factorial load and consequently the greater proportion of the variance reflected in their commonality (Ψ) is presented in the dimension of anxiety towards the temporality of the exams (ANSITEM, 0.905), followed by anxiety towards numbers and mathematical operations (ANSINOM, 0.899) and anxiety towards evaluation (ANSIEV, 0.893).

This trilogy that makes up the extracted component (to call it so) leads us to think that anxiety is generated within the institution where they are studying, since evaluations and its temporality are present precisely in the classrooms, and in the contents of the mathematics curricula, it is precisely in that context that numbers and mathematical operations are seen.

Likewise, we can point out another data that seem significant to us, and this refers to the lowest of the factorial loads and proportion of variance, represented by the anxiety dimension towards real-life mathematical situations (ANSISIT, 0.540). Apparently that generates less anxiety, that is, they probably do not feel pressure to develop calculation operations in front of their teachers or classmates within their courses. This leads us to think that it is very likely that when the student carries out every-day activities where they interact in some way with numbers, these give them a little more security and independence, or maybe confidence.

However, in the academic discussion aspect, [García-Santillán, Mato-Vázquez, Muñoz-Cantero and Rodríguez-Ortega \(2016\)](#) carry out a comparative study in the morning and evening shift students of the National College of Professional Technical Education (CONALEP) which is also high school level. In their study they identified a component in each of the surveyed

populations, which explained 66.74 % in the morning shift and 67.28 % in the afternoon shift, which is considered very acceptable.

In their findings they found that anxiety is more present in the variable ANSIEV and ANSINOM (in both populations) and in the remaining three factors they differ, since the morning shift presents greater anxiety in ANSICOPM, followed by ANSITEM and ANSISIT while the evening shift presents greater anxiety in ANSITEM, ANSISIT and ANSICOPM.

These results are concordant with those of this study, in two of the variables that presented the highest factorial loadings, being these: anxiety towards numbers and mathematical operations (ANSINOM, 0.899) and anxiety towards evaluation (ANSIEV, 0.893). However, in the anxiety variable of real life mathematical situations (ANSISIT), CONALEP students showed a greater degree of importance, which differs from that of this study, where it was the lowest factorial load.

A similar study was carried out by García-Santillán, Edwards-Wurzinger and Tejada-Peña, (2015) who evaluated high school students. In the same way, they obtain a component that explains 76.76 % of the assimilable variance with loads > to 0.8 in each one of the factors.

Finally we can say that, the most significant finding that we could highlight is the validation of the Muñoz and Mato test, used for the study: Although it is an instrument that has shown a high reliability and internal consistency from its design, however the data matrix in this study does not show normal distribution. About this, several studies that has been used with similar results about its internal consistency (García-Santillán et al., 2016, García-Santillán et al., 2016, García-Santillán et al., 2018)

However, in this empirical study it was possible to validate the instrument used with an acceptable internal consistency, but the problem that we face for data analysis was presented at the normality of the database, i.e. the data matrix does not come from a normal distribution.

This fact could prevent to carry out the factorization; however the data matrix was presenting acceptable values in each of the required steps of the exploratory factor analysis, following the recommendations suggested by Méndez and Rondón (2012).

Future lines of research

Finally it is suggested to extend the study by integrating other variables that may be present within the context in which the student develops. For example, the performance they had in the previous grade, that is, an analysis where the academic performance obtained in junior high school and its relationship to the degree of anxiety towards mathematics now that they study high school can be integrated. Another line of research that has been suggested in other studies is the measurement of variables such as the profession and activity of parents; this could explain some behaviors in children.

References

- Adelson, McCoach, 2011 – Adelson, J., McCoach, D. (2011). Development and psychometric properties of the Math and Me Survey: Measuring third through sixth graders' attitudes towards mathematics. *Measurement and Evaluation in Counseling and Development*, 44: 225-247. DOI: <https://doi.org/10.1177/0748175611418522>
- Aiken, 1974 – Aiken, L. (1974). Two Scales of Attitude toward Mathematics. *Journal for Research in Mathematics Education*, 5: 67-71.
- Aiken, 1976 – Aiken, L. (1976). Update on attitudes and other affective variables in learning mathematics. *Review of Educational Research*, 46: 293-311.
- Aiken, Dreger, 1961 – Aiken, L., Dreger, R. (1961). The effect of attitudes on performance in mathematics. *Journal of Educational Psychology*, 52(1): 19-24.
- Aleman, Lara, 2010 – Aleman, I., Lara, A. (2010). Las actitudes hacia las matemáticas en el alumnado de la ESO: un instrumento para su medición. *Publicaciones*, 40: 49-71.
- Alexander, Martray, 1989 – Alexander, L., Martray, C. (1989). The development of an abbreviated version of the Mathematics Anxiety Rating Scale. *Measurement and Evaluation in Counseling and Development*, 22: 143-150.
- Auzmendi, 1991 – Auzmendi, E. (1991). Evaluación de las actitudes hacia la estadística en estudiantes universitarios y factores que las determinan. Tesis Doctoral Inédita, Universidad De Deusto, Bilbao.
- Bartlett, 1950 – Bartlett, M.S. (1950). Tests of significance in factor analysis. *British Journal of statistical psychology*, 3(2): 77-85.

Bazán, Sotero, 1998 – Bazán, J., y Sotero, H. (1998). Una aplicación al estudio de actitudes hacia la matemática en la UNALM. *Anales Científicos UNALM*, 36: 60-72.

Brassell et al., 1980 – Brassell, A., Petry, S., Brooks, D. (1980). Ability grouping, mathematics achievement, and pupil attitudes toward mathematics. *Journal for Research in Mathematics Education*, 11: 22-28.

Bursal, Paznokas, 2006 – Bursal, M., Paznokas, L. (2006). Mathematics anxiety and preservice elementary teachers' confidence to teach mathematics and science. *School Science and Mathematics*, 106(4): 173-179.

Centros educativos, 2017 – Centros educativos (2017). Centros educativos. [Electronic resource]. URL: <https://centroseducativos.com.mx>

Cruise, Wilkins 1980 – Cruise, R., Wilkins, E. (1980). Statistical Anxiety Rating Scale. Michigan. Andrew University.

Dreger, Aiken, 1957 – Dreger, R.M., Aiken Jr, L.R. (1957). The identification of number anxiety in a college population. *Journal of Educational psychology*, 48(6): 344.

Dutton, Blum, 1968 – Dutton, W.H., Blum, M.P. (1968). The measurement of attitudes toward arithmetic with a Likert-type test. *The Elementary School Journal*, 68(5): 259-264.

Eccius, Lara-Barragán, 2016 – Eccius, C. y Lara-Barragán, A. (2016). Hacia un perfil de ansiedad matemática en estudiantes de nivel superior. *Revista Iberoamericana de Educación Superior (RIES)*, 7(18). [Electronic resource]. URL: <https://bit.ly/2FXLLbd>

Feierabend, 1960 – Feierabend, R. (1960). Review of research on psychological problems in mathematics education. *Research Problems in Mathematics Education*, 3: 3-46.

Fennema, Sherman, 1976 – Fennema, E., Sherman, J. (1976). Fennema-Sherman Mathematics Attitudes Scales: Instruments Designed to Measure Attitudes Toward the Learning of Mathematics by Males and Females. *Journal for Research in Mathematics Education*, 7: 324-326.

Furner, Berman, 2003 – Furner, J., Berman, B. (2003). Math Anxiety: Overcoming a major obstacle to the improvement of students math performance. *Childhood Education*, 79(3): 170-174.

Galbraith, Haines, 1998 – Galbraith, P., Haines, C. (1998). Disentangling the nexus: Attitudes to mathematics and technology in a computer-learning environment. *Educational Studies in Mathematics*, 36: 275-290.

Galbraith, Haines, 1998 – Galbraith, P., Haines, C. (1998). Disentangling the nexus: Attitudes to mathematics and technology in a computer learning environment. *Educational Studies in Mathematics*, 36: 275-290.

Galbraith, Haines, 2000 – Galbraith, P., Haines, C. (2000). Mathematics-computing Attitudes Scales. Monographs in Continuing Education. London: City University.

García-Santillán, 2010 – García-Santillán, A. (2010). Edel Navarro R. Escalera Chávez M. "La enseñanza de la matemática financiera: Un modelo didáctico mediado por TIC" Universidad de Málaga. Registro en la Biblioteca Nacional de España N° 11/4918. [Electronic resource]. URL: <http://www.eumed.net/libros-gratis/2010f/867/>

García-Santillán, 2017 – García-Santillán, A. (2017). Measuring set latent variables through exploratory factor analysis with principal components extraction and confirmatory analysis. *European Journal of Pure and Applied Mathematics*, 10(2): 167-198.

García-Santillán et al., 2016 – García-Santillán, A., Mato-Vázquez, D., Muñoz-Cantero, J.M, Rodríguez-Ortega, D. (2016). Anxiety toward mathematics in students of the CONALEP campus Veracruz-1: a comparative study of the morning and afternoon shifts in Veracruz, México. *Revista Internacional de Investigación e Innovación en Didáctica de las Humanidades y las Ciencias*. No. 3, 55-75.

García-Santillán et al., 2016 – García-Santillán, A., Mato-Vázquez, D., Escalera-Chávez, M.E., Moreno-García, E. (2016). Student perception toward mathematics assessment, temporality toward exams, the understanding toward problems associated to the numbers and mathematical operations in real life. Really are factors generators of anxiety toward math? *International Journal of Developmental and Educational Psychology. INFAD Revista de Psicología (IJODAEP)*, 1(2): 393-402. DOI: <http://dx.doi.org/10.17060/ijodaep.2016.n2.v1.530>

García-Santillán et al., 2018 – García-Santillán, A., García-Cabrera, R.V., Molchanova, V.S., García-Cabrera, V. (2018). Psychometric properties of the Scale of Mato and Muñoz-Vázquez in medical undergraduate students sample. *European Journal of Contemporary Education*, 7(2): 332-343. DOI: 10.13187/ejced.2018.2.332

García-Santillán et al., 2015 – García-Santillán, A., Edwards-Wurzinger, A., Tejada-Peña, E. (2015). What factors explain the anxiety level towards studying mathematics among students in elementary school? *Mediterranean Journal of Social Science (MJSS)*, 6(4): 564-572.

García-Santillán et al., 2013 – García-Santillán, A., Escalera-Chávez, M., Venegas-Martínez, F. (2013). Principal components analysis and Factorial analysis to measure latent variables in a quantitative research: A mathematical theoretical approach. *Bulletin of Society for Mathematical Service and Standards*, 2(3): 3-14.

García-Santillán et al., 2018 – García-Santillán, A., Martínez-Rodríguez, V., Santana, J. (2018). Psychometric properties of the RMARS Scale in High School Students. *European Journal of Contemporary Education*, 7(1): 97-117.

García-Santillán et al., 2016 – García-Santillán, A., Mato-Vázquez, D., Muñoz-Cantero, J., Rodríguez-Ortega, D. (2016). Anxiety toward mathematics in students of the CONALEP campus Veracruz-1: a comparative study of the morning and afternoon shifts in Veracruz, México. *Revista Internacional de Investigación e Innovación en Didáctica de las Humanidades y las Ciencias*, 3: 55-75.

Gorsuch, 1983 – Gorsuch, R. (1983). *Factor analysis* 2nd ed. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Hair et al., 2009 – Hair Jf.Jr, Black W.C., Babin B.J. et al. (2009). *Multivariate data analysis*, 7th ed. Upper Saddle River, NJ: Prentice-Hall, Inc Bartlett.

Ignacio et al., 2006 – Ignacio, N.G., Nieto, L.J.B., Barona, E.G. (2006). The affective domain in mathematics learning. *International Electronic Journal of Mathematics Education*, 1(1): 16-32.

INEE, 2016 – INEE (2016). *México en PISA 2015*. 1a edición. México: INEE. Recuperado de: <https://bit.ly/2UrotCG>

Lim, Chapman, 2013 – Lim, S., Chapman, E. (2013). Development of a short form of the attitudes toward mathematics inventory. *Educational Studies in Mathematics*, 83: 145-164. DOI: 10.1007/s10649-012-9414-x

Mandler, Sarason, 1952 – Mandler, G., Sarason, S. (1952). A study of anxiety and learning. *Journal of Abnormal and Social Psychology*, 47: 166-173.

Mato, 2006 – Mato, M. (2006). *Diseño y validación de dos cuestionarios para evaluar las actitudes y la ansiedad hacia las matemáticas en alumnos de educación secundaria obligatoria*. Tesis doctoral no publicada, Universidad de A Coruña, España.

Mato, De la Torre, 2010 – Mato, M. y De la Torre, E. (2010). Evaluación de las actitudes hacia las matemáticas y el rendimiento académico. *PNA*, 5(1): 197-208.

McConeghy, 1985 – McConeghy, J. (1985). Gender differences in mathematics attitudes and achievement. Ponencia no publicada presentada en el Congreso de Investigación de la mujer de Kalamazoo. Michigan.

McConeghy, 1987 – McConeghy, J. (1987). Mathematics attitudes and achievement: gender differences in a multivariate context. Ponencia no publicada presentada en el Congreso del AERA, Washington.

Meece, 1981 – Meece, J. (1981). Individual differences in the affective reactions of middle and high school students to mathematics: A social cognitive perspective. Unpublished doctoral dissertation, University of Michigan.

Méndez y Rondón, 2012 – Méndez, C. y Rondón, M. (2012). Introducción al análisis factorial exploratorio. *Rev. Colomb. Psiquiat.*, 41(1): 197-207.

Michaels, Forsyth, 1977 – Michaels, L., Forsyth, R. (1977). Construction and validation of an instrument measuring certain attitudes toward mathematics. *Educational and Psychological Measurement*, 37: 1043-1049.

Muñoz, Mato 2007 – Muñoz, J. y Mato, M. (2007). Elaboración y estructura factorial de un cuestionario para medir la ansiedad hacia las matemáticas en alumnos de ESO. *Revista Galego-Portuguesa de Psicoloxía e Educación*, 14(1): 221-231.

Ocampo et al., 2014 – Ocampo Botello, F., Guzmán Arredondo, A., Camarena Gallardo, P., de Luna Caballero, R. (2014). Identificación de estilos de aprendizaje en estudiantes de ingeniería. *Revista mexicana de investigación educativa*, 19(61): 401-429.

OCDE, 2016 – OCDE (2016). *Informe de Resultados de PISA 2015*. Retrieved of: <https://bit.ly/2gAat2l>

- OCDE, 2017 – OCDE (2017). Marco de Evaluación y de Análisis de PISA para el Desarrollo: Lectura, matemáticas y ciencias. Versión preliminar, OECD Publishing, Paris. [Electronic resource]. URL: <https://bit.ly/2M6tUDO>
- Palacios et al., 2014 – Palacios, A., Arias, V., Arias, B. (2014). Attitudes Towards Mathematics: Construction and Validation of a Measurement Instrument. *Journal of Psicodidactics*, 19(1): 67-91. DOI: 10.1387/RevPsicodidact.8961
- Pérez, 2012 – Pérez Tyteca, P. (2012). La ansiedad matemática como centro de un modelo causal predictivo de la elección de carreras. Universidad de Granada.
- Pett et al., 2003 – Pett M.A., Lackey N.R., Sullivan J.J. (2003). Making sense of factor analysis. Thousand Oaks, CA: Sage.
- Plake, Parker, 1982 – Plake, B., Parker, C. (1982). The development and validation of a revised version of the mathematics anxiety rating scale. *Educational and Psychological Measurement*, 42, 551-557. DOI: 10.1177/001316448204200218
- Planea, 2017 – Planea (2017). Resultados Nacionales 2017 en Educación Media Superior. [Electronic resource]. URL: <https://bit.ly/2Qliux8>
- Planea, 2018 – Planea (2018). Resultados Nacionales 2018, 6° de primaria, INEE. [Electronic resource]. URL: <https://bit.ly/2RIEe8I>
- Richardson, Suinn 1972 – Richardson, F., Suinn, R. (1972). The Mathematics Anxiety Rating Scale: Psychometric data. *Journal of Counseling Psychology*, 19: 551-554.
- Roberts, Bilderback 1980 – Roberts, D., Bilderback, E. (1980). Reliability and validity of a statistics attitude toward statistics. *Educational and Psychological Measurement*, 40: 235-238.
- Rosário et al., 2008 – Rosário, P., Núñez, J., Salgado, A., González-Pienda, J., Valle, A., Joly, C. y Bernardo, A. (2008). Ansiedad ante los exámenes: relación con variables personales y familiares. *Psicothema*, 20(4): 563-570.
- Sandman, 1980 – Sandman, R. (1980). The Mathematics Attitude Inventory: Instrument and User's Manual. *Journal for Research in Mathematics Education*, 11: 148-149.
- Sarason, 1977 – Sarason, I. (1977). The Test Anxiety Scale: Concept and Research. Spielberger, C. & Sarason, I. (Eds.) *Stress and Anxiety*, 5. N.Y.: Halstead-Wiley.
- Sarason, 1984 – Sarason, I. (1984). Stress, anxiety and cognitive interference: reactions to tests. *Journal of Personality and Social Psychology*, 46, 929-938. DOI: <http://dx.doi.org/10.1037/0022-3514.46.4.929>
- Sarason et al., 1958 – Sarason, S., Davidson, K., Lighthall, F., Waite, R. (1958). A Test Anxiety Scale for Children. *Child Development*, 29, 105-113. DOI: <https://doi.org/10.2307/1126274>
- Satake, Amato, 1995 – Satake, E., Amato, P. (1995). Mathematics anxiety and achievement among Japanese elementary school students. *Educational and Psychological Measurement*, 55: 1000-1007.
- Sepie, Keeling 1978 – Sepie, A., Keeling, B. (1978). The Relationship between Types of Anxiety and Under-achievement in Mathematics. *Journal of Educational Research*, 72(1): 15-19.
- Suinn, Winston, 2003 – Suinn, R., Winston, E. (2003). The Mathematics Anxiety Rating Scale, a brief version: Psychometric data. *Psychological Reports*, 92: 167-173.
- Supervisión Escolar Zona Veracruz, 2017 – Supervisión Escolar Zona Veracruz. Escuelas, 2017. [Electronic resource]. URL: <https://bit.ly/2VgTXsv>
- Szetela, 1973 – Szetela, W. (1973). The Effects of Test Anxiety and Success-Failure on Mathematics Performance in Grade Eight. *Journal for Research in Mathematics Education*, 4: 152-160.
- Wise, 1985 – Wise, S. (1985). The Development and Validation of a Scale Measuring Attitudes toward Statistics. *Educational and Psychological Measurement*, 45: 401-405.
- Yasar, 2014 – Yasar, M. (2014). Short form of Mathematics Attitude Scale: Its psychometric properties. *Pakistan Journal of Statistics*, 30(6): 1267-1277.



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Conditions and Factors of the Development of Creative Civic Engagement of Students

Sergei I. Belentsov ^{a, *}, Veronika A. Gribanova ^b, Nadezhda V. Tarasova ^c, Tat'yana Y. Kopylova ^c

^a Kursk State University, Russian Federation

^b Rostov State University of Economics, Russian Federation

^c Southwest State University, Russian Federation

Abstract

The authors deal with the conditions and factors of the development of creative civic engagement of students. The article contains the results of the experimental work on forming the creative civic engagement of students during studying the discipline, which is called: "The Basics of Camp Counseling". The work on forming the creative civic engagement consists of such directions as: the formation of the theoretical readiness for manifestation of the creative civic engagement when working as camp counselors (informing students about the basics of civic engagement, camp counselors activities); formation of practical readiness to work as a camp counselor (participation in the results-oriented activities which are built on an optimistic attitude and emotional inclusion); formation of personal willingness for manifestation of creative civic engagement when working as camp counselors (the students' involvement in the action which demands using personal qualities of a civically engaged young individual). The materials of the research can be used as the recommendations to questions of the organization of upbringing work in the university, as the accompaniment of the module or the discipline "The Basics of Camp Counseling".

Keywords: conditions and factors, creative civic engagement, camp counseling, students, up-bringing activities.

1. Introduction

Nowadays young Russian people live in difficult conditions of economical and social development of the society. The problems of forming the democratic and constitutional state put in the first place the aim to form the personality of a young person as the subject of creative activity. Today there is a necessity for the most active, energetic, responsible and "viable generation" (Sikorskaya, 2009).

* Corresponding author

E-mail addresses: si_bel@mail.ru (S.I. Belentsov), akchinorev@yandex.ru (V.A. Gribanova), nadia-79@bk.ru (N.V. Tarasova), kgtup@mail.ru (T.Y. Kopylova)

Practice shows us that during studying at school personal qualities of civic engagement were not formed in a proper way. Today we see a reasonably deep contradiction between an apprehend need for upbringing the civic engagement in conditions of modern Russia and the lack of sufficient theoretical and methodological justification to organize such an education (Knyazev, 2007). Therefore, the main aim of the university is to form a civically engaged personality, to get and develop special professional qualities necessary for the future occupation.

2. Materials and methods

The experimental work has been conducted with the students of Taganrog University named after A.P. Chekhov during the academic year. The students who are mastering the discipline "The basics of camp counseling" became the participants. The experiment has gathered students of the faculty of history and philology (87 people).

In general, 173 people (87 people – the participants of the experimental group, 86 people – the participants of the control group) took part in the research. Random sampling was used to select the students.

Z-ratio test was used to compare two independent proportions.

The methodological aim of the research consists of the following:

- Personal approach. This approach points out the necessity of transferring students into the position of a civically engaged subject in compliance with originality of a person's identity in pedagogical process (E. Bondarevskaya, S. Barabanova, N. Borytko, G. Imakova, V. Zaytsev, O. Konopkin, I. Kohn, A. Leontyev, V. Serikov, G. Prygin) (Bondarevskaya, 2013; Barabanova, 2015; Imakova, 2015; Leontyev, 1975);

- Activity approach. This approach indicates the necessity of personality formation and development through inclusion in practical activities (D. Artyukhovich, A. Verbitsky, L. Vygotsky, P. Galperin, V. Davydov, A. Zaporozhets, I. Zimnyaya, V. Zinchenko, A. Leontyev, S. Rubenstein) (Leontyev, 1975; Artyukhovich, 2012; Vygotsky, 1982-1984; Zaporozhets, 2016; Rubenstein, 2009);

- Ideas of the value-based approach. This approach unites the importance of value as a stable regulator of human behavior (including the influence on the development of the person's creative civic engagement) (E. Bondarevskaya, A. Kiryakova, S. Kulnevich, L. Razbegayeva, I. Solovtsova) (Bondarevskaya, 2013);

- Axiological approach. The person is considered in the array of society values and self-purposes of social development (I. Andramonova, B. Brushlinsky, Z. Valiyeva, N. Nikandrov, V. Slastenin, P. Schedrovitsky) (Andramonova, 2010; Slastyonin, 2005; Schedrovitsky, 2002);

- Psychological theories. This approach considers the bases of the age-related features of the students' development (the aspiration to declare oneself, search of their own place in society, independence) (L. Vygotsky, I. Kohn, D. Feldstein, D. Elkonin) (Vygotsky, 1982-1984), (Elkonin et al., 2006);

- System-integral approach. This approach unites the recognition of integrity of the personality and pedagogical process, holistic studying and development of the students' civic engagement (I. Andramonova, N. Borytko, L. Bolotin, V. Ilyin, B. Igoshev, V. Kochisov, N. Lossky, L. Rubina, N. Sergeev) (Andramonova, 2010; Igoshev, Rubina, 2015).

3. Discussion

It might be wise to consider relevance of civil and patriotic education of the younger generation in a number of normative documents of the federal level.

The document "The Concept of long-term social and economic development of the Russian Federation until 2020 (approved by The order of the Government of the Russian Federation of 17.11.2008 N 1662-r (an edition of 28.09.2018) Paragraph 9" contains questions of youth policy. The materials indicate that the purpose of the state youth policy is creation of conditions for productive socialization and self-realization of the youth audience, the development of potential and opportunities of young people for further using for the benefit of an innovative way of development of our state (Order, 28.09.2018).

The materials of the document "Bases of the State Youth Policy of the Russian Federation until 2025" (approved by The order of the Government of the Russian Federation of November 29, 2014 No. 2403-r) point out the importance of the education of a patriotically adapted young person. The document contains information that every young person must have an independent

thinking, have a creative outlook, necessary knowledge, the high level of culture (including the culture of the international communication), to be able to make independent decisions and to be responsible for their own actions, to carry out their activities for the benefit of the country, people and family (Osnovy..., 29.11.2014).

The document "The strategy of the national state policy of the Russian Federation until 2025 (approved by The executive order of the President of the Russian Federation of December 19, 2012 N 1666)" unites questions of providing interests of the state, society, human and citizen, emphasizing the questions of the state integrity, keeping traditions of ethnic and cultural identity of people, maintenance of constitutional rights and freedoms of citizens of the country (Strategy, 19.12.2012).

The document "The strategy of up-bringing development in the Russian Federation until 2025 (approved by The order of the Government of the Russian Federation of May 29, 2015 No. 996-r)" describes the high-priority directions of state policy connected with the questions of education and socialization. The materials consist of the leading mechanisms of the development of upbringing institutes which are focused on the relevant needs of modern society and the state; and reflect global challenges and preconditions of the country development in the international community (Strategy, 29.05.2015).

These documents point out the importance of the education of younger generation, development of the civic position of youth. The question of the formation of civic engagement is of interest to the pedagogical community, philosophers, historians, psychologists and sociologists. The works of T. Akhayan, L. Bozovic, V. Karakovsky, A. Mertsalov, A. Petrov, L. Rakhimova, G. Shapoval, etc. emphasize the necessity of civic engagement development within younger generation. Such authors as A. Amirov, I. Grigoriev, I. Duranov, M. Kagan, S. Serebryakov, V. Slastenin, E. Shorokhov, etc. consider civic engagement as a social phenomenon and a socially useful activity. I. Andramonova, E. Anufriyev, B. Igoshev, G. Imakova, S. Maximova, A. Petrov, A. Solovyova, etc. study psychological and pedagogical features of development of civic engagement. However, the scientific knowledge used nowadays does not always correspond to the modern dynamically developing challenges of the society. Some works miss relevant socio-political and psychological and pedagogical preconditions of development of students' creative civic engagement. Some works do not take fully into consideration the educational resources of the university during working with students.

4. Results

Important work has been done on revealing the factors of the development of students' creative civic engagement. The purpose of the work is to define conditions of improvement of educational process and to create its scientific and methodical support.

The authors consider that camp counseling helps to form necessary skills and competences of a civically engaged young person (capacity for self-organization and self-education; willingness to realize the social importance of the future profession, having a motivation for implementation of professional activities; having the basics of professional ethics and speech culture; readiness for interaction and communication; initiative and independence; development of creative abilities).

The experimental work has been conducted with students of Taganrog University named after A.P. Chekhov during an academic year. The students, who took part in it, were involved in mastering the discipline "The basics of camp counseling" as a part of their educational program. The experiment gathered students of the faculty of history and philology (87 people).

A questionnaire for students has been organized (at the beginning of the experiment) on such topics as "the relation of students towards camp counseling", "the analysis of microclimate in the group", "willingness of students to join the active forms of civic engagement manifestation".

The results of this survey allow us to consider the following issues.

The respondents noted that they consider work in a children's health center to be important for further professional activity and effective within formation of competences of civically engaged young person (75 % of respondents answered positively, 25 % of respondents do not consider it to be an important experience).

We asked to mention interesting forms of studying within the discipline "The basics of camp counseling" (aimed at getting communicative competences, which are necessary for a camp counselor). The survey showed that 71 % of respondents consider to be effective active forms of

practical inclusiveness, game activities (trainings, collective and creative works, organization of evening meetings, competitions of pedagogical ingenuity, photocrosses, intellectual discussion games); 16 % of respondents mentioned less active forms and unwillingness to join the collective process and pointed out for themselves preparation of individual tasks; 10 % of the total number of respondents mentioned the preparation of reports and presentations; 3 % pointed out other forms of work.

In continuation of the research it was determined how united the team is, whether there are certain traditions in the group, etc. Answers showed: 58 % of the total number of respondents consider their collective to be united, however 31 % of respondents pointed out the lack of unity in groups, 11 % marked that it depends on a situation.

The creative atmosphere in studying groups was defined. The students' answers showed that only 35 % of the total number of respondents do not feel discomfort in communication, they are pleased with the atmosphere in collective. However, the most of the respondents (53 %) pointed out the lack of unity and creative atmosphere; 12 % defined that the atmosphere depends on certain circumstances, changes or a situation.

The authors researched whether there are traditions in studying groups, which are very significant for them. The answers showed that the majority of students do not have common, collective and significant for the group activities (75 % – "there are no such traditions", 15 % – marked the traditions (mostly birthday congratulations), 10 % – "yes, we have certain traditions (but did not specify them)").

The answers to the question whether the participants of the research take part in collective activities of their group are shown in [Table 1](#).

Table 1. Participation of Students in Collective Activities of their Group, % of the total number of participants of the experiment

Question	Answers of the respondents
Yes, I like to participate in collective and creative activities	50 %
No, I do not like to participate in collective activities, I got used to work independently	35 %
Sometimes, when it is really necessary, if I really feel like doing it	15 %

The students were asked whether they like to be engaged in cultural and creative activities. The answers showed: 62 % (the majority) like to be engaged in creative activities, however 28 % did not mention interest in this form, 10 % answered that it depends on their mood.

The students were asked whether like to be engaged in social activities. The answers showed: 55 % – join the public forms of work with pleasure, 31 % – such form of work is not interesting, 14 % – sometimes, it depends on their mood.

The atmosphere of cooperation in group was defined. The students did not answer actively. The answers: 56 % of the total number of the respondents indicated sympathy for the majority of the group members, but 44 % – indicated the indifferent attitude towards the members of their collective.

The question of how often the ideas and suggestions of students are used in the collective was studied. The answers: 50 % of the respondents answered positively, however the second half of group pointed out the following: "I do not make suggestions, I do not participate in discussions", "I suggest something seldom", "only when creative approach is necessary", "by half", "it depends on the atmosphere when I speak".

The students were asked whether they are eager to come to and leave the university. The students answered with small difficulties, thinking for a long time. 42 % answered positively, 26 % answered negatively and 32 % pointed out that "not always, sometimes", "at the beginning of educational process", "I find it difficult to answer", "it depends on my mood", "if subjects are not boring", etc.

The leader of group was defined. The respondents pointed to the head of the group (88 % of the total number of respondents), the others mentioned other members of the collective (creative students, public leaders).

The students were also asked to mention whether they feel discomfort in communication with someone, whether it is difficult to find a common language. The answers showed that in the group there is small percent of private people, who are not willing to contact with others.

The answers to the question "To what degree are you satisfied with results of studying and spending free time in your group, in your university?" are reflected in [Table 2](#).

Table 2. Satisfaction with results of studying and spending free time in your group, university

Question	Answers of the respondents
Completely satisfied	29 %
Partly satisfied	51 %
I do not know	8 %
Partly not satisfied	6 %
Not satisfied	6 %

Answers to the question "Do the results of studying at the university correspond to your expectations?" are reflected in [Table 3](#).

Table 3. Correspondence between the results of studying at the university and expectations

Question	Answers of respondents
completely correspond	25 %
Partially correspond	55 %
I do not know	6 %
Partly do not correspond	5 %
Do not correspond	5 %
Other answer (not sure about choosing the right speciality, etc.)	4 %

The students were asked what forms of work are pleasant for students during educational process on the discipline "The Basics of Camp Counseling". The following answers were received: "more team-building exercises", "to arrange seminars with advantage", "to focus on group tasks", "collective work with students from other groups", etc.

The organization of the results-oriented work in the experimental group was started (based on definition of microclimate in the group, the attitude of students towards work of camp counselors and desire of students to get involved in intensive activities).

The experimental work included the following activities:

- formation of theoretical readiness for manifestation of creative civic engagement while working as camp-counselors (informing students about basics of camp counseling, civic consciousness);

- formation of practical readiness to work as camp counselors (participation of students in the results-oriented activities, which are built on an optimistic spirit and emotional involvement);

- formation of personal readiness for manifestation of creative civic engagement when working as camp counselors (involvement of students in the activities which demands using personal qualities of a civically engaged camp counselor).

The experience of formation of the students' readiness to work as camp counselors and manifestation of the active civic position during their mastering the course "The Basics of Camp Counseling" (the module united those components which have already been spoken about) will be described.

The working system of the children's health centers was introduced to the students. The students studied various techniques and forms of the organization of leisure time activities of children. The participants were taught to plan and organize collective activities of civil and patriotic

character. The students made the analysis and self-examination of their activity. We worked on the development of the students' professional and pedagogical skills of the organization of bringing-up activities with children and teenagers. The basics of pedagogical culture and the professional speech were explained to the students. Conditions were created for development of the civil, patriotic, and pedagogical value system, skills of professional communication, self-education and personal growth.

The following events were arranged, aimed at formation of theoretical readiness for manifestation of creative civic engagement while working as camp counselors:

- the historical aspect of development of camp counseling movement and the experience of camp counseling in Russia were shown;

- the social and psychological portrait of the modern child was made;

- the functional legislature in the sphere of education and organization of the leisure time and health improvement of children was overlooked;

- the sphere of professional activity of a camp counselor was updated.

- the basics and features of psychological and pedagogical activity of a camp counselor were presented;

- the question of goal-setting in the work of a camp counselor, self-control of emotional behavior was considered.

- the basics of camp counseling ethics and axiological aspects of a camp counselor's outlook were pointed out.

- the features of a camp counselor's work with intellectually gifted children, with children who are in a difficult life situation, with children with special health needs were considered.

The results-oriented events were arranged (which are built on an optimistic spirit and emotional involving) in the course of forming of practical readiness to work as camp-counselors.

There were pointed out such forms of work as:

- Training programs (aimed at getting skills of team building, removing communicative barriers, overcoming the conflicts in children's temporary collective, understanding the features of children team management, overcoming conflict situations (forecasting, prevention, avoidance and creative solution), etc.).

- Business and role-play games (aimed at getting the basics of knowledge of life safety of children collective (a camp counselor's responsibility for physical and psychological wellbeing of a child; the behavior algorithms in extreme, dangerous and emergency situations; providing safety in various geographical and climatic conditions; obeying the rules of fire safety while arranging sporting events, etc.); specifics of interpersonal and intergroup conflicts in children community at different age stages).

- Express diagnostics (techniques and technologies of a camp counselor's work with the children who are in a difficult life situation, feeling discomfort in communication in conditions of a temporary children collective).

- Game techniques (development of leadership, confidence in their own power, overcoming the fear of engagement and leadership manifestation). The following principles of successful game interaction were used: situationality, variability, personal adaptability, pedagogical expediency. The students were involved in outdoor games, folklore games, informative games, games-acquaintances, games-tests, etc.

- Projecting (aimed at motivation of students for socially important activities, for manifestation of an active civic position). "A life cycle of a project" and the basics of forming of project team were considered. The students developed, presented and defended projects. Reflection has been done (estimation of efficiency of the project at different stages of its realization).

- Collective and creative activities (aimed at manifestation of activity, involvement of all the participants of the event in the process, development of communication skills during the collective and creative activity).

- Modern interactive technologies of work (Quest, photocross, etc.).

- Creative master classes (aimed at the development of creative competences of participants of the process).

- The competition of pedagogical resourcefulness (aimed at the development of professional skills, ability of the operational solution of problem situations).

- Discussion platforms (aimed at the development of skills of communication, ability to defend the point of view, to find optimal solutions of various tasks).
- Intra-group reflection.
- Song and dancing creativity (as a factor of unity of a temporary collective (use of such songs as repeating songs, chants, comic, patriotic, evening, songs, songs near the fireplace, etc.)).
- Professional orientation activities (as way of formation of ideas of professions).

The following events were conducted, aimed at formation of personal readiness for manifestation of creative civic engagement when working as camp counselors:

- Development of pedagogical tact and student culture,
- Getting of necessary creative civil and patriotic competences, and, most importantly, desire and readiness to apply them within student practice.
- Up-bringing of self-organization and self-discipline.
- Realizing professional responsibility for life, health and development of a child.
- Formation of social immunity to various negative situations.

The result of the organized activities reveals a sufficiently high level of work on formation of creative civic engagement in student environment.

Diagnostics was carried out (on completion of the experimental work) and positive dynamics of formation of student's creative civic engagement in the experimental group was found out (Table 4).

Table 4. Participation of Students in collective and creative activities, % of the total number of participants of the experiment

Activity degree	Experimental group		Control group		Z ^a
	Beginning of the experiment (wishes)	End of the experiment (in fact)	Beginning of the experiment	End of the experiment	
High level of activity	Planned to join 31,2 %	46 %	Planned to join 32,1 %	15 %	8,10*
Partial participation	Expressed a wish 42,3 %	41 %	Expressed a wish 44,5 %	21,5 %	4,43*
Weak participation	Designated 10,6 %	7 %	Designated 10,1 %	41,5 %	-6,53*
Lack of interest in participation, difficulties	Showed 15,9 %	6 %	Showed 13,3 %	22 %	-3,60*

^a Z-ratio test for the significance of the difference between two independent proportions (for participants of experimental group and control group at the end of experiment) has been used.

*p < 0,05

The results of the experiment have showed positive dynamics concerning students' attitude towards camp counseling and understanding of its importance. The following issues have been noted: the development of initiatives in the student group, independence of the participants, commitment, and acquisition of organizing skills. The discipline "The Basics of Camp Counseling" was highly appreciated by participants of the activities. It was seen that having mastered the discipline, the students began to take part in life of their group, faculty and university with great interest. They began to show interest in cultural and creative, sports and public activities, manifesting the high civic position. The atmosphere of emotional responsiveness and positive interaction gave a sense of intra-group comfort and self-confidence, which increased civic self-determination and engagement of youth.

The students of the experimental group began to show interest and desire to participate in active forms of socially useful activities. The level of self-organization and self-education abilities

has grown; we saw readiness of students to realize the social importance of their future profession; the most of the participants got the motivation to implement their professional activity. The following issues have also been noted: the increased level of pedagogical ethics and speech culture; students' conscious ability to interact and communicate; initiative and independence, development of creative abilities. In addition, the participants of the process got the practical experience of participation in socially useful activities, began to think more reasonable, not to be embarrassed with making suggestions, having overcome communicative barriers, to respect the opinions of their collective members.

5. Conclusion

Positive changes, which were recorded during the experimental work, make it possible for us to conclude about the efficiency of the revealed conditions and factors influencing the development of creative civic engagement of students.

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References

- [Andramonova, 2010](#) – *Andramonova I.M.* (2010). Aktivnaya grazhdanskaya pozitsiya molodezhi [Active civic stand of youth]. M.: Obrazovanie. 276 p. [in Russian]
- [Artyukhovich, 2012](#) – *Artyukhovich D.V.* (2012). Problema grazhdanskoi aktivnosti lichnosti v filosofskoi traditsii [A problem of civic engagement of the personality in philosophical tradition]. M.: Prosveshchenie. 223 p. [in Russian]
- [Barabanova, 2015](#) – *Barabanova S.V.* (2015). Studencheskoe samoupravlenie kak pravovoe yavlenie [Student government as legal phenomenon]. *Pravo i obrazovanie*. P. 139. [in Russian]
- [Bondarevskaya, 2013](#) – *Bondarevskaya E.V.* (2013). Vospitanie kak vozrozhdenie grazhdanina, cheloveka kul'tury i npravstvennosti [Education as revival of the citizen, person of culture and morality]. Opyt razrabotki kontseptsii vospitaniya: V 2-kh ch. 4.1. Rostov n/D. pp. 11-12. [in Russian]
- [El'konin i dr., 2006](#) – *El'konin D.B., Zaporozhets A.V., Gal'perin P.Ya.* (2006). Problemy formirovaniya znaniy i umeniy u shkol'nikov i novye metody obucheniya v shkole [Problems of formation of knowledge and abilities at school students and new methods of training at school]. *Voprosy psikhologii*, 5: 10-12. [in Russian]
- [Igoshev, Rubina, 2015](#) – *Igoshev B.M., Rubina L.Ya.* (2015). Razvitie grazhdanskoi aktivnosti studentov pedagogicheskikh vuzov: kontseptual'nye osnovy i programma deyatel'nosti [Development of civic engagement of students of pedagogical higher education institutions: conceptual bases and program of activity]. *Nauchnyi dialog*, 4: 101-110. [in Russian]
- [Imakova, 2015](#) – *Imakova G.U.* (2015). Grazhdanskaya aktivnost': vozmozhnosti razvitiya i izmeneniya obshchestva [Civil activity: possibilities of development and change of society]. *Molodoi uchenyi*, 6 (1): 148. [in Russian]
- [Knyazev, 2007](#) – *Knyazev A.M.* (2007). Vospitanie grazhdanstvennosti. Vospitanie cheloveka i grazhdanina kak filosofsko-pedagogicheskaya problema [Education of civic consciousness. Education of the person and citizen as philosophical and pedagogical problem]. M.: RAGS. [in Russian]
- [Leont'ev, 1975](#) – *Leont'ev A.H.* (1975). Deyatel'nost'. Soznanie. Lichnost' [Activity. Consciousness. Personality]. M.: Politizdat. 342 p. [in Russian]
- [Order, 28.09.2018](#) – Rasporyazhenie Pravitel'stva RF ot 17.11.2008 N 1662-r (red. ot 28.09.2018) [The order of the Government of the Russian Federation of 17.11.2008 N 1662-r (an edition of 28.09.2018). About the Concept of long-term social and economic development of the Russian Federation until 2020]. [in Russian]
- [Osnovy..., 29.11.2014](#) – Osnovy gosudarstvennoi molodezhnoi politiki Rossiiskoi Federatsii na period do 2025 goda [Bases of the state youth policy of the Russian Federation until 2025]. (utv. Rasporyazheniem Pravitel'stva Rossiiskoi Federatsii ot 29 noyabrya 2014 g. № 2403-r). [in Russian]

[Rubinshtein, 2009](#) – *Rubinshtein S.L.* (2009). Osnovy obshchei psikhologii [Fundamentals of the general psychology]. SPb.: Psikhologiya. 713 p. [in Russian]

[Shchedrovitskii, 2002](#) – *Shchedrovitskii G.P.* (2002). Obrazovanie i innovatsionnye soobshchestva [Education and innovative communities]. Otkrytoe obrazovanie i regional'noe razvitiye: problema sovremennogo znaniya. Tomsk. pp. 12-21. [in Russian]

[Sikorskaya, 2009](#) – *Sikorskaya L.E.* (2009). Krizis institutov sotsializatsii sovremennoi molodezhi [Crisis of institutes of socialization of modern youth]. *Vestnik Kostromskogo gosudarstvennogo universiteta im. N.A. Nekrasova*, 4: 258–265. [in Russian]

[Slastenin, 2005](#) – *Slastenin V.A.* (2005). Aktual'nye problemy sotsial'noi aktivnosti [Current problems of social activity]. Red. kol. T.G. Kiseleva (otv. red.), B.G. Mosalev, Yu.A. Strel'tsov: sb. statei. M.: MGUK. pp. 121-134. [in Russian]

[Strategy, 19.12.2012](#) – Strategiya gosudarstvennoi natsional'noi politiki rossiiskoi Federatsii na period do 2025 goda [The strategy of the state national policy of the Russian Federation until 2025]. (utv. Ukazom Prezidenta Rossiiskoi Federatsii ot 19 dekabrya 2012 g. N 1666). [in Russian]

[Strategy, 29.05.2015](#) – Strategiya razvitiya vospitaniya v Rossiiskoi Federatsii na period do 2025 goda [The strategy of development of education in the Russian Federation until 2025]. (utv. rasporyazheniem Pravitel'stva Rossiiskoi Federatsii ot 29 maya 2015 g. № 996-r). [in Russian]

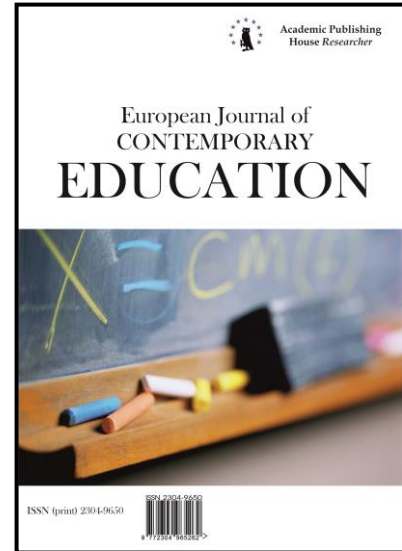
[Vygotskii, 1982–1984](#) – *Vygotskii L.S.* (1982–1984). Sobr. soch. [Collected works]: v 6 t. M.: Pedagogika, 1982-1984 gg. 246 p. [in Russian]

[Zaporozhets, 2016](#) – *Zaporozhets A.V.* (2016). Izbrannye psikhologicheskie trudy [Chosen psychological works]: v 2-kh t. M. P. 8. [in Russian]



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The History of Education

Development of the School Education System in the Province of Vologda (1725–1917). Part 2

Aleksandr A. Cherkasov ^{a, b, *}, Sergei N. Bratanovskii ^{c, d}, Larisa A. Koroleva ^e,
Ludmila G. Zimovets ^f

^a International Network Center for Fundamental and Applied Research, Washington, USA

^b Volgograd State University, Volgograd, Russian Federation

^c Plekhanov Russian University of Economics, Moscow, Russian Federation

^d Institute of State and Law of RAS, Moscow, Russian Federation

^e Penza State University of Architecture and Construction, Penza, Russian Federation

^f Sochi State University, Sochi, Russian Federation

Abstract

The article discusses the origin and development of the school system on the territory of Vologda province in 1725–1917. In the second part of the study, the authors examine the development of the public education system from the end of the 1840 to 1864.

In solving research problems, both general scientific methods (concretization and generalization) and traditional methods of historical analysis were used. The authors used the historical-situational method, which involves the study of historical facts in the context of the era in conjunction with the “neighboring” events and facts. Additionally, pre-revolutionary studies on the history of pedagogy, as well as modern Russian scientific literature, were brought in as materials.

In conclusion, the authors noted that the system of public education in Vologda province from the late 1840s to 1864 continued to develop actively. At this time, the idea of teaching literacy to the younger generation begins to penetrate into the consciousness of the peasantry. As a result, not only a variety of educational institutions appears, but also ways of teaching children with the help of private hiring of teachers are becoming common. The first private public library appeared in the early 1860s and it also contributed to the spread of literacy.

* Corresponding author
E-mail addresses: sochi003@rambler.ru (A.A. Cherkasov)

Keywords: national education, gymnasium, colleges, Vologda Province, Russian Empire, teachers.

1. Introduction

The first educational institutions in Vologda province were established in the XIV century. Their founder was St. Stephan, the apostle and enlightener of the land of Perm, who preached Christian teachings among local pagans (Popov, 1885: 40). In his effort to strengthen the faith among the people, he founded schools at churches. He also taught children and translated other church books into the Zyryan language.

However, after the death of St. Stephan, writing existed in the land of Perm no more than 100 years. Later it was forgotten, as the priests tried to translate writing from Zyryan to Slavic. Schooling was resumed only under Peter I. In the second part of this article, we would like to consider the development of the public education system from the late 1840s to 1864.

2. Materials and methods

Studies on the history of pedagogy of the pre-revolutionary period, as well as modern Russian scientific literature, were brought in as materials.

In solving research problems, both general scientific methods (concretization and generalization) and traditional methods of historical analysis were used. The authors use the historical-situational method, which involves the study of historical facts in the context of the era in conjunction with the “neighboring” events and facts.

3. Discussion

Public education on the territory of Vologda province caused and continues to arouse the interest of specialists in the field of history of pedagogy. Initially, this topic was studied in the context of the history of Orthodoxy, and in particular the activities of St. Stephen of Perm in the XIV century. Researchers like E.A. Popov and N. Otto (Otto, 1866), wrote or mentioned this topic, which was also mentioned in the work “For the History of the Vologda School Directorate” (Dlya istorii, 1860).

During the reign of Peter the Great, Russia began the process of creating educational institutions, namely, “numeric” schools and theological seminaries, which evolved to big and small schools, and later – to gymnasiums and district schools. The topic of public education in Vologda province in pre-revolutionary Russia was paid attention to by such researchers as: N. Bunakov (Bunakov, 1864) and A. Ivanov (Ivanov, 1879). It was also mentioned in the “Historical Review of the Activities of the Ministry of National Education, 1902–1902” (Istoricheskii obzor, 1902).

In the modern period, the topic of history of Vologda educational institutions was addressed by such researchers as: N.S. Vorotnikova (Vorotnikova, 2015; Vorotnikova, 2015a; Vorotnikova, 2016), L.N. Kolos (Kolos, 2015), A.A. Cherkasov et al. (Cherkasov et al., 2019). At the same time, the issues of regional education of other central and southern provinces of the Russian Empire are actively studied (Peretyatko, Zulfugarzade, 2017; Peretyatko, Zulfugarzade, 2017a; Kornilova et al., 2016; Natolochnaya et al., 2018; Magsumov et al., 2018; Shevchenko et al., 2016).

4. Results

In 1847, the Russian Geographical Society requested a variety of ethnographic material from different regions of the Russian Empire. These included folk tales, songs, proverbs, dictionaries of the commonplace language and local dialects, with indications of common stress and examples in the language of speech and samples of small stories or conversations written in exactly the same local language. In this regard, in 1848, the Geographical Society sent out a guide for collecting ethnographic information, wishing to have notes on the appearance of local residents, on their home life, mental and moral characteristics, education, folk traditions and monuments. Among the programs were brief instructions on the collection of information about the climate and a book with questions to mark observations on agriculture.

Meanwhile, the Academy of Sciences and the main physical observatory extracted results from meteorological observations that were made in all parts of Vologda province by full-time caretakers, teachers, and priests; noticing the inaccuracy of these observations, the academy reported that in its workshop one could purchase the most accurate instruments which the schools

could not afford. Manuals and guidelines for the work of meteorological observations, psychrometric tables, etc were sent to the Directorate from the observatory.

A number of teachers of the Vologda gymnasium and elementary schools responded to the call of the Geographical Society. In 1847, the Russian Geographical Society expressed its gratitude to the teachers Titova and Mikhailov for delivering the articles, and also expressed the hope that their studies in science would continue. What researches did the teachers conduct? An example is Protopopov, a teacher in Ustyug, was engaged in compiling a dictionary of Ustyug and Yarensk counties. He read about 260 acts of the XVI and XVII centuries in the Yarensky archive and made a compilation of words that were rarely used. Thus, he compiled more than 1 thousand words. Also, the teachers were engaged in the study of local languages, the preparation of local history articles, a description of the local rites etc. (Otto, 1866: 100).

In 1848, an outbreak of cholera took place in Vologda*. The epidemic began at the end of May and caused considerable demographic damage to the city. Among the dead was one high school student and one high school official (Otto, 1866: 101).

District, parish and private schools were an important part of the public education system (Cherkasov, 2011: 138-149). The Vologda district school was opened on November 12, 1804 and was placed together with the gymnasium in the public care center, where the school was located until 1837. Before the transformation in 1832, the school had two classes and had about 70–80 pupils constantly. In addition to the standard amount of money, it was supposed to get 200–400 rubles per year. The first parish school in Vologda was opened on November 8, 1807 and 360 rubles were spent on its maintenance per year. The number of students was from 50 to 70 people (Otto, 1866: 102). From the very beginning, the parish school were up to 60 students, which made it difficult for one teacher to work. Therefore, the Vologda Directorate intended to establish one parish school in each of the three parts of the city and asked the local authorities to open 2 more schools. The locations included the Resurrection Church in the Leninskaya ground and Kolyashnaya Street for the students from the other bank of the river. However, it was only in March, 1838 that the second parish school was established in Vologda, at the expense of the merchant society's donation of 400 rubles, and in 1848, with the assistance of the mayor of Grudin, the first girls' school was opened in the city. In the second parish school there were 30–50 students, and in the girls' school there were about 20 students (Otto, 1866: 102).

In 1834, supervision of the district school was assigned to senior teachers of the gymnasium in order to make Vologda district school exemplary for all the other schools in province. In this regard, in 1838, the teachers were engaged in free teaching of German and algebra, and the staff superintendent taught Latin.

According to the traditions of the Russian Empire, in addition to the full-time superintendent of the school, there was also an honorary caretaker who was chosen from among the richest citizens of the area. The duty of the honorary caretaker was to donate a fixed amount to the educational institution every year. For example, the honorary caretaker of Vologda School, the court counselor V.A. Volotskoy annually donated 200 rubles to the school. After the conversion of the district school in 1832 from a two- to a three-year, the honorary caretaker donated 65 rubles for the furniture and 48 rubles for the textbooks (Otto, 1866: 103).

In 1837, the district school bought at auction a three-story house (made of stone) of the merchant Kokorev for 8 thousand rubles (Otto, 1866: 102)

The donation of the merchant Grudin, who in 1841 provided 56 poor students from the district and parish schools with shoes and clothing (winter and summer), was a true phenomenon of charity. At the same time, Grudin paid for the placement of the Second Parish School in a private house (42.8 rubles per year). In 1842, Grudin supplied 60 students not only with clothes and shoes, but also with textbooks, and encouraged diligent students to study with gifts. In 1843, there were already 70 children supported by Grudin. In addition, he paid 150 rubles a year for the premises of the 2nd parish school and saved 450 rubles for the school administration, which was spent to establish a parish school for girls (as an experiment, for 3 years) (Otto, 1866: 105).

* It is important to note that the first outbreaks of cholera in Eurasia began at the beginning of the XIX century. They covered first the Caucasus, and then the central European provinces of Russia. (Ermachkov et al., 2018; Ermachkov et al., 2018a; Ermachkov et al., 2018b).

In 1850 in the Vologda school the inspection found out that out of 151 students in classes there were only 145 were present. In the 1st class there were 73 students, 41 in the 2nd and 37 in the 3rd class. There were 77 children of nobles and officials, 42 children of merchants and burghers and 32 peasant children (Otto, 1866: 171).

The free mutual education school, opened in 1819 in Vologda by tradesman J. Muromtsov is also worth mentioning. Muromtsov arrived in Vologda in September 1819 with textbooks, rented a room for 200 students and announced the citizens about free education for children. 32 students enrolled in the school and in December the school was opened. By August 1820, the number of students had increased to 130; in 1821 there were 90 and 51 in 1822. Children from 6 to 16 years studied at the Muromtsov School, both boys and girls. The school was divided into 7 classes. Beginners wrote on the sand with sticks. In addition to reading and writing, children studied arithmetic, the law of God and sacred history; but after the subordination of the schools to the supervision of local staff (March 18, 1821), the subjects in their course were limited only to reading, writing, and the basic arithmetic. In the first four years, the construction and maintenance of the school cost Muromtsov about 5 thousand rubles, spent on classroom furniture, the purchase of textbooks, rent, heating, lighting, etc. All these expenses caused Muromtsov a lot of difficulties. He was forced to transfer the school to a smaller room. The lack of money led to the fact that in 1825 there were 12 pupils in the school, but from 1826 it was again replenished by pupils (in 1828 there were about 40). By this time, he had spent up to 8 thousand rubles on his school but he was given a grant from the government at the same time – 1,000 rubles, and in November 1828 he received a silver medal on the Order of St Anna (Otto, 1866: 109). The following year, however, Muromtsov fell ill and died on July 31, 1829. His school was closed.

Private boarding schools

The first half of the 18th century is characterized by the emergence in Russia of a new type of educational institutions – boarding schools, including private ones. “The tasks of the first boarding school did not go beyond teaching students a decent material content and establishing a well-known external discipline, without which the school could not function” (Sukhomlinov, 1865: 192).

Boarding schools became very popular, since the conditions of education in them were “milder” in comparison with state schools. They solved the social task of educating the children of nobility and middle class. The majority continued to use primitive home schooling and the services of elementary general private schools, which were still accessible to all classes. (Kodrlé, 2016: 131).

The first noble boarding school for children was opened in Vologda in 1816 by foreigners Osip Jacobi and Theresia Tausch; but it functioned only for 3 years. In 1835, on the permission of the Minister of Public Education G. K. Dose (the wife of a gymnasium teacher) a boarding house for noble girls was established with payment of 400 rubles for full-board, and 250 rubles for half-board (Otto, 1866: 110). In 1839, the boarding school had about 30 students. It brought up the children of noblemen, officials, clerics, and even merchants. In 1846, the boarding school introduced the teaching of a short course of physics and a brief overview of universal history in French. The boarding school was famous in Vologda and existed for about 23 years, until the very opening of a gymnasium, the management of which was entrusted to the former owner of the boarding house, G.K. Dose.

Koltynyanskaya primary school for children of both sexes also functioned in Vologda in 1848-1858. Tuition was 60 rubles per year. The number of students was up to 12 people and they studied God's law, grammar, history, geography, arithmetic, reading and writing in French and German.

It is important to note that public education in district schools for a long time was miserable. At first, it was difficult for the government to establish a school in the regions, but then the school authorities were faced with the problem of poor attendance. Let us take a look at the statistics. In 1804, after the opening of the Vologda gymnasium, the total number of students did not exceed 400 people. In 1807 it was only 345. In 1808, the number of students was less than 250, in 1809 – 350. In 1815 – 600, in 1822 there were about 500 students, in 1824 – 350, in 1825 – 360 and up to 463 students in 1830 (Otto, 1866: 181).

By 1850, along with the rural schools, there were already more than 4.1 thousand students, including 1,709 boys and 181 girls in educational institutions of the Ministry of Public Education, and 2,239 people in rural schools. (Otto, 1866: 182).

Schools were opened in landowners' estates. So, in 1814–1840, three schools were opened in the territory of Vologda province: in the village of Pokrovsky, in the village of Nikolsky and in the village of Kovyryn. The number of children in those schools ranged from 12 to 34 (Otto, 1866: 191).

In 1845 in Vologda province state peasants had 39 schools with 41 teachers. There were 1097 students (Otto, 1866: 194). Thus, on average, the school accounted for 28 people. By 1849, the total number of schools had reached 49, with 1,381 students. At the same time, the number of pupils per school did not change and continued to be 28 people.

In total, as of 1848, 1,468 people were enrolled in state rural schools, 357 in special schools, and 48 in the Malaya Zavodskaya school, a total of 1,859 boys and 13 girls. Two years later, there were 1979 pupils in schools of state peasants, 210 in specific schools, and 50 in Malaya Zavodskaya, a total of 2239 students (Otto, 1866: 195).

The problems of all rural schools were similar. For example, there were only 18 students in the Shuisky school, when it could have been 50. Unfortunately, the teacher in the school was a priest who was busy with the duties of his parish. The same situation was with the school in Seregov. There were 11 students in the Glotovo School and there was no teacher in the school in Seregov.

But there were exceptions. In Ustyugsky district, in the Iglinsky Pogost, a school was opened by the peasant Chebykin. Chebykin pledged to maintain a school for 10 years, where boys were brought up and lived at his expense. In 1846, a full-time caretaker found this facility in good condition, children had a lot of textbooks. The teacher who completed the course in the seminary received up to 500 rubles from Chebykin per year (Otto, 1866: 198).

After the abolition of serfdom and the Zemstvo reform, the primary education system developed even more.

Table 1. Number of educational institutions and students in 1862 (Bunakov, 1864: 120-121)

Department	Number of educational institutions	Students		
		Both	male	female
1) Subordinate to the ministry public education:				
Parish schools	14	500	474	26
Private schools	2	77	6	71
2) Subordinate to the ministry state property				
Rural schools	64	3331	2917	414
3) The district department:				
Rural schools	9	317	317	-
Parish schools	98	810	402	408
Private schools	5	51	36	15
4) The clergy department:				
Parish schools	1	43	43	-
Primary church schools	448	8509	7384	1125
5) Alexandrovsky orphanage	1	80	79	1
Total	642	13718	11658	2060

By 1863, the number of schools had increased even more – in Vologda province there were 664 educational institutions with 1,335 teachers (of which 26 were women) and 16310 students of which 2407 were girls (Bunakov, 1864: 117). In addition to schools officially recognized in society, there were other ways to spread literacy. In Kadnikovsky district, the peasants sent their children for literacy training to a literate person in another village, who had been teaching for many years. That man taught more than 10 boys – thus that made a whole unaccounted school. Sometimes the peasants would invite a teacher. 8–10 peasants hired a teacher for a conditional fee - usually 1–1.5 rubles for reading and about 3 rubles for teaching reading and writing (Bunakov, 1864: 122).

In 1863, there were only 3 secondary educational institutions in entire Vologda province: the provincial gymnasium, Mariinsky Women's Gymnasium and the Theological Seminary. In 1862 - 1863, 26 people completed a course of study at the provincial gymnasium, of which 19 continued their studies at universities. In Mariinsky Women's Gymnasium in 1862 there was no graduation, and in 1863 six pupils graduated from the gymnasium, 3 of them passed a special exam for the right to teach French. The graduates of the seminary are worthy of mentioning. In 1862, out of 115 graduates, 4 enrolled in the theological academy, 32 in the clergy, 7 became teachers at state

schools, 12 in civil service, 13 were engaged in private affairs and teaching, 46 remained without work, and 1 of them died (Bunakov, 1864: 124-125).

An important means for the dissemination of knowledge in Vologda was a private public library (Arsenyev and Fedoseyev), opened in the second half of 1863. The library enlisted of 1396 volumes, of which 98 – on history, 80 – on natural science, 68 – on economics, on statistics and ethnography, fiction – 1020, books of indefinite content – 130. In 1863, the library received 24 periodicals. By January 1, 1864, the library had 115 members, of which 17 were women.

Table 2. Distribution of members of the private public library by classes (Bunakov, 1864: 125)

Class	Number of members	
	Male	Female
Nobles and officials	73	16
Merchants	16	1
Clergy	9	-

In addition to the public library in Vologda, there was also a library at the gymnasium (5095 volumes), which was used only by teachers and students. There were also libraries in district schools at Mariinsky Gymnasium, in noble council and seminary.

5. Conclusion

In conclusion, we would like to note that the system of public education in Vologda province from the late 1840s to 1864 continued to develop actively. At this time, the idea of the need to teach literacy to the younger generation begins to penetrate into the consciousness of the peasantry. As a result, not only a variety of educational institutions appears, but also ways of teaching children with the help of private hiring of teachers are becoming common. The first private public library appeared in the early 1860s and it also contributed to the spread of literacy.

References

- Bunakov, 1864 – Bunakov N. (1864). Ocherk narodnogo obrazovaniya Vologodskoi gubernii [Essay on the public education of Vologda province]. *Zhurnal ministerstva narodnogo prosveshcheniya*, 122: 117-132. [in Russian]
- Cherkasov et al., 2019 – Cherkasov A.A., Bratanovskii S.N., Koroleva L.A., Zimovets L.G. (2019). Development of School Education in the Vologda Governorate (1725–1917). Part 1. *European Journal of Contemporary Education*, 8(1): 208-214.
- Cherkasov, 2011 – Cherkasov A.A. (2011). All-Russian Primary Education (1894-1917): Developmental Milestones. *Social Evolution & history*, 2(10): 138-149.
- Dlya istorii, 1860 – Dlya istorii vologodskoi direksii uchilishch [For the history of the Vologda school directorate]. *Pamyatnaya knizhka dlya Vologodskoi gubernii na 1860 god*. Vologda, 1860, 65-104. [in Russian]
- Ermachkov et al., 2018 – Ermachkov I.A., Koroleva L.A., Svechnikova N.V., Gut J. (2018). The Plague in the Caucasus in 1801–1815 years: Part I. *Bylye Gody*, 47(1): 120-129.
- Ermachkov et al., 2018a – Ermachkov I.A., Koroleva L.A., Svechnikova N.V., Gut J. (2018). The Plague in the Caucasus in 1801–1815 years: Part II. *Bylye Gody*, 48(2): 558-569.
- Ermachkov et al., 2018b – Ermachkov I.A., Koroleva L.A., Svechnikova N.V., Gut J. (2018). General Ermolov and His Role in the Evolution of Public Health Service in the Caucasus. *Bylye Gody*, 49(3): 1037-1045.
- Istoricheskii obzor, 1902 – Istoricheskii obzor deyatelnosti Ministerstva narodnogo prosveshcheniya. 1802-1902 [The historic overview of the activities of the Ministry of Education. 1802-1902]. Sost. S.V. Rozhdestvenskii. SPb., 1902. 840 p. [in Russian]
- Ivanov, 1879 – Ivanov A. (1879). Materialy dlya istorii zemskoi deyatelnosti po narodnomu obrazovaniyu v Vologodskoi gubernii: Sravnitel'no-statisticheskoe obozrenie po narodnomu obrazovaniyu v Vologodskom uezde za 9-letnee sushchestvovanie zemstva v gubernii [Materials for the history of zemstvo activities on public education in Vologda province: Comparative statistical review of public education in Vologda district for the 9-year existence of the zemstvo in province]. *Vologodskii sbornik*. T.1. Vologda. [in Russian]

[Kobakhidze, 2015](#) – *Kobakhidze E.I.* (2015). Zakonodatel'stvo 1840–1870-kh gg. v oblasti obrazovaniya kak faktor integratsii kavkazskoi shkoly v rossiiskuyu sistemu narodnogo prosveshcheniya [The legislation of 1840-1870-ies in the sphere of education as a factor of integration of the Caucasian school in the Russian system of public education]. *Istoricheskie, filosofskie, politicheskie i yuridicheskie nauki, kul'turologiya i iskusstvovedenie. Voprosy teorii i praktiki*, 10. Ch. 3. pp. 87-90. [in Russian]

[Kodrlé, 2016](#) – *Kodrlé S.V.* (2016). Chastnaya shkola dorevolutsionnoi Rossii kak kul'turno-istoricheskii i obshchestvennyi fenomen [The private school of pre-revolutionary Russia as a cultural, historical and social phenomenon]. *Aktual'nye problemy gumanitarnykh i estestvennykh nauk*, 8-2: 129-133. [in Russian]

[Kolos, 2015](#) – *Kolos L.N.* (2015). Razvitiye nachal'nogo zhenskogo obrazovaniya v Vologodskoi gubernii vo vtoroi polovine XIX – nachale XX veka [The development of primary female education in the Vologda province in the second half of the XIX – early XX centuries]. Vologda. [in Russian]

[Kornilova et al., 2016](#) – *Kornilova, I.V., Magsumov, T.A., Shakirov, R.R.* (2016). Female teachers training in educational grades of women's gymnasia in kazan in the last third of the XIX - Early XX centuries. *European Journal of Contemporary Education*. 16(2): 217-228.

[Magsumov et al., 2018](#) – *Magsumov, T.A., Artemova, S.F., Ustinova, O.V., Vidishcheva, E.V.* (2018). Public education system in the Caucasus region in the 1850s: Unification and regulation of educational process. *European Journal of Contemporary Education*. 7(3): 598-607.

[Natolochnaya et al., 2018](#) – *Natolochnaya, O.V., Miku, N.V., Zulfugarzade, T.E., Médico, A.* (2018). Highland schools in the Caucasus: Historical background. *European Journal of Contemporary Education*. 7(3): 608-614.

[Otto, 1866](#) – *Otto N.* (1866). Uchilishcha i gramotnost' v Vologodskoi gubernii do otkrytiya gimnazii [Vocational schools and literacy in the Vologda province before the opening of the gymnasiums]. *Zhurnal ministerstva narodnogo prosveshcheniya*, 10: 1-198. [in Russian]

[Peretyatko, Zulfugarzade, 2017](#) – *Peretyatko, A.Y., Zulfugarzade, T.E.* (2017). Project of reforms proposed for the don public education in the first half of 1860: A.M. Dondukov-Korsakov, Kh.I. Popov, N.I. Krasnov. *European Journal of Contemporary Education*. 6(4): 817-829.

[Peretyatko, Zulfugarzade, 2017a](#) – *Peretyatko, A.Y., Zulfugarzade, T.E.* (2017). Higher and secondary education of the don cossacks in the context of the epoch: The time of the great reforms. *European Journal of Contemporary Education*. 6(2): 367-377.

[Popov, 1885](#) – *Popov E.A.* (1885). Svyatitel' Stefan Velikopermskii [St. Stefan Wielkopermsky]. Perm'. [in Russian]

[Shevchenko et al., 2016](#) – *Shevchenko N.A., Vidishcheva E.V., Emelyanova O.V.* (2016). The Establishment of the System of Public Education in the Caucasus (1802–1917 years): the Characteristic Features. *Bylye Gody*, 40(2): 363-372.

[Shevchenko et al., 2016](#) – *Shevchenko, N.A., Vidishcheva, E.V., Emelyanova, O.V.* (2016). The establishment of the system of public education in the Caucasus (1802-1917 years): The characteristic features. *Bylye Gody*. 40(2): 363-372.

[Sukhomlinov, 1865](#) – *Sukhomlinov M.I.* (1865). Materialy dlya istorii obrazovaniya Rossii v tsarstvovanie imperatora Aleksandra I [Materials for the history of education of Russia in the reign of Emperor Alexander I]. SPb. [in Russian]

[Vorotnikova, 2015](#) – *Vorotnikova N.S.* (2015). Istoricheskii opyt nachal'nogo obrazovaniya v derevne Vologodskoi gubernii vo vtoroi polovine XIX – nachale XX veka [The historical experience of primary education in the village of the Vologda province in the second half of the XIX – early XX centuries]. Vologda. [in Russian]

[Vorotnikova, 2015](#) – *Vorotnikova N.S.* (2015). Ustroistvo sel'skogo obrazovaniya v zemskikh shkolakh vologodskoi gubernii vo vtoroi polovine XIX – nachale XX veka [The device of rural education in Zemstvo schools of the Vologda province in the second half of the XIX – early XX centuries]. *Vestnik Cherepovetskogo gosudarstvennogo universiteta*, 8(69): 118-121. [in Russian]

[Vorotnikova, 2016](#) – *Vorotnikova N.S.* (2016). Istochnikovedcheskii analiz nachal'nogo obrazovaniya v derevne Vologodskoi gubernii vo vtoroi polovine XIX – nachale XX veka [The source analysis of primary education in the village of the Vologda province in the second half of the XIX – early XX centuries]. *Sovremennaya nauka: aktual'nye problemy teorii i praktiki. Seriya: Gumanitarnye nauki*, 7: 11-18. [in Russian]



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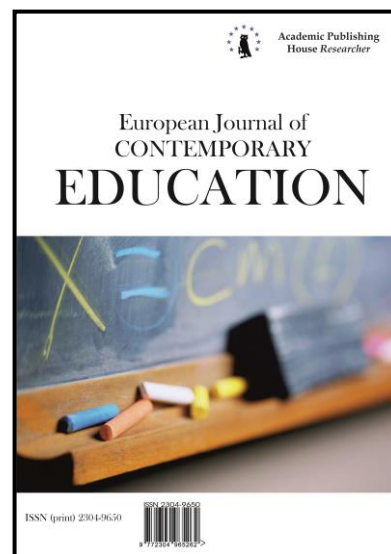
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Educational Process in Ancient Rome Schools

Dmytro V. Kudinov ^a, Sergey I. Degtyarev ^{b,c,*}, Lybov G. Polyakova ^{c,d,e}, Jasmin Gut ^f

^a Sumy State University or Regional Institute of Postgraduate Studies, Sumy, Ukraine

^b Sumy State University, Sumy, Ukraine

^c International Network Center for Fundamental and Applied Research, Washington, USA

^d Volgograd State University, Volgograd, Russian Federation

^e East European History Society, Russian Federation

^f University of Geneva, Geneva, Switzerland

Abstract

The relevance of this study is attributable to the influence of ancient school on the further development of European education. The focus of the publication is the organization of learning process in Latin schools. The historiographic base of the research is represented by profound scientific works on the history of pedagogy. Among them are the studies of T. Mommsen, K. Schmidt, J. Ussing, J. Paroz, L. Winniczuk and G. Zhurakovsky. The source base is represented by original works of Roman poets and theologians, including those with a memoir context: works of Seneca and Pliny the Younger, studies and letters of Quintilian, Tacitus, Cicero, Plutarch, Suetonius, literary works of Martial, Horace, Ausonius, Plautus, Apuleius. The publication presents a comprehensive review of the education system of ancient Rome: the main types of educational institutions are identified, the contents of the education is revealed, the methods and means of teaching activity are indicated, the role of physical influence on pupils in the Latin school is specified.

Some innovative approaches of Roman school, which are still relevant nowadays are specified – the organization of educational competitions, rewards for successes, group methods of work, practical approach to the content of education (on the principle of reproduction of connections to life), thoughts paraphrasing, phonological exercises, etc. In the end, it is concluded that three-tiered Roman education consistently provided students with knowledge relevant to their time. Under the Republic, its content was aimed at future success in the realization of private, public or state affairs. Moreover, a characteristic feature in middle and higher stages of Roman school was bilingualism.

* Corresponding author

E-mail addresses: starsergo2014@gmail.com (S.I. Degtyarev)

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1. Introduction

The origins of modern European education system go back to classical era. Although it takes roots in ancient Greece, its widespread geographical extension (European continent, North Africa, Middle East) owes to the Roman Empire. It was during this period that the classical antique education achieved its thoroughness and determined impact on the further development of pedagogy, offering the following generations the model of enlightenment that prevailed at schools until the 20th century. As a rule, this system is considered by researchers in a comprehensive manner. The authors of this publication took the courage to isolate and analyze a didactic side of Roman pedagogy specifically, which, in fact, determined the purpose of this publication – to reveal the content of typical learning processes in Roman school.

2. Materials and methods

The peculiarity of this study is its interdisciplinary nature, since the authors turned to the analysis of not only the historiographic base, but also to works of art and pedagogical treatises – the main written sources of information about the past of ancient Rome education. The letters of Seneca and Pliny the Younger, the works of Quintilian, Tacitus, Cicero, Plutarch, Suetonius, literary works of Martial, Horace, Ausonius, Plautus, Apuleius represent an indispensable base for the exploration of Roman pedagogy (Apuleius, 1959; Augustine, 2005; Ausonius, 1993; Cicero, 1974; Horace, 1790; Horace, 1982; Livius, 1989; Martial, 1891; Plautus, 1987; Pliny, 1950; Plutarch, 1961; Plutarch, 1963; Plutarch, 1964; Quintilian, 1834; Seneca, 1977; Suetonius, 1993; Tacitus, 1969), since they reveal the vision or perception of contemporaries of the educational trends of the epoch. The task that we set ourselves is to go beyond the established approaches in the analysis of these sources in Russian historiography, to include as much as possible those parts of texts that have fallen out of sight of previous researchers (in our case, this is especially true for the consideration of the literary heritage of Ausonius and Saint Augustine of Hippo).

The methodological basis of the study consists of general scientific methods (generalization and systematization, convergence from concrete to abstract, analysis and synthesis) and methods: historical (system-functional analysis, diachronic method), pedagogical (scientific information obtaining in order to establish regular connections, relations, dependencies and the construction of scientific theories) and literary (cultural-historical, sociological, literary hermeneutics (metaphysical and normative components)).

This study is considered by the authors as a part of a wider scientific project, so the parts related to didactics (the organization and management of educational institutions, the state of school education, social status and professional self-realization of a teacher, funding and state regulation of educational institutions) have been left aside so far.

3. Discussion

The history of the education of Ancient Rome has aroused interest in many generations of historians and has often been considered in the context of extensive research as part of Rome citizens' public life. At the same time, it has also defined themes of individual specialized studies. The first category includes a profound work of German scientist T. Mommsen (The History of Rome) (Mommsen, 1997a; Mommsen, 1997b; Mommsen, 1997c). Here the history of education of the Romans is not isolated in the form of a paragraph, but is conveyed discretely by epochs in the flow of socio-cultural phenomena analysis. Such approach does not undermine the thoroughness and reveals the author's clear position regarding the relation between Hellenic and purely Roman components of education, and, finally, its content at each school stage. A detailed picture of the Romans' education development is given in the pages of the works of the Swiss researcher J. Paroz (The General History of Education for the Guidance of Students in Ordinary Schools), German scholars Ch. Schmidt (The History of Pedagogy by Charles Schmidt, Set out in the World-historical Development and in Organic Connection to the Cultural Life of the Peoples) and T. Ziegler (The History of Pedagogy), Danish scientist J. Ussing (Upbringing and Education of the Greeks and the Romans), etc. (Paros, 1875; Schmidt, 1890; Ussing, 1878; Ziegler, 1911). These authors described school education within general cultural and social development of the Roman (or generally

ancient) civilization. They determined the factors, which contributed to the contents of the learning courses, identified the features of the educational process, depending on the school stage (elementary, secondary, higher) and analyzed pedagogical views of Roman thinkers.

Worth of note are the works of the French historian P. Guiraud (*Private and Public life of the Romans*) and Ukrainian O. Gordievich (*Higher Education in Rome at the Times of the Emperors*), which, on the basis of various, including figurative, sources cover certain aspects of the Roman school (Gordievich, 1894; Guiraud, 1899).

In historiography of the 20th century the works of L. Winniczuk (*People, Morals and Customs of Ancient Greece and Rome*) and G. Zhurakovskii (*Essays on the History of Ancient Pedagogy*) could be distinguished. The scientists characterized the peculiarities of organization of each educational stage, investigated the influence of the Greek educational system on the Roman one and analyzed the pedagogical thoughts of Cato the Elder, Cicero, Quintilian, Seneca and other representatives of Roman pedagogical thought, distinguished the peculiarities of the school education organization and emphasized the practicality of the approach to teaching during the Republic period (Winniczuk, 1988; Zhurakovsky, 1940).

The urgent issues of modern theoretical pedagogy determine the need for an updated assessment of Roman education development, specification of innovative and demanded for its time components, emphasizing of those ways and methods of training, which determined the impact on the further development of education and are still used in contemporary schools (Magsumov, 2015; Cherkasov, Smigel, 2016; Shevchenko et al., 2018).

4. Results

The origins of Latin school education, probably, date back to The Roman Kingdom. The first information about a Roman school was given by the Roman historian Titus Livius (59 BC–17 AD), who dated it to 449 BC. In that time, according to him, in the eternal city, «among the benches» worked a school at the Forum. However, contemporary analysts of Livius consider this statement to be purely literary and attribute the real date of the first Roman school establishment to the third century BC, when, according to Plutarch, Spurius Carvilius, a freedman of Spurius Carvilius, opened the first school (about 250 BC) (A companion, 1921: 228; Livius, 1989: 152, 531; Winniczuk, 1988: 204). But the Romans by their own efforts did not progress further than primary school. T. Mommsen explained it by stating that for a long time in public life of the Republic «there was no differentiation in levels between educated and uneducated Romans» (Mommsen, 1997a: 457). Military and civil valor were valued much more than book learning.

Creation of classical ancient Roman education system became possible due to the extension of Greek influence. Confirmation of admiration over Greek education as early as in the third century BC is found in Plutarch's work *Parallel Lives: Lucius Aemilius Paullus*, a two-time consul of the Roma republic, tried to give his children not only traditional Roman education, but also Hellenic, for that reason he hired Greek grammarians, rhetoricians and even artists (Plutarch, 1961: 309). Gradually, from home-based tutoring, the Hellenes switched to the establishment of private schools in the territory of the Republic no later than II BC (not taking into account the schools of Greek cities on the Apennine Peninsula, co-opted into the Roman state in III BC), This fact, was localized in time by Quintus Horatius Flaccus (65–8 BC):

But for a long time there remained,
and this day remain, some traces of rusticity;
For late the Roman writer applied his genius to the Grecian pages
And enjoying rest after the Punic wars began to search what useful matter
Sophocles, and Thespis and Aeschylus afforded (Horace, 1790: 270).

Finally, Gaius Suetonius Tranquillus (75–160 AD) linked the emergence of the first grammar school to the mission of Crates of Mallus (159 BC), an Ambassador of Attalus II, the King of Pergamon. Since then, the Romans «enjoyed their sons getting Greek education», which in that times aroused the anxiety of the supporters of Latin traditions and even led to the temporary expulsion of Greek philosophers (Plutarch, 1961: 447; Zhurakovsky, 1940: 305; Suetonius, 1993: 220).

However, as late as the second half of II BC, the Hellenic education was completely rehabilitated and began penetrating Roman society widely, spreading everywhere in the territories where the Republic ruled. In particular, after 82 BC, the proconsul of Hispania Citerior, Quintus

Sertorius arranged in Huesca, a school at his own expense for children of grandees of different ethnicities, where they got acquainted with «the science of Romans and Greeks» (Plutarch, 1963: 277; Mommsen, 1997c: 491–492).

The expansion of Hellenic educational sample was also facilitated by the fact that the Emperor Guy Julius Caesar granted Roman civil rights to Greek grammatici and rhetoris. Actually Roman grammar schools appeared at the turn of the II–I BC, facilitated, according to T. Mommsen by an intellectual, Roman equite Lucius Aelius Stilo Praeconinus who, in selected company of young people, analyzed the content and philosophy of Roman authors' works. Back at that time the first Roman literary (grammar) school was opened by Marcus Postumius Sevius Nicanor, and about 90 BC the first Latin rhetoric school, to which, as Cicero recalled, came the students «who were distinguished by diligence» was established by Lucius Plotius Gallus. All this evidenced significant changes in the public consciousness of the Romans, the violation of the traditional way of life of quirites (Schmidt, 1890: 388; Mommsen, 1997b: 202, 635; Suetonius, 1993: 230). Along with the Hellenization of education changed the title of the middle level teacher's position – from litterator to grammarian, the phenomenon, explained by Suetonius: Latin concept of «litterator», which went beyond the actual pedagogical specialty and meant all those who could gracefully speak and write, was replaced with a new «custom», connected to the spread of Greek scholarship, to refer to teachers with more precise and relevant to their profession term.

In the republican period, the system of school education assumed the existence of such educational institutions: 1) ludus (luduslitterarum, luduslitterarius)– establishments of elementary education where both boys and girls were educated, which had no definite program and term of study (G. Zhurakovsky generalized the term of education in ludi as 4-5 years, taking into account the imperfection of the teaching methodology and the actual lack of books and methodological materials); 2) Grammaticus for boys aged 12-16 with a term of study of four years; 3) rhetor, for boys aged 16. Rhetoric schools, arranged according to the Greek model, could be Greek or Latin depending on language of tuition. This final stage of Latin education represented the prototype of institutions of higher education. Here the training lasted for 3-4 years and could be interrupted for army service. Together, all these stages, in the words of Lucius Apuleius corresponded to the «cups of the Muses»: The first cup is poured for us by the litterator, who begins to polish the roughness of our mind. Then comes the grammaticus, who adorns us with varied knowledge. ... is the turn of the rhetor, who puts the weapon of eloquence into our hands (Apuleius, 1959: 351–352).

All these stages existed independently of each other and did not involve sequencing. Ludus, as a rule, were attended by students from the democratic strata of the population, while affluent citizens preferred home-tutoring their children, including an in-depth course. In particular, Pliny the Younger (AD 62–114) advised his addressee, Cornelia, a mother of a son, who received basic education from home teachers, to give him to a rhetorical school straightway. So, the young man had mastered science at home until at least the age of 16.

For a long time, professional education was obtained exclusively in connection with the practice: after finishing Grammaticus boys could receive training from a manager of latifundia, mastering the profession of agronomist under his guidance, or from a lawyer, or a doctor, or, finally, to go to serve in the army or get a job as a public servant. Special medical schools and law schools (stations) appeared only during the time of the Empire. The most famous one was Lex Schola (law school of Berytus) opened in III BC in Beirut (Schmidt, 1890: 429).

In general, studying in grammar or rhetoric schools during late Republic time was prestigious, which Horace claims in his poetry to Gaius Cilnius Maecenas. The poet's father, a freedman and a petty landowner, «despite the poverty» gave his son to the prestigious Roman grammar school of a litterator Lucius Orbilius Pupillus in Rome, «where the children of the senators and the equites study, and was not ashamed to accompany son to his studies instead of a slave-pedagogue» (Blagoveshchenskiy, 1864: 20–21; Horace, 1982: 144). However, in the next era, the time of the flowering of pleasures, the love of knowledge has somewhat cooled down. «All the sciences have stood back, and mentors of free arts are sitting in empty corners without visitors», Seneca remarked. «There is no soul in the schools of philosophers and orators, but how many people are there in the kitchens of the belly-slaves, how many young people hang about at the stove!» (Seneca, 1977: 233).

The organizational aspects of learning were less influenced, though. In particular, both in republican and imperial epochs, elementary schools were often organized in the open air (at the

intersection of the street–trivium), under shelter behind the curtain, in light annexes to main buildings, on the roofs of the houses, or in one room of the teacher's apartment. The lessons here began at dawn (a contemporary, a lover to lie-in and a poet Marcus Valerius Martialis (around AD 40 – between 102 and 104 AD): «school teachers do not let live in the morning») and lasted until late at night with breaks for breakfast, lunch and walks. It is noteworthy that almost all of the lessons were «open», because anyone from the street could attend classes and listen to what the teacher said. Such scene is depicted on a fresco in Pompeii.

All Roman schools of the republican period were private. The duty to fund education for children was entirely borne by parents or guardians: «In the first place then, the parents are the builders-up of the children, and lay the foundation for the children; they raise them up, they carefully train them to strength, and that they may be good both for service and for view before the public. They spare not either their own pains or their cost, nor do they deem expense in that to be an expense. They refine them, teach them literature, the ordinances, the laws; at their own cost and lab our they struggle, that others may wish for their own children to be like to them» (Plautus, 1987: 192–193).

There was no fixed curriculum, so in a trivial school, teachers could interfere with the areas of knowledge that were usually given in grammar schools, and Grammaticus, in turn, could teach what was mostly in the competence of the rhetor. This was especially felt in the republican «antiquity», when Grammaticus in the absence of rhetor, taught children both sciences. And even later, when rhetorical schools were established, «Grammaticus still retained old exercises for the development of eloquence and themselves introduced the new ones – problems, paraphrases, appeals, etiologies», as a propaedeutic course of rhetoric – this state of affairs, according to the notes of Suetonius was preserved approximately to the middle of IAD (Suetonius, 1993: 221–222).

The law did not establish a compulsory education age. According to unwritten rule the education began no earlier than at 7, which was promoted by the authoritative opinion of a number of Greek philosophers. Nevertheless, there were exceptions to this rule. In particular, the famous rhetorician Marcus Fabius Quintilianus (AD 35 –around AD 96) encouraged parents not to waste time and teach literature before the age of seven (Quintilian, 1834: 6–7). In the same way, there was no upper limit for students' age. Although the acquisition of education traditionally concerned children and youth, however, it was aspired after by people of mature age. Quintilian implicitly advocated the need to acquire knowledge in a young (after adolescent) age. It was Seneca, who frankly confessed of attending the lessons of the philosopher Metronactus in Naples, which he explained to his correspondent with the proverb «you're never too old to learn» (Seneca, 1977: 145).

As a rule, the classes were small («Effective teacher will not bother himself with a crowd, with which he cannot handle», Quintilian). Duration of training and its organization were not strictly regulated. Vacations and holidays were usually during Saturnalia (December 17–23) («you call me to school, and I am still celebrating Saturnalia», Pliny the Younger), Quinquatrus (March 19–23), on other holidays and *nundinae* (together no less than 60 days a year). Teaching of town-dwellers could take place in summer, although according to unwritten rules, which, obviously, Martial described in the epigram «School teacher» termed the vacations starting no later than July to October Idus (Martial, 1891: 651). Horace also pointed out at eight months long duration of study – 8 times per year on Idus the pupils brought money to Orbilius for their education (Horace, 1982: 144). Thus, the duration of the training was regulated exclusively by calendar and agreement between students' parents and the teacher and, finally, depended on the will of the teacher.

Wax tablets, *cerae*, and pointed sticks, styluses, were used for writing. Closer to the imperial era, papyrus, inks, made of rubber, soot or fluids of the octopuses, and writing reeds (*calamus*) began to be used. The scrolls of books were put in a wooden box-capsule.

In the elementary schools where they studied reading, writing, arithmetic and the laws of Rome, the emphasis was on the reproduction of what the teacher said (Cicero recalled that in such a way he literally learned the laws of XII tables). When mastering literacy, the letter assembly method was used: first, the children learned to say letters, then to combine them into syllables, then into words, and, finally, to formulate whole sentences. Quintilian warned his colleagues of the haste in such exercises: «First of all, it is necessary to ensure that the student reads confidently; let him read slowly for a while; speed will come along with exercises». Otherwise, the rhetorician pointed out, the hurry could lead to the failure in training. He also protested against the widespread practice of learning letters without their illustration. He advised to study «all syllables

without exception», not relying on the memory of schoolchildren (Quintilian, 1834: 9–11; Paros, 1875: 42; Ussing, 1878: 106, 124; Zhurakovsky, 1940: 313). When teaching writing a child's hand was guided or a student was taught to lead lines on prepared samples, in particular, on boards with cut out letters. Subsequently, they proceeded to copying of words and sentences (which were taken from poetic writings). The spelling was polished with dictations, and sometimes with spelling exercises. G. Zhurakovsky, referring to the notes of Quintilian, commented on such training organization as highly ineffective: firstly, certain rules of spelling had not yet been developed in Latin, which naturally complicated the learning of grammar; and secondly, the practice of oral learning of the alphabet before writing only delayed the time of study (Zhurakovsky, 1940: 313).

Poetry also covered mathematics, which was studied by singing: «one and one two», etc. («One and one – two, two or two – four, I hated to drawl this song», Aurelius Augustinus). Then they counted on the fingers (the fingers of the left hand served to denote the units and dozens, and the fingers of the right hand were used for hundreds and thousands) and on abacuses, The later enabled to visualize counting in response to the complexity of Roman numerals (the limited amount of numerals and the absence of zero). Multiplication table was remembered in chorus following the teacher. The peculiarity of Roman mathematics was the practical connection of counting to a monetary circulation. The unit of measurement was an as coin, which in turn consisted of 12 ounces, while 16 asses corresponded to a silver denarius (after 130 BC). The scene of the division of as is found in the work of Horace *Ars Poetica*:

Roman lads learn long division, and how to split
A pound weight into a hundred parts. 'Then, tell me
Albinus' son, if I take an ounce from five-twelfths
Of a pound, what fraction's left? You should know by now.'

'A third.' 'Good! You'll look after your wealth' (Augustine, 2005: 27; Guiraud, 1899: 79, 87–88; Horace, 1982: 222; Paros, 1875: 43; Quintilian, 1834: 10; Ussing, 1878: 125; Winniczuk, 1988: 205; Zhurakovsky, 1940: 313).

In general, studies in elementary schools were considered by contemporaries to be superficial, because here, according to Publius Cornelius Tacitus (AD c. 50 – c. 120), children «did not make enough effort either to get acquainted to the works of great writers, nor to understand the antiquity, neither for the knowledge of things and people, nor for the events of the past» (Tacitus, 1969: 393). In the same time, in grammar school the approaches to learning were weightier than in elementary school. Grammar, as a leading subject, was divided into two parts – «the right way to express thoughts with words, and reading the poets» (Quintilian, 1834: 32). G. Zhurakovsky made a refinement for this formula: I – perfect mastery of Latin and Hellenic (especially teachers took care of the elimination of barbarism and solecisms); II – study of languages learning outstanding works of Greek and Latin literature, where particular attention was drawn to the metric – a system of verifying rules of poetry, the doctrine of the structure of versified speech, its rhythm (Zhurakovsky, 1940: 318).

Reading was accompanied by grammatical, stylistic, source and lexical explanations, interpretation of historical events, mythology, astronomy, geography, life and morals, biographical and bibliographic commentaries on authors of works, which provided a deep, albeit unsystematic assimilation of material from various branches of knowledge. At the same time philological criticism occupied a leading place in the educational process. As for the analysis of the content of the works, there was a lot of superfluous in it. Seneca ironized on this matter – instead of considering the moral content of the work, the teachers sought from the students the knowledge of trivia, for example, about the age of Patroclus and Achilles, the study of the chastity of Penelope, etc. Instead, Seneca suggested to analyze the meaning of the phenomena themselves (what chastity is and what its virtues, where it is contained – in the soul or body, how to love homeland, wife, children) (Seneca, 1977: 191–192).

The question of the language(s) of teaching in Latin grammar schools is a matter in dispute. There is an assumption, that originally exclusively Latin was used. In particular, the works of Greek authors were studied either in translation or in the form adapted by Latin writers. Later, Greek literature was studied in the original. At the same time, not knowing Hellenic by Roman children did not stop their teachers, who demanded immediate noticeable results in the study of works of the descendants of the Achaeans. «I have not yet known a single word in Greek», the Christian theologian Augustine of Hippo (AD 354–430), recalled, but I was forced to learn Greek without

giving me either rest or term, scaring with harsh punishment (Augustine, 2005: 28). Quintilian advised to start studying Greek first, and then master Latin, since many civilization achievements of Rome owed to Greece, in particular, in science (Quintilian, 1834: 5). G. Zhurakovsky concluded from this that the beginning of studying sciences in grammar school was inseparable from the knowledge of Greek, since the learning of Greek authors took place in the original language (Zhurakovsky, 1940: 318).

The main methods of teaching were reading with comments, explanations and lectures, translations from Greek into Latin and vice versa, doing written exercises in a class that sharpened literacy and style, translating poetry into prose, paraphrasing thoughts (reduction and extension), development of some *Sententiae*, writing a narrative on a mythological or poetic theme, doing exercises with chairs (concise statements about the actions or thoughts of a famous person), ethologies (the image of a literary or historical hero at a certain known moment, such as Achilles's thoughts on the death of Patroclus). According to the established tradition, the teacher clarified the rules on three examples, which is testified by the remark of Pliny the Younger, who asked his correspondent to tell stories, as if «according to the school rule». The processing of the text of the Latin author assumed the following procedure for mastering the material: I – dramatic well-worked reading; II – the interpretation of the work as a whole and in parts, including historical and geographical comments; III – critical analysis of the work in order to identify its advantages and disadvantages and proposals for correction; IV – critical conclusions. For the development of speech, the following method was used: for example, students read Aesop's fables, retold them, and then wrote down. Teachers frequently referred to the method, which reminded a prototype of the Lancasterian System—one of the students from the group was selected to replace the mentor for some time or serve as a tutor for his classmates. Of course, a significant place throughout the process of learning knowledge was given to remembering, which coincided not only with the pedagogical tradition, but also with the elementary shortage of books (Gordievich, 1894: 14; Guiraud, 1899: 81, 88; Pliny, 1950: 67; Ussing, 1878: 126–127; Zhurakovsky, 1940: 319).

In rhetoric school they taught the art of eloquence. The theory of oratory, firstly, assumed teaching the doctrine of material presentation and argumentation, text structuring, three means of high style (selection, combination, and figures of words), memorization and giving speeches, secondly, consideration of rhetorical examples, that could be followed, acquisition of skills to proclaim small speeches, and thirdly, doing oratory exercises on certain topics. From I BC, the consenter «rhetoric» was divided into two courses: at first, students read and analyzed literature, then learned to make panegyric, political and court speeches. To do this, they made translations from Greek originals, recited in Hellenic, took lessons from actors, listened for the art of pronunciation in the theatre, and finally attended classes of *phonascus*, who developed the voice of the students through a combination of dietetic rules and musical exercises (Schmidt, 1890: 388). Moreover, the erudition of a future lawyer, official, architect, engineer or physician had to go far beyond humanitarian disciplines. Therefore, in the course of preparation of speeches, students in rhetoric schools studied the basics of geometry, arithmetic, astronomy, music, medicine and architecture (Mommsen, 1997c: 516–517).

The following rhetorical exercises were used *anaskeves* and *kataskesves* (exercises to justify or refute legends), 12 types of *progymnasis* (preparatory rhetorical exercises), as well as the main types – advisory or commemorative *Suasoriae* and *Controversiae*. *Suasoriae* represents a monologue, in which students on behalf of the historical or mythological character, who was in a difficult position, claimed his intentions and motives for resolving an urgent issue (for example *Suasoriae* Alexander the Macedonian wonders whether to enter Babylon, despite the warnings of augurs about the danger by Lucius Annaeus Seneca). *Controversiae* were studied by elder scholars. They represented speeches about confusing legal cases, where it was required to use arguments skillfully and inventively in order to confute or defend a certain statement in civil or criminal proceedings; for example, in such a situation, described by Lucius Annaeus Seneca: «The law gives the right to a raped girl to demand the death of her assailant or marry him without dowry. Some young man raped two girls at one night; one of them requires his death, another marriage».

In preparing the task, the following points were taken into account: 1) it was necessary to consider, what exactly to say; 2) to arrange the material in a certain order; 3) to make a speech and work over its composition; 4) remember it; 5) to give the speech; 6) to fill it with complementary quotations from ancient and new literature (Ausonius, 1993: 258; Ussing, 1878: 156).

When selecting topics, teachers often resorted to imaginary, often unbelievable (suprafidem) situations. St. Augustine of Hippo recalled that he was asked to prepare the speech «of Juno, angry that she could not distract the king of Tjeker from Italy, the task «troublesome enough to the soul» of a young student.

«Which words I had heard that Juno never uttered; but we were forced to go astray in the footsteps of these poetic fictions, and to say in prose much what he expressed in verse. And his speaking was most applauded, in whom the passions of rage and grief were most preeminent, and clothed in the most fitting language, maintaining the dignity of the character» (Augustine, 2005: 32–33).

Improving the form without sufficient thoughtfulness of the content, the selection of fantastic themes, finally, caused complaints over the institution of rhetoric school itself. Not without badinage Pliny the Younger wrote in one of his letters that «the school and the audience with their factitious affairs (sic) is a peaceful, harmless and happy place, especially in old age», meaning a good place for a sophist to earn a living and the absence of any practical benefit from the knowledge gained from him (Pliny, 1950: 41). In this phrase one can also see some self-irony of the author, aimed at the future, because he himself was a teacher at that time. Tacitus was disgusted with the methods of teaching in the rhetoric school: «tongue and larynx exercises in fictitious and unrealistic verbal battles», as well as with the questions like «reward for tyrant slaying, or whether the raped girl should chose death or marriage for her attacker, or the recourse to human sacrifice in a plague epidemic, or maternal incest or all the other daily performed in the schools, but rarely if ever in the Forum». Tacitus called rhetoric school «the schools of charlatans», because here teachers were allowed to talk on ordinary topics (gladiator games, circus performances, etc.) and did not give students really useful knowledge. For Tacitus oratory was rather a fact of history, not of the present, where rhetoric resembled an empty chatter, rather than demonstrated the practical skill of a specialist (Tacitus, 1969: 373, 393–394, 397).

This position without much critical processing has changed little in the estimations of the scientists of the modern era. In particular, the Danish historian of education of the 19th century J. L. Ussing mentioned «the emptiness and meaninglessness of classes in the rhetorical school», which was suffering from the «lack of taste» and attempts to preserve «the remnants of the former education» (Ussing, 1878: 164). Similarly, German philosopher T. Ziegler spoke of rhetorical training in the Roman school («rhetoric turned into sophistry and increasingly degenerated into formalism and word-splitting») (Ziegler, 1911: 20). T. Mommsen claimed, that show-off «nipped a really sincere eloquence in a bud», G. Zhurakovsky noted, that «the art of words t lost its practical meaning and turned into an end in itself» (Mommsen, 1997b: 636; Zhurakovsky, 1940: 329). Thus, in learning rhetorical art not the content of the speech was valued, but its effect, stylistic richness and technical perfection (chirognomy, acting skills, etc.). «Theoretical perfection and elegant form ... were always only the means for him [the Roman– authors], not a goal to master the language» – that's how somewhat tendentially the historian of education K Schmidt generalized the content of didactics in rhetoric schools (Schmidt, 1890: 388).

Instead, some scholars of the ancient scientific heritage are receptive to didactics in rhetoric schools. «The whole program of rhetoric education, both theoretical and practical, seems at first glance totally detached from life. However, it is not. From theoretical point of view, they ensured the unity of ideological views and artistic tastes, without which any society is impossible», – proved the researcher of ancient literature M. L. Gasparov (Ausonius, 1993: 258). It is worth remembering, that while doing rhetorical exercises, students at the same time acquired or deepened their knowledge in history, philosophy, ethics and law, learned to translate from Latin into Greek, and vice versa. Furthermore, literary questions developed thinking, memory, imagination and speech.

Since studying rhetoric was mostly oral, students improved their skills in the field of shorthand in order to be able to record the thoughts of a teacher or a reader. Public readings and lectures performed by the teachers, as well as court hearings and people's assemblies served as examples of eloquence for youth, who adopted techniques of polemics («learned to fight participating in a fight», Tacitus), and then mastered them in declamations: «one of them was to blame, another to defend Odysseus, caught in front of Ajax's corpse with a blood-red sword» (Gordievich, 1894: 20; Mommsen, 1997b: 636).

In AD I, the canon of education in the middle and upper school was stated: grammar, rhetoric, dialectic (logic), arithmetic, geometry, astronomy, music, medicine, architecture. The first

subject was divided into learning Latin and Greek (in Greece itself, under Roman rule, Latin was not a compulsory school subject, whereas in the Romanized provinces in the late Empire, on the contrary, the teaching of the Greek language decayed). In the AD IV «after the exclusion of medicine and architecture from the list, the classical medieval «seven liberal arts» program for «free citizens» took shape. It was after the end the antiquity era, that the poet and philosopher Anicius Manlius Severinus Boethius (c. 480–524 AD) divided liberal arts into two groups. Grammar, rhetoric and dialectics were considered basic arts and made up trivium, while arithmetic, geometry, astronomy and music were combined into quadrivium. It's worth noting that music and dance did not achieve such a respectable role as in Greek school. For a long time, art was considered no more than a kind of craft or aesthetic decoration of a cult, so studying art at school contradicted age-old understanding of the morality of a free citizen. The exception was made for Pyrrhic dance, a war dance, most likely Spartan in origin, mastered by young men for the development of physical strength and agility.

Many works that had a significant impact on the content of education were written during Republic and Empire times. Significant importance in studying literature was given to Alexandrian poetry. These works, in abstracts and adapted form, were included in school manuals. Some of them were mentioned by Martial: the books of Cicero, Maron and Tutilius. Studying in grammar school traditionally began with Homer. During the Empire, Homer lost priority to Virgil. Quintillian encouraged to study, the comedies of Menander, the verses of Ennius, Accius, Pacuvius, Lucilius, Terence. Finally, Ausonius called the obligatory elements of the program: the Iliad, works of Menander, Flaccus, Terence, Sallust (Ausonius, 1993: 12). T. Mommsen, based on the plots of Roman drama of the Republic era, came to the conclusion that the school program then corresponded, first of all, to the reading of the Trojan cycle and to the Iliad itself.

Later, the works of the «great four poets» – Virgil, Terence, Sallust, Cicero, and also the works of «school classics» by Lucan and Statius – were added to the list (Suetonius believed that the novelty of studying of «new poets» at school belonged to Quintus Caecilius in the time of Octavian August). Anyway, the selection of works for school education was not adapted for children and corresponded to the range of interests of adult educated Romans.

When students' admiration for the word of ancient intellectuals changed with boredom, their motivation was supported by physical punishment («harsh rods are teachers' scepters» Martial). Along with rods, whips (scutica), straps and ferules were used to «get across an idea». Reasons for punishment could be quite trifling, as could be seen from Plautus: «Then when you had returned home from the track and field, all neat and trim you would sit on your chair before your teacher with your book: and while you were reading, if you had missed a single syllable, your hide would be made as spotted as a nurse's gown» (Plautus, 1987: 217).

Lucius Orbilius Pupillus, a proponent of military discipline at school, was known for his heavy-handed approach in teaching («Orbilius stroke with a ferula and a strap», Domitius Marsus). One of his students was Horace, who perpetuated him as a flogger (plagosus):

I remember how Orbilius, with his cane, used to

Thwack us in time to those verses in the schoolroom (Horace, 1982: 203).

A common judgment can be found in Martial's epigram to the teacher at ludi school:

What right have you to disturb me, abominable schoolmaster,
object abhorred alike by boys and girls?

Before the crested cocks have broken silence,
you begin to roar out your savage scoldings and blows.

In general, the society was rather tolerant of the teachers using rods or straps. «The better, the more capable the teacher is, the more wrath and impatience he reveals in his lessons. It is painful for him to see that the student does not understand what he understood so easily and quickly», – justified Cicero the methods of physical impact (Guiraud, 1899: 90). Ausonius asked his grandson not to be afraid of «caning» knowledge into his body: Let no outcry, no sound of stripes, no dread make you quake as the morning hours come on. That he brandishes the cane for scepter, that he has a full outfit of birches, that he has a tawse artfully hidden in innocent wash leather, that scared confusion sets your benches abuzz, is but the outward show of the place and painted scenery to cause idle fears (Davis, 2018: 133).

Saint Augustine of Hippo in Confessions acknowledged that when he was lazy at school, he was beaten. At the same time, the elders approve of this "custom", and even the parents of the

future Church Father «continued to laugh at these beatings, my great and difficult misfortunes» (Augustine, 2005: 17–18). At the same time, punishment also often took forms of burdensome homework, which could be even worse for students than beating. Instead, teachers received the intended effect.

For example, famous Horace at school of Lucius Orbilius Pupillus mastered the Greek language, read Iliad in the original, understood the philosophy, learned to write poems. Cicero admitted that he owed his achievements in public activity «to his teachers and their labors» (Cicero, 1974: 98). Ausonius gratefully remembered his Greek grammarians, who «were the first to teach me, so that my voice and speech did not sound rude, even without finishing» (Ausonius, 1993: 40).

The graduates of rhetoric schools in IV–V AD swelled the ranks of Christian intellectuals, were elected to bishopric positions, became prominent theologians of their time (for example, Ambrose, Basil the Great, Saint Sidonius Apollinaris, or Saint Augustine of Hippo). All of them, in their own time, learned lessons from ferula. However, things could happen vice versa. In Plautus's comedy *Baccharia*, cited above, the opposite situation is described—the student hits the teacher back, so that the victim has to complain about the pupil to his father. Obviously, school fights between teachers and students were quite common and emerged depending on local traditions of education, the attitude of adults to the physical punishment of children, the authority of the teacher and the extent of rods misuse.

At the same time, students could be motivated without physical actions. Horace described one of such techniques: teachers encouraged children to study well, promising sweets. Reward instead of hitting was a practice adopted by Marcus Verrius Flaccus, a grammarian in Augustus and Tiberius times. He arranged competitions between his students with «wonderful or rare» books as a gift for the winners (Suetonius, 1993: 226). Sertorius held examinations at his school, giving awards to good students and golden necklaces «bullae» to the best. An example of an understanding attitude to students, according to Plutarch, was Sarpedon, the teacher of the future prominent statesman Cato the Censor, who «kept an explanation for the student ready, not a thrash. Finally, in order not to excite children» disgust to studying, Quintilian advised to turn the didactic process into fun, using praise, manipulation through jealousy for another child, who was temporarily paid more attention, arranging competitions among students, including didactic games in the form of questions-answers and rewarding them for good results. He explained these suggestions by his own feelings, experienced at school (jealousy, shame, triumph). Every month his teachers divided students into grades with hierarchy depending on performance level. It stimulated competition between children, the desire to outsmart others, and to succeed in the oratorical skill. These examples showed an alternative to physical punishment, which, according to the Roman teacher, by nature were not only «mean and characteristic only for slaves», but also demonstrated teachers' incompetence (Guiraud, 1899: 84; Plutarch, 1963: 277; Plutarch, 1964: 29; Quintilian, 1834: 8, 22–23, 29–30; Schmidt, 1890: 390).

5. Conclusion

Three-tiered Roman education, in spite of the independence of each stage, consistently provided students with knowledge, relevant of the time, based on the subjects of the humanitarian cycle, first of all, literature. The peculiarity of Roman education of the Republic era was its practicality (clearly manifested in learning of four arithmetical operations), the focus on future success in the realization of private, public or state affairs, bilingualism (Greek and Latin languages of study preconditioned by the powerful influence of Hellenistic countries culture on Rome. In the era of the Empire, erudition came to the forefront, especially in the field of «old» literature. At the same time, under the Dominate, the importance of other disciplines, which formed seven liberal arts, increased. Education of the highest rhetorical level was inseparable from practical skills of versification, writing and proclamation of speeches.

The Roman education system did not pay much attention to the conditions for learning organization – the society did not set strict requirements to school physiology, which led children, especially in elementary schools, to acquire knowledge not in proper conditions (lessons began too early, pupils stayed indoors for too long, lack of isolation and school furniture). Moreover, such unfavorable phenomena as physical punishment, didactogenia, low moral impact on children by

school community or teachers. All this led to the popularity of home-schooling among wealthy Romans, which often was not limited to the initial stage.

Although Roman education did not add much novelty to teaching tools and continued its existence on a material basis borrowed from the Greeks, we can trace certain innovations in it, noted both in pedagogical works and in literature characters: improvement of the methodology of texts analysis and public speeches preparation, the development of rhetorical culture through the mastery of acting and phonopedic exercises, the expansion of the set of methods for students' motivation to study (moral and material encouragement, competition).

However, humanistic suggestions in didactics did not acquire systematic character and entirely depended on the personality of the teacher. Organization, methods of teaching, selection of school material were not regulated and were conditioned by traditions and public opinion which gave teachers free hands in presentation of pedagogical creativity.

References

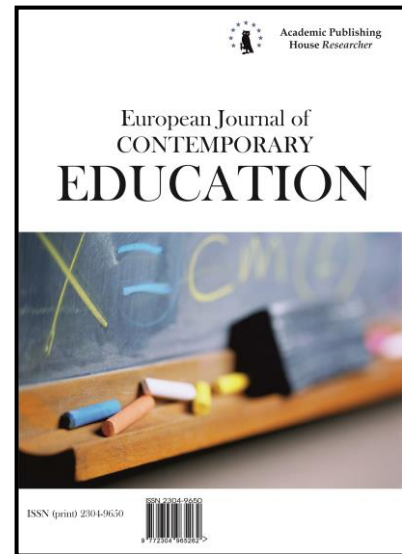
- [A companion, 1921](#) – A Companion to Latin Studies / edited by Sir John Edwin Sandys. Cambridge: University Press, 1921. XXXV, 891 p.
- [Apuleius, 1959](#) – *Apuleius, Lucius*. (1959). The Apology. The Metamorphoses. Florida. Moskva. 434 p.
- [Augustine, 2005](#) – *Saint Augustine of Hippo*. (2005). Confessions. Moskva. 544 p.
- [Ausonius, 1993](#) – *Ausonius Magnus*. (1993). Stihotvoreniya [Poems]. Moskva. 356 p.
- [Blagoveshchenskiy, 1864](#) – *Blagoveshchenskiy, N.M.* (1864). Goratsiy i ego vremya [Horace and his Time]. SPb. [4], 226 p.
- [Cherkasov, Smigel, 2016](#) – *Cherkasov, A.A., Smigel, M.* (2016). Public education in the russian empire during the last third of the XIX century: Parish schools. *European Journal of Contemporary Education*. 18(4): 418-429.
- [Cicero, 1974](#) – *Cicero, M. Tullius*. (1974). O starosti. O družhbe. Ob obyazannostyah. [On Old Age. On Friendship. On Duties]. Moskva. 245 p.
- [Davis, 2018](#) – *Davis, Jr. Phillip, A.* (2018). The Place of Paideia in Hebrews' Moral Thought. XII, 291 p.
- [Gordievich, 1894](#) – *Gordievich, O.I.* [Vyisshee obrazovanie v Rime vo vremena imperatorov: Rech, proiznesennaya na torzhestvennom akte Kollegii Pavla Galagana 1 oktyabrya 1893 g. vospitatelem i prepodavatelem grecheskogo yazyika O. Gordievichem] Higher Education in Rome under the Emperors: A Speech, Given on Solemn Convocation of Pavel Galagan College on October 1, 1893 by Mentor and The Greek Language Teacher O. Gordievich. Kyiv, 1894. 21 p.
- [Guiraud, 1899](#) – *Guiraud, P.* (1899). Chastnaya i obschestvennaya zhizn rimlyan [Private and Public Life of the Romans]. SPb. VIII, 623 p.
- [Horace, 1790](#) – *Horace*. (1790). The Works of Horace. Vol. 2. London. 331 p.
- [Horace, 1982](#) – *Horatius, Quint Flaccus*. (1982). Tvory [Compositions]. Kyiv. 254 p.
- [Livius, 1989](#) – *Livius Titus*. (1989). Istoriya Rima ot osnovaniya goroda [The History of Rome]. Vol. 1. Moskva. 575 p.
- [Magsumov, 2015](#) – *Magsumov, T.A.* (2015). The additional professional training in the late russian empire. *Bylye Gody*. 36(2): 327-337.
- [Martial, 1891](#) – *Martialis Marcus Valerius*. (1891). Epigrammyi [Epigrams]. Moskva. Part 2. [4], 933 p.
- [Mommsen, 1997a](#) – *Mommsen, T.* (1997). Istoriya Rima. V 4 tomah [The History of Rome. In 4 volumes]. Vol. 1. Rostov-on-Don. 640 p.
- [Mommsen, 1997b](#) – *Mommsen, T.* (1997). Istoriya Rima. V 4 tomah [The History of Rome. In 4 volumes]. Vol. 2. Rostov-on-Don. 640 p.
- [Mommsen, 1997c](#) – *Mommsen, T.* (1997). Istoriya Rima. V 4 tomah [The History of Rome. In 4 volumes]. Vol. 3. Rostov-on-Don. 640 p.
- [Paros, 1875](#) – *Paroz, J.* (1875). Vseobschaya istoriya pedagogiki dlya rukovodstva uchaschimsya v normalnyih shkolah [Histoire universelle de la pédagogie]. SPb. 386, II p.
- [Plautus, 1987](#) – *Plautus, Titus Maccius*. (1987). Komedii [Comedies]. Vol. 2. Moskva. 800 p.
- [Pliny, 1950](#) – *Pliny, Gaius Caecilius Secundus*. (1950). Pisma Pliniya Mladshego [The Letters of Pliny the Younger]. Moskva. 578 p.

- [Plutarch, 1961](#) – *Plutarch*. (1961). *Sravnitelnyie zhizneopisaniya: V treh tomah* [Parallel Lives: in three volumes]. Vol. I. Moskva. 503 p.
- [Plutarch, 1963](#) – *Plutarch*. (1963). *Sravnitelnyie zhizneopisaniya: V treh tomah* [Parallel Lives: in three volumes]. Vol. II. Moskva. 548 c.
- [Plutarch, 1964](#) – *Plutarch*. (1964). *Sravnitelnyie zhizneopisaniya: V treh tomah* [Parallel Lives: in three volumes]. Vol. III. Moskva. 546 p.
- [Quintilian, 1834](#) – *Quintilian Marcus Fabius*. (1834). *Dvenadtsat knig ritoricheskikh nastavleniy* [Institutes of Oratory in twelve volumes]. P. 1. SPb. XI, 483 p.
- [Schmidt, 1890](#) – *Schmidt, C.* (1890). *Istoriya pedagogiki Karla Shmidta, izlozhennaya vo vseмирno-istoricheskom razvitii i v organicheskoy svyazi s kulturnoy zhiznyu narodov. T. I: Dohristianskaya epoha: Vospitanie u dikh narodov na Vostoke, u grekov i rimlyan* [The History of Pedagogy by Charles Schmidt, Set out in the World-historical Development and in Organic Connection to the Cultural Life of the Peoples. T. I: Pre-Christian Era: Upbringing at barbarous peoples on the East, at the Greeks and the Romans]. Moskva. XXX, 815 p.
- [Seneca, 1977](#) – *Seneca, Lucius Annaeus*. (1977). *Nravstvennyie pisma k Lutsiliyu* [Epistulae morales ad Lucilium]. Moskva. 383 p.
- [Shevchenko et al., 2018](#) – *Shevchenko, N.A., Kucherkov, I.A., Shirev, D.A., Miku, N.V.* (2018). Public education in the Russian empire at the end of the 19th century. *European Journal of Contemporary Education*. 7(1): 226-231.
- [Suetonius, 1993](#) – *Suetonius, Gaius Tranquillus*. (1993). *Zhizn dvenadtsati tsezarey* [The Twelve Caesars]. Moskva. 368 p.
- [Tacitus, 1969](#) – *Tacitus, Publius Cornelius*. (1969). *Sochineniya: V 2 t. T. 1: Annalyi. Malyie proizvedeniya* [Works: in 2 volumes.V. 1: Annales]. Leningrad. 444 p.
- [Ussing, 1878](#) – *Ussing, I.* (1878). *Vospitanie i obuchenie u grekov i rimlyan* [Upbringing and Education of the Greeks and the Romans]. SPb. XIV, 175 p.
- [Winniczuk, 1988](#) – *Winniczuk, L.* (1988). *Lyudi, nrayvi i obyichai Drevney Gretsii i Rima* [People, morals habits and customs of Ancient Greece and Rome]. Moskva. 496 p.
- [Zhurakovsky, 1940](#) – *Zhurakovsky, G.E.* (1940). *Ocherki po istorii antichnoy pedagogiki* [Feature-stories on the History of Ancient Education]. Moskva. 472 p.
- [Ziegler, 1911](#) – *Ziegler, T.* (1911). *Istoriya pedagogiki* [The History of Education]. Spb.; Kyiv. [2], VIII, 501 p.



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Management of Process of Training in Reading in Russia at the end of XIX – the beginning of the XXth centuries: Foreign Aspect

Olga N. Malykhina ^a, Irina V. Ilyina ^a, Gulsina A Grevtseva ^b, Valery Okulich-Kazarin ^{c, *}

^a Kursk State University, Russian Federation

^b Chelyabinsk state Institute of culture, Russian Federation

^c Pedagogical University of Cracow, Poland

Abstract

Foreign pedagogical ideas, subjected to careful study and criticism from public figures, scientists, teachers of Russia, contribute to the development of Russian methods of teaching reading in the second half of the XIX – early XX centuries. The issue of borrowing Western pedagogical ideas was widely discussed in the works of prominent thinkers in the second half of the XIX – early XX centuries. Public speeches, critical reviews, publications on teaching philological subjects in general and teaching reading in particular, cannot do without reference to foreign authors. Many articles in pedagogical journals present a comparative description of various aspects of pedagogical activity in Russia and abroad on various issues. The systems of education abroad, which pay attention to learning to read, are described in detail. The following questions are acute: the volume of foreign languages in educational programs (especially in real schools); the place of foreign literature in the circle of school reading. This discussion drew public attention to reading, encouraged learners to read the authors mentioned, and contributed to the development of reader interest in General. The formation of pedagogical principles of teaching reading in a professional environment continued. Recommendations developed by Russian and foreign teachers (especially the USA) and are reflected in Ignatiev's education reform project in 1915-1916. This is public participation in the administrative management of the school, granting autonomy to the school, affirming the need to introduce universal, free and compulsory primary education, joint education of children.

Keywords: teaching reading, foreign influence, education reform.

* Corresponding author

E-mail addresses: v-kazarin@yandex.ru (V. Okulich-Kazarin)

1. Introduction

The study of various sources of the second half of the XIX – early XX centuries (circulars, protocols of pedagogical councils and other archival materials, as well as monographs and periodicals) reveals that the leading teachers and public figures of Russia turned to foreign experience in the development of reader's taste and experience. That is why it is important to track pedagogical experience in solving the problems of formation of a literate reader who owns the «art of reading» in Russia and abroad and to determine the impact of foreign methodological literature on the Russian methodology of teaching reading.

2. Materials and methods

Comparative-historical method and theoretical analysis of sources are the main methods of work. They characterize the features of the formulation and solution of the problem of reader activity in pedagogy at the turn of the XIX – XX centuries. Generalization, systematization and classification of the material according to the publications of the period under study and in modern works are also used.

3. Discussion

The issue of borrowing Western pedagogical ideas discussed in the works of advanced thinkers in the second half of XIX – early XX centuries – V.J. Stojunin, (1869), P. Kapterev (1901), K. Ushinsky (1954), K. Wentzel (1886), N. Bunakov (1906), A. Ostrogorsky (1895), N. Rubakin (1897), J. Eichenwald (1912). Scientists talk about the possibility of applying foreign ideas and practices on the Russian soil on the pages of periodicals and monographs. Analysis of pedagogical periodicals (random sampling): «Pedagogicheskoe obozrenie» (1869), «Pedagogicheskij listok» (1868-1901), «Vestnik vospitanija» (1895-1901), «Obrazovanie» (1901-19016) showed it. It is noteworthy that the rhetoric of statements changes significantly from the middle to the end of the XIX century and receives a new light in the early twentieth century, and then again transformed into the pre-war and war period. Modern researchers – R. Leybov, A. Vdovin (2004), M. Boguslavsky (2016), V. Bezrogov (2013), B. Lanin (2006), S. Belentsov (2017), O. Dmitrieva (2013), E. Nikulina (2016) – regard to this issue, regard on the experience of archival sources, periodicals, pay attention to the personalities and reconstruct the process of individual influence of a foreign public figure on Russian science.

4. Results

The rapid development of social and political thought in Russia in the second half of the XIX – early XX centuries took place with the participation of a pleiad of outstanding scientists and teachers who developed various issues of education, training and education, who sought to comprehensively describe and qualitatively transform the pedagogical reality of the time, without ignoring foreign ideas. Let us turn to the experience of learning to read abroad, meaningful in Russia at the turn of XIX – XX centuries.

The possibility of reception of Western models of teaching Russian schoolchildren to read is widely discussed in the pages of periodicals in the second half of the XIX – early XX centuries. This analysis showed the following pedagogical periodicals (random sampling): «Pedagogicheskoe obozrenie» (№ 6-12, 1869), «Pedagogicheskij listok» (complete with sample from 1868 to 1901), «Vestnik vospitanija» (1895-1901), «Obrazovanie» (1901-19016).

Attention is drawn to the fact that almost no public speech, no critical analysis, almost no publication devoted in one way or another to the teaching of philological disciplines in general and teaching reading in particular, is complete without reference to foreign authors.

A large number of articles in pedagogical journals presents a comparative description of various aspects of pedagogical activity in Russia and abroad on various issues. Noteworthy critical analysis of publications J. Paper «People's library and reading room as an object of public charity», which examines the experience of England, Switzerland, USA, Germany in the development of reader's activity of citizens. The need for close attention to foreign success is noted here. The author calls for more active work in the direction of «reading development» at home – not only from the state and professional structures, but also (as abroad) with the involvement of individuals, especially (convinced reviewer – N. Tulupov) there is a significant number of «willing not indifferent persons» ([Pedagogicheskij listok, 1901](#)).

The systems of education abroad, which pay attention to learning to read, are described in detail. This is the people's house in Amsterdam ([Pedagogicheskij listok, 1901](#)), society for the mental study of children in Paris, primary education in Transvaal ([Pedagogicheskij listok, 1901](#)), children's court in new York, women's education in Japan ([Pedagogicheskij listok, 1905](#)), international Congress on school hygiene in Germany ([Pedagogicheskij listok, 1901](#)), lessons of thrift in Brussels ([Pedagogicheskij listok, 1901](#)), questions of public education and upbringing at the congresses of the Paris exhibition – from the experience of France, Germany, Belgium, England ([Vestnik vospitanija, 1901](#)) «about reading books» (translated by A. Volkova from *Le Volume*) ([Obrazovanie, 1901](#)).

Training should be conducted taking into account the physiology of the child. This is a key position of outstanding teachers of that time. Much attention is paid to this aspect in the periodicals. Bibliographic lists are full of works in a foreign language and translations. You can find not only a description of the advantages and disadvantages of scientific work, but also an indication of the relevance, novelty of the study in the annotations and book reviews of foreign publications of this subject. Attention is also paid to translation options. All this testifies to the increased attention to such works and the desire for a deep, full comprehension of the presented materials. Here are just some of the articles and works presented in the above mentioned journals regarding teaching reading: T. Bend «Nervous hygiene and school» (translated from German); V.E. Ignat'ev, «Conversations on physiology», a work based on studies of Hertwig, Fervore, Collie, Tyndall ([Pedagogicheskij listok, 1901](#)); N. Piaskowski «Science and ethics», where we understand the ideas of such scientists as Darwin, Haeckel, Huxley, Wallace, Spencer, Drummond ([Pedagogicheskij listok, 1901](#)); The Psychological basis of the reading process (based on the latest experimental psychological research), where the work of Herman and the work of the *Psychologische Untersuchungen uber das Lesen auf experimenteller Grundlage*, but also presents a broad bibliography of relevant recent publications on the subject) ([Pedagogicheskij listok, 1901](#)); a story about the society for the mental study of children in Paris ([Pedagogicheskij listok, 1901](#)). Count I. Rossolimo talks about the impact of the school, and in particular the setting of reading on the physical and moral health of children, and refers to German medical research. He cites the terms and gives in parenthesis German names, obviously as more well-known: for example, «overwork (school headache *Schulkoprabotafschmerz*) ». He also in his discussion quotes Philipp Melanchthon, Montaigne, Rousseau, Frank, Hufeland, von Stein, Pestalozzi, FR. Tire, FR. Background Raumer, Paulsen, Lorinser, Laprade; Goethe, A. von Humboldt, Schleiermacher, Herbart, F.A. Wolf, Witze, Background Tracke, points out the attention to the issue of the Emperor Wilhelm II. ([Pedagogicheskij listok, 1901](#)). The work of L. E. Obolensky «Laughter in children, its origin, development, forms, causes and significance» is based on the work of the American scientist D. Selli ([Pedagogicheskij listok, 1901](#)). Jones-Lange's theory of emotions is very popular, because teachers associate the educational value of reading with «education of feelings». V. Vakhterov writes about the importance of mood, feelings, emotions in teaching reading writes ([Pedagogicheskij listok, 1900, 1901](#)). A. Vinogradov analyzes the work of the Frenchman F. Tom, «Education of feelings» and notes that it «does nothing new», but «good language» recounts already known, and also gives good examples of fiction. In addition, «the author's confidence in the importance of the emotional sphere for the development of the soul deserves only sympathy» ([Obrazovanie, 1901](#)). A detailed analysis of the new translation from P. F. Kapterev surprising. He notes the excellent translation of the work of J. Fonsegriv «Elements of psychology», but considers this work not applicable on the Russian soil, because the author is too concerned about the preservation of the French philosophical tradition, and therefore it is not scientific: «In science you need to take care of the truth, not the preservation of traditions...». There are not enough details and examples (According to P. Kapterev) in «The Essays of elementary psychology» J.T. Ladd. He believes positive processing labor A.E. Brehm «Life of animals for the youth», as part of the written hearsay was excluded, and questions of «sex» omitted.

It is noteworthy that the number of participants in the international Congress on school hygiene, which was held in Germany, noted as follows: 121 from Germany, 322 from Austria, 60 from Russia, while, for example, from England 48, 15 from Spain, even less from other European countries.

Of course, the German pedagogical system occupies a leading position in the number of references in the works of Russian scientists. A. Kirpichnikov, a historian of literature, a Professor

of the Kharkiv and Moscow universities, a member of the Academy of Sciences, writes a number of articles on the results of his observations, and after a trip to Heidelberg. He wants to compare the teaching of literature in the two countries, as well as the position of the German and Russian teachers. «In Germany, – says the author, – the case of education and training delivered incomparably better than ours; there is no one complains about the ambiguity of the tasks of teaching», because the programs regulate the sequence and volume of the studied material. The order in everything, despite the fact that the programs in the country are different and even in one school can change every year (Kirpichnikov, 1870). Incorrect statement of the case in Russia leads to the fact that «the student writes some children's language or as a foreigner, barely learned to speak Russian» (Kirpichnikov, 1870). Student essays – the sharpest of the questions of teaching literature (then and to this day) – is also reflected in the comparison: «The Teacher does not come to horror if he is in the composition of the student preparing to finish a full course of high school in two months, will find a few spelling mistakes. He will emphasize them with a blue pencil and a surprised traveler from Russian teachers will say very calmly: «Yes, these are mistakes, because this can happen to anyone». He would not believe that we have two such accidents can be closed the University for a young man, full-grown and perfectly knows his business in all other respects» (Kirpichnikov, 1870).

K.N. Wentzel, a well-known propagandist of free education, talks about teaching children morality, argues in the work of the same name, that, pursuing «one of the attempts to solve the problems of modern moral education», should refer to the experience of the German scientist Döring. This experience is summarized in «The Handbook for parents and educators on the teaching of morality based on human nature». It is noted here that visual ethical training «preparing for adult activity in the form of images of individual sides and features of modern moral life in the form of stories, poems, etc.» should be conducted from the age of 13 (Pedagogicheskij listok, 1901).

B. Fleet's letter from Germany deserves attention. Admiration for the German out-of-school education is clear: «more than a school that teaches people a reasonable, good, eternal, and more than the policy of making Germany ahead of Europe» is the education given, in the opinion of the author. The German society for distribution in the people of education promotes *national* education [italics of the author] about which spoke I. G. Fichte, identifying concept «national» with category of classlessness since 1871 really. In fact the greatest works of the German (as well as Russian, and any other) literature have no class character? «Popular teacher, saved Germany, put her on an unattainable height», B. Fleet concludes (Pedagogicheskij listok, 1901).

A teacher Plejer's survey of German students on the war and books about war, proved important for the Russian philologists (Pedagogicheskij listok, 1901).

The issue of censorship, relevant in Russia, is also considered. G. Grossman does not draw any analogies formally, but analyzes very subtly «always worried about the Germans» the question of «police and administrative regulation of literature and art» (Obrazovanie, 1901).

The education system in England is regarded at the turn of the century in the works of the so-called moralists (Smiles, Gibbon, Carlyle, Lubbock, Macaulay), who claimed the usefulness of reading, because it «puts you in the best society». Establishing relations with English societies of family education is promoted; – it is offered to take from them the principles of visibility, naturalness, independence. However, our thinkers are against the pedantry of the British «who want to squeeze observation into the framework», as well as against the development in children of «ambition in the undesirable direction», manifested, for example, through the publication and glorification of works and the names of «little employees» of «The Parent review» (Pedagogicheskij listok, 1901). G. I. Rossolimo bitterly asks Russian teachers «turn to a flourishing society, where life is in full swing, and we have so much paperwork and doctrine and little living matter» on the Commission on family education. The Chairperson of the Commission C.P. Baltalon named «the main direction of English and European pedagogy»: an experiment and observation of the child. He assured that the Commission also tries to work in this direction (Pedagogicheskij listok, 1901).

A. Tihy explains its methodology of teaching reading «Story time» and refers to the works of the British E. and D. Partridge, «How and what to tell the children at school and at home», and S. Bryant «How and what to tell children?». He praises their principles: preliminary study of the audience, good knowledge and understanding («to see what you tell») by the teacher of his story,

the requirement that the story of the student becomes a continuation and development of the story of the teacher. A. Tihy offers to skip the texts of the British «through the prism of the Russian school and leave what is not alien to our understanding» ([Pedagogicheskij listok, 1901](#)).

V. Vakhterov, a famous figure of public education, writes about the principles of explanatory reading, which also contributes to the main task of the school – to prepare the child for self-education. He calls John Stuart Mill the main expert in self-education, because he demanded to achieve a clear understanding of the word, sentence, before they accept. V. Vakhterov also notes John Locke, who wrote that reading is simply «the collection of raw materials», and thinking «hewing logs... and constructing the building» ([Obrazovanie, 1901](#)). The positive side in the distribution of books in Russia, are noted by the scientist: «...we, thank God, left behind from the advanced presses of the West, in particular England, where there is no author dares to publish books without the permission of syndication publishers», thus providing complete control over a book and a newspaper ([Obrazovanie, 1901](#)).

The ideas of the French enlightenment cause sympathy of V.J. Stojunin, the largest of the literature's methodist of the second half of XIX – early XX centuries: he wishes their distribution in Russia, but regrets the misunderstanding or application of them. The scientist says about the anti-religious and anti-monarchist orientation of the ideas of Education, recalls the times of the dominance of the French language and is glad that «more talented Russian people» paid attention to the culture of other countries. V.Y. Stojunin thinking, «is education "this education has developed a broad cosmopolitanism that held back the extreme fascination of a foreign nationality, the ugly and pervasive in the Russian public life» ([Stojunin, 1991](#)). He believed that it is possible to come to universalism, and from it – to national ideals from the «slave worship» to one nation, one culture. This is possible if familiarity with the major cultures of Europe ([Stojunin, 1991](#)).

E. Demolin's school admired by the Russian public men. It is very expensive, a lot of maintenance costs, but it is necessary to take the principles: to pay more attention to the individual inclinations of students, not to neglect physical development, to give teaching a more lively and visual character, to translate each subject from course to course, and not from class to class in all subjects, to combine such teaching reading, socially and morally significant. Thus, the training system is created, it is based on the identity of the student, and not the "soulless conventions and inanimate circulars, the sacrifice that brought alive the identity and under the influence of which the nature of the coming young generation is being blighted» ([Vestnik vospitanija, 1901](#)).

The experience of comparing the American and Russian education systems in the Russian press in the second half of the XIX – early XX centuries is interesting. The main goal of «American life and education» is self-education. To do this, from the earliest years the child is treated as an adult, which gives rise to a sense of responsibility. It's forbidden to do nothing, that's why America starts business early, without the help of parents. The comprehension of the breadth of life comes through a journey, not from books. That is why, it can be concluded that Americans are so little developed intellectually, but students never forget what little they learned ([Obrazovanie, 1901](#)). However, the national League of storytelling exists even in such a pragmatic country, unlike Russia.

U. Veselovsky's article «On the characteristics of modern Swedish literature» deserves attention. He argues that the Scandinavian and Russian literature – «the magic key», which water gives strength, vigor, energy, inspiration, unlike, for example, French literature, where «all the old stories and ideas are intertwined». That's why these works conquer the world. In France the same – the author does a shot – "there are many adversaries, wishing to shield from the Scandinavian and Russian authors, proving that all their subjects are taken from the French" ([Obrazovanie, 1909](#)). We are also interested in this, but poorly, mostly with the German translation, however, already possible to talk about the Swedish influence on Russian fiction, outshining the German influence ([Obrazovanie, 1909](#)).

N. Karintsev criticized St. Petersburg imitators of European exhibitions of children's books. «Such exhibitions are regularly and everywhere arranged in Europe and serve there for the benefit of business. These exhibitions show the real [italics of the author] success of children's literature, help to navigate among the masses of books annually released on the market, serve as a reliable leader in the selection of good and healthy spiritual food for children, because they directly point to it – in a word in Western Europe, they facilitate the difficult task of the tutor, But the organizers of the St. Petersburg exhibition "had no purpose or organization» – a pile of piled old untested books – «in any bookstore more order» ([Obrazovanie, 1909](#)).

The wrongness of thoughtless borrowing of foreign samples was emphasized in the works of Saint Innokenty of Moscow, who gave 45 years to the cause of education of the peoples of Kamchatka, the Aleutian Islands, North America, Yakutia, and the Khabarovsk territory. He wrote that the law on universal education in Germany, for example, follows from its life: «Many people think that it is possible to educate the people and make it moral only by literacy. And in proof of this point to Prussia, where almost every villager literate. But there is not literacy or, at least, is not so much the cause of their enlightenment, as the result of education, which is grounded in their customs» ([Khrestomatiya..., 2016](#)).

Questions of the place of foreign languages and foreign literature in the education of russian students in the second half of XIX-early XX centuries.

Each advanced work of that time somehow reflected the idea expressed by K.D. Ushinsky: «A child who is not used to delve into the meaning of the word, understands darkly or does not understand its real meaning at all, or has not received the skill to dispose of it freely in spoken and written speech, will always suffer from this fundamental lack in the study of any other subject» ([Ushinskij, 1954](#)). Hence, the questions arise: 1) how much foreign languages are needed to the educational programs (especially in real schools); 2) what is the place of foreign literature in the circle of school reading.

1. The meetings authorized by the Ministry of public education and the various pedagogical societies, that were busy working on new educational programs actively discussed the question of the ratio of hours for the study of native and foreign languages. Of course, there were extreme positions:

a) russian civilization (like all European) «has its roots in the classical soil», «the key of understanding» of history are ancient languages, so you cannot do without them ([Materials, 1915](#));

b) a foreign language is an «artificial sign», therefore, to comprehend it you need not just a thoughtless memorization, but the ability to think on it, which is difficult and expensive for widespread introduction, especially it takes time from learning native language, which comparison in the study of both «new» and «dead» languages is extremely difficult ([Materialy po reforme..., 1915](#)).

The Solution of P.N. Ignatieff will be the outcome of the discussions. He will conclude that it is necessary to have a school with two directions: real and humanitarian. At the same time, the study of the native language should be put at the forefront in any school ([Materialy po reforme..., 1915](#)).

2. The place of foreign literature in the school reading circle is also a burning issue. The general idea of «directing» reading arose not only in government, but also among teachers. This was due to the unstable political situation, and sincere concern about the good moral image of youth, in the formation of which reading played an important role. The Trustee of the Kharkov district in its Circular dated 10 December 1899, calls exemplary works of russian literature «ready material for exercises in language» ([Tsirkulyar popechitelya..., 1899](#)). In accordance with the instructions of the Ministry of public Education, changes are being made in the programs on the russian language and literature: hours are being increased, the theoretical and practical base is being changed in order to comprehensively develop and give life and national character to education ([Tsirkulyar popechitelya..., 1899](#)). N. F. Bunakov, a supporter of explanatory reading, is even more categorical: «but if the native language really has a great pedagogical force, then the full deployment of this force should be sought not in the grammar textbook, at least the most complete and competent, but in its artistic literature, comprehensively and vividly reflecting the ideal life of the people» ([Bunakov, 1906](#)). However, a direct consequence of this position was a noticeable reduction in the program of foreign literature. «Foreign literature is completely expelled from the program, and our University can get young people who are barely familiar with the name of Homer and Shakespeare in the textbooks of General history and who have not read any of them», writes Kirpichnikov ([Kirpichnikov, 1870](#)). Even more symptomatic of the fact, for pedagogy, the second half of XIX – early XX centuries is the first anthology for the teaching of russian literature went to German-speaking students for seven years before its counterpart in the russian language. Not makes scientists doubt the fact of the orientation of the most famous anthologies – Galakhov's – in French and German samples ([Acta Slavica Estonica, 2013](#)).

In any case, the discussion of the role and volume of foreign literature in the school education of russian schoolchildren attracted public attention to reading, encouraged students to read the

mentioned authors and contributed to the development of reader's interests in general. In the professional environment, the formation of pedagogical principles of teaching reading continued. For example, the basis of an important methodological problem was laid – the criteria for the selection of works of foreign literature for study at school (before that, the question of criteria arose mainly with respect to works of russian literature) (Kirpichnikov, 1870).

5. Conclusion

Foreign pedagogical ideas are carefully studied and criticized by public figures, scientists, teachers of Russia, contribute to the development of russian methods of teaching reading in the second half of XIX – early XX centuries. Recommendations of russian and foreign teachers (especially the USA) education reform project P.N. Ignatieff of 1915-1916 were reflected. This includes public participation in the administrative management of the school, granting autonomy to the school, approval of the need to introduce universal, free and compulsory primary education, joint education of children (Materialy po reforme..., 1915). People who are interested in the qualitative reform of the education system, noted the positive factors that made the system of other countries successful: funding(public and private); the construction of schools (large, bright rooms in natural areas, cleanliness, low occupancy classes); respect for the individual (no penalties, no grades, no homework, a single course for all); high wages of teachers and free time, self-education; reliance on scientific knowledge of psychology, history and hygiene; systematic-and therefore fruitful work. However, teachers and public figures realized that only those borrowings can be really useful, which are consistent with the traditions of a particular people, a particular historical period, without violating the economic and cultural characteristics of a state. That's what made us look for a unique way to develop the education system. «The educational ideas of every nation is imbued with nationality more than anything else, permeated to the point that you could not transfer them to a foreign soil» – claimed K.D. Ushinsky (Ushinskij, 1954).

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References

- Acta Slavica Estonica, 2013 – Acta Slavica Estonica IV. Trudy po russkoj i slavjanskoj filologii. Literaturovedenie, IH. Hrestomatijnye teksty: russkaja pedagogicheskaja praktika XIX v. i pojeticheskij kanon [Works on russian and slavic philology. Literary criticism, IX. Textbook texts: Russian pedagogical practice of the XIX century and the poetic Canon]. Redaktery toma A. Vdovin, R. Lejbov. Tartu, 2013. 345 p. [in Russian]
- Bunakov, 1906 – Bunakov N.F. (1906). Shkol'noe delo: uchebnyj material, prorabotannyj na uchitel'skih s#ezdah i kursah za 30 let (1872-1902 g.) [School business: educational material worked at teachers' congresses and courses for 30 years (1872-1902)]. Izd. 3-e, znachit. pererabot. SPb: Gutzac, 231 p. [Elektronnyj resurs]. URL: elib.gnpbu.ru/textpage/download/html/?bookhl=&book=bunakov_shkolnoe-delo_1906 [in Russian]
- Khrestomatiya..., 2016 – Khrestomatiya po istorii pedagogiki. L.N. Belenchuk, E.N. Nikulina, sost. M.: Pravda Severa. T. 1. 718 p. [in Russian]
- Kirpichnikov, 1870 – Kirpichnikov A. (1870). O prepodavanii otechestvennogo jazyka i slovesnosti v nemeckih gimnazijah [The teaching of the national language and literature in german grammar schools]. Zhurnal Ministerstva narodnogo prosveshcheniya, 5–6: 66–80. [in Russian]
- Materialy po reforme..., 1915 – Materialy po reforme srednej shkoly: Primernye programmy i ob'yasnitel'nye zapiski, izdannye po rasporyazheniju g. Ministra narodnogo prosveshhenija [Materials on the reform of secondary school (1915): Sample programs and explanatory notes issued by order of the Minister of public education]. Pg., 1915. [in Russian]
- Obrazovanie – Obrazovanie (1901-19016 gg.). [in Russian]
- Pedagogicheskij listok – Pedagogicheskij listok (1868-1901 gg.) [in Russian]
- Pedagogicheskoe obozrenie – Pedagogicheskoe obozrenie» (№6-12 za 1869 g.). [in Russian]
- Stojunin, 1869 – Stojunin V.J. (1869). Rukovodstvo dlja teoreticheskogo izuchenija literatury po luchshim obrazcam russkim i inostrannym [Guide for the theoretical study of literature on the

best examples of russian and foreign]. SPb. [Elektronnyj resurs]. URL: dlib.rsl.ru/viewer/01003582747#? [in Russian]

[Stojunin, 1991](#) – *Stojunin V.J.* (1991). Izbrannye pedagogicheskie sochinenija [Selected pedagogical works]. M., Pedagogika, 368 p. [in Russian]

[Tsirkulyar popechitelya..., 1899](#) – Tsirkulyar popechitelya Khar'kovskogo uchebnogo okruga ot 10 dekabrya 1899 g. [The circular of the Trustee of the Kharkov educational district of December 10, 1899]. GAKO. Fond 185. Opis' 1. Delo №52. Delo kantselyarii Kurskoi muzhskoi gimnazii [in Russian]

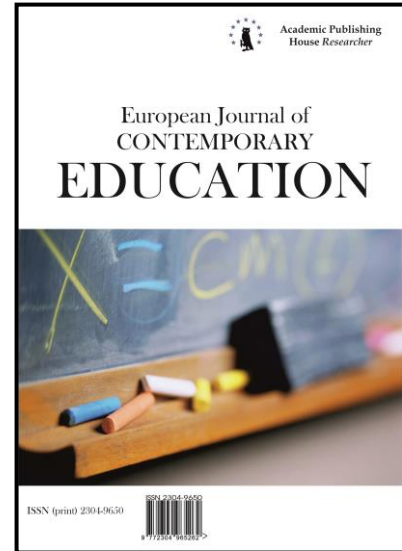
[Ushinskij, 1954](#) – *Ushinskij K.D.* (1954). Izbrannye pedagogicheskie sochinenija: v 2-h t. [Selected pedagogical works: in 2 t.]. M.: Uchpedgiz, T. 2: Voprosy obuchenija. 734 p. [in Russian]

[Vestnik vospitanija](#) – Vestnik vospitanija (1895-1901 gg.). [in Russian]



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The German System of Public Education in the Period between the 15th and early 20th centuries. Part 1

Anvar M. Mamadaliev ^{a, b, *}, Sergey D. Ludwig ^c, Natal'ya V. Miku ^d, Aude Médico ^e

^a International Network Center for Fundamental and Applied Research, Washington, USA

^b Volgograd State University, Volgograd, Russian Federation

^c Plekhanov Russian University of Economics, Russian Federation

^d Penza State University of Architecture and Construction, Penza, Russian Federation

^e University of Geneva, Geneva, Switzerland

Abstract

This paper explores the origins of the German public education system. This part of the work provides an analysis of the formation process of the German primary education system between the 15th and 18th centuries. Also, this paper explores the use of philosophical approaches in German education, and examines the impact of Protestantism on the process of creation of the German primary education system.

The study is grounded on a body of related research and special literature. In effect, its methodological basis is based on the principles of historicism, research objectivity, and systemicity, which are traditional in historiography. The authors employed the following key methods: (1) problem-chronological, which helped explore certain facts in the evolution of the German system of public education in the context of the then-existing historical situation; (2) historical-comparative, which helped compare the objectives for introducing a network of schools in the Protestant and Catholic zones of the German empire.

The authors conclude by noting that during the period between the 15th and 18th centuries German pedagogy had its ups and downs. A setback to the fledging effort to establish a system of public education, first undertaken back in the 15th century, was the Thirty Years' War. German regions were divided based on religion – paradoxical as it may sound, it is this division that actually gave rise to competition for congregation. Ultimately, this acted as a key driver in the process of creating an extensive network of primary schools.

* Corresponding author

E-mail addresses: anvarm@mail.ru (A.M. Mamadaliev)

Keywords: primary schools, German empire, system of public education, philosophical currents, Protestantism, Catholicism.

1. Introduction

Investigating the development of the German public education system, as well as exploring the history of German pedagogy, is of special significance for the world community. The reasons include both that in the past it is, for the most part, in Germany that pedagogy had developed as a science and that for quite a long period of time (particularly, up until the 1930s) it was German that had acted as the main language of science in the world.

This paper examines the version of the German state which is known as the German Empire, and was created in 1871. The empire incorporated four kingdoms, six grand duchies, seven principalities, and three free cities. At the time the regions were joined, Germany had an area of around 540,000 km² (Yuzhakov, 1903: 514).

2. Materials and methods

The work's materials are grounded in a body of related research and special literature.

The study's methodological basis is the principles of historicism, research objectivity, and systemicity, which are traditional in historiography. The authors employed the following key methods: (1) problem-chronological, which helped explore certain facts in the evolution of the German system of public education in the context of the then-existing historical situation; (2) historical-comparative, which helped compare the objectives for introducing a network of schools in the Protestant and Catholic zones of the German empire.

3. Discussion

The historiography related to the subject under examination may be divided chronologically – into the pre-revolutionary historiography (1860–1917) and the contemporary historiography (1918–2019).

In terms of the pre-revolutionary historiography, researchers have devoted a significant amount of attention to issues of public education in Germany in particular and in Europe as a whole. The subject has been explored by scholars Yu.S. Rekhnevskii (Rekhnevskii, 1860), P.N. Voeikov (Voeikov, 1873), A.V. Belyavskii (Belyavskii, 1887), F. Paulsen (Paulsen, 1908), N.V. Speranskii (Speranskii, 1898), and others.

The level of researchers' interest in the subject of philosophical currents in pedagogy as well has been quite high. This subject has been researched by scholars like H. Weimer (Weimer, 1913), M.I. Demkov (Demkov, 1912), E.P. Krevin (Krevin, 1915), E. Künoldt (Künoldt, 1897), G. Krenenberg (Krenenberg, 1896), F. Jakobi (Jakobi, 1916), F. Fischer (Fischer, 1912), and others.

In terms of the contemporary historiography, issues of the history of German and European history of pedagogy have been explored by scholars A.I. Piskunov (Piskunov, 1960), A.M. Mamadaliev (Mamadaliev et al., 2019), L.G. Abramova (Abramova, 2004), V.G. Bezrogov (Bezrogov, 2018), S.M. Marchukova (Marchukova, 2011), I.A. Sergienko (Sergienko, 2017), G. Rajović (Rajović et al., 2018; Rajović et al., 2018a), L.V. Obraztsova (Obraztsova, 1999), and others.

4. Results

Historically, the concept of public schools, i.e. schools intended to provide initial education to the lower strata of society, had long been foreign to the medieval Catholic world. In the period between the 14th and 15th centuries, the Catholic hierarchy only cared about the development of education amongst the higher strata of society. Medieval universities, academies, and Latin schools sought to produce educated priests for the needs of the church and turn out scholars and dignitaries for those of the state. The concept of public schools intended for teaching one the rules of the faith arose out of the spirit of opposition to the church hierarchy, the spirit of Protestantism. As early as the 15th century, under the influence of teachings by John Wycliffe*, there started to

* An English theologian, seminary professor at the University of Oxford, founder of a movement known as Wyclifism, which afterwards turned into a popular movement known as Lollardy, reformer, and forerunner of Protestantism.

circulate printed books that set out the rules of the faith for the people. Nonetheless, proper public school emerged only after Martin Luther's Reformation. It developed in a gradual manner – as Protestantism gradually gained its significance and necessity.

Similar to the way medieval Catholicism sought support in monastic orders and monasteries, Protestantism had to lean on schools. For that purpose, in states which embraced Protestantism a major portion of former monastic property was directed toward the establishment and upkeep of schools. Along with Latin schools, there also started to emerge and gain prominence German trade schools for boys and girls. An important fact is that schools would be established only in cities ([Rekhnevskii, 1860a: 7](#)).

Ultimately, it was catechization, i.e. interpretation of major rules of the faith, that served as the beginning of the German school. During the first decades following the Reformation, the German public school was about nothing but church catechization, through which a pastor had to provide instruction to the children. As early as the mid-16th century, catechization had been instituted in all Protestant churches in Germany. However, the labors of just one pastor were not sufficient, so there appeared in 16th century canons in Protestant states a new church post – a junior deacon. A junior deacon's duties, inter alia, included teaching the children catechism, prayers, and church singing ([Rekhnevskii, 1860a: 9](#)).

The junior deacon, jointly with the pastor, would teach children catechism at the church; therefore, education was just about church catechization, not independent schooling. Society was urged to establish public schools for two major reasons: 1) Protestants introducing the rite of Confirmation; 2) Protestantism splitting into two strands – Lutheran and Reformed.

During the rite of Confirmation, a young Christian would have to prove before the face of God and the community that they could, in full consciousness, use the spiritual benefits brought to them by Holy Baptism. Therefore, it was not sufficient that participants in the rite of confirmation have had general training – they would have to have studied Bible history and learnt catechism. This facilitated the establishment of an entirely separate academic discipline, which going forward would be known as God's Law. Regarding the second reason, after the Lutheran and Reformed strands of Protestantism finally became fully separate entities and the key principles of both faiths were rigorously and precisely laid down, each camp would now have to focus on entrenching those principles in the minds of the Congregation through familiarizing the people with them. This could be achieved only through the establishment of public schools in the parishes ([Rekhnevskii, 1860a: 10](#)). That is how parish schools would emerge in Germany.

As early as 1559, the church constitution in Württemberg contained a provision that parents would be fined if their children “cut class” at the time of catechization ([Rekhnevskii, 1860a: 11](#)). Note that regulations of this kind abounded. For instance, in Braunschweig this type of regulation was in place as early as 1528, Württemberg – 1533, and Hannover – 1536 ([Polyakova, 2017: 325](#)).

Public schools did not offer many subjects, with the curriculum limited to reading, writing, catechism and church singing and only few schools providing instruction in arithmetic. A school's educational literature at the time was represented by hymnals and catechisms, with short psalters used as well. In 1526, the first complete textbook for initial education and German schools was published. At first, students were divided into three study groups (classes) in the cities; those who could read by letters, by syllables, and those who read fluently.

There were various awards in place to reward the more diligent students. For instance, in Württemberg and in Nördlingen, the teacher would present the best students with a coin and a loaf of bread. A symbol of school discipline was the whip. A new teacher hired by the school would be handed a whip, as a symbolic attribute of the teacher's position, solemnly in the presence of the students ([Demkov, 1912](#)).

The public school system had developed in Germany up until the start of Thirty Years' War, i.e. 1618. The first period in the development of the German public school system was now over – but the second period would actually take a while to begin. During the Thirty Years' War, Germany's 16th-century public school system disappeared entirely, with junior deacons turning into soldiers. After the war, most of Germany's regions were in ruins, with the aristocracy devoting little to no attention to issues of public education. The only exception was Ernest I, a duke of Saxe-Gotha and Saxe-Altenburg, who already at the end of the war drew up a plan for creating public schools in all the duchy's communities. Along with the establishment of village schools, the duke had all the churches provide catechization to children and adults. There was a single objective behind both the

schooling and catechization – to revive the weakened religious Protestant spirit (Rekhnevskii, 1860a: 15).

Work related to catechization was conducted by pastors as well. A perfect example is the activity of pastor August Hermann Francke (Fig. 1). The pastor began his activity in 1694 by inviting a group of poor children over to his pastor house for catechization, and eventually instituting a public school via donated funds, as well as funds earned personally, by the time of his death (1727) Francke had created an entire network of facilities, which incorporated the following:

1) A pedagogium, intended to educate children from the upper class, which numbered 82 students, 70 teachers, and several housekeeping staff;



Fig. 1. Pastor August Hermann Francke (1663–1727)

2) An orphan house-based Latin school, which numbered 3 inspectors, 32 teachers, 400 students, and 10 housekeeping staff;

3) A German burgher school, which numbered 4 inspectors, 98 male teachers, eight female teachers, and 1,725 boys and girls;

4) An orphan's asylum, which numbered 100 boys, 34 girls, and 10 male and female supervisors;

5) Free board, provided to 255 students and 360 poor pupils;

6) A bookshop, an apothecary's shop, and a few other edifices, which combined employed 53 housekeeping staff and public officers;

7) A poorhouse for females, which numbered 29 young women and widows (Rekhnevskii, 1860a: 23–26).

In addition, the orphan house incorporated Canstein's Bible Institution. Karl Hildebrand von Canstein was the first to implement the idea of using stereotype printing to publish cheap copies of the Bible for mass distribution (hundreds of thousands of copies) in Germany. The first stereotype edition of the New Testament came out in 1711. By 1795, Francke's orphan house published over 1.6 million copies of the Bible, over 880,000 copies of the New Testament, 16,000 copies of the Psalms, and 47,000 copies of the Book of Sirach.

It is worth remembering that the direction of education at Francke's institutions was mainly religious. Catechisms, the Bible, and ancient languages, especially Hebrew, were the schools' key subjects. Nevertheless, of interest is the fact that Francke's institutions had a major focus on the real sciences as well. More specifically along with catechisms, reading, and writing, burgher schools intended for the education of children from poor families provided instruction in arithmetic, the principles of the natural sciences, geography, and history. The Latin school provided instruction in botany, physics and anatomy. The pedagogium incorporated a natural history classroom, a botanical garden, physical apparatuses, a chemical laboratory, anatomical preparations, lathes, etc. Francke's school for the poor would eventually turn into a public school.

For the first time in history the German public school became organically linked with the Latin academic school. There emerged the conviction that public and academic education ought to rely on

the same foundation and that academic education is only about the further development of public education. In other words, the public school proved synonymous with the elementary school.

Jan Amos Komensky (Comenius) is justly considered the founder of the real dimension in education and learning (Fig. 2). Born in 1592, Komensky attended several universities in Germany. As early as 1616, he became rector of a school in Pířerov and was ordained a minister. During the war, Komensky travelled extensively and lived in Poland, Sweden, England, Holland, and Hungary. He wrote and published numerous pedagogical works. The scholar was engrossed in a search of a classic system of education (Marchukova, 2011: 192). Criticizing his era's schools, Komensky would make the following statements: "They spend 15 to 20 years of their lives to learn Latin alone, while paying no attention to what is really beneficial and necessary for them" and "Learning must be natural, facile, and attractive" (Rekhnevskii, 1860a: 32–33). To help implement in practice his real method of learning, Komensky released several textbooks, which would be highly popular in the following 200 years. Among his works, of particular mention is his set of four study guides (Orbis, Vestibulum, Janua, and Atrium) intended to help a learner master Latin as a lingua franca, and subsequently help them learn the sciences and other languages (Bezrogov, 2018: 222). The first real school was founded in Berlin in 1739 by Halle University graduate and Francke Pädagogium teacher, Johann Julius Hecker. Berlin's real school would go on to develop vastly: along with subjects related to gymnasium learning, it provided instruction in geometry, draftsmanship, architecture, mechanical science, engineering, agriculture, and natural science. In 1748, Hecker founded a teacher-training seminary, which was mainly intended to prepare pedagogical personnel for the lower schools of the vast Holy Trinity parish.



Fig. 2. Jan Amos Komensky (1592–1670)

Of importance is the fact that, after watching the Protestants, the Catholic Church would also join the process of creating schools. For a long time, issues related to public education were handled by the Jesuit Order solely (Demkov, 1912). Although the Jesuits were mainly focused on education for the higher strata of society, in countries where the population was in part Protestant, next to Jesuit schools were Protestant public and German schools. They would open up their schools and provide catechesis to the common people as well. Subsequent to the end of the Thirty Years' War, regions where Catholicism was entrenched would eventually witness public schools for the common people going into decline. Subsequent to the end of the Thirty Years' War, regions where Catholicism was entrenched would eventually witness public schools for the common people going into decline. Restoring the public education system in Catholic Germany was now up to Silesian prelate, Johann Ignaz von Felbiger (Fig. 3), who in 1758 was appointed abbot of the monastery of Sagan in Lower Silesia (Rekhnevskii, 1860b: 119).



Fig. 3. Johann Ignaz von Felbiger (1724–1788).

Felbiger set to reforming the public education system by secretly sending three young teachers to a Protestant teacher seminary for training. When they returned, they were appointed instructors at three Sagan schools. To help provide the schools with study guides, Felbiger founded a printery in Sagan, which started to produce school primers, catechisms, and other study books.

In 1763, King Frederick the Great issued 'The General School Regulations' for all of the kingdom's communities. The document was grounded in many of the study guides from Felbiger's printery. On May 12, 1764, a directive was issued on instituting in Silesia a set of teacher seminaries, with the duty of taking care of these facilities vested with parish priests (Rekhnevskii, 1860b: 120–121).

Attending the schools was made mandatory for all young people. As early as 1766, in the Breslau province they opened 128 schools out of 189 planned were in opened in the Breslau Province. Meanwhile, Felbiger worked out a set of instructions on the inspection of public schools, as well as some additional study literature (Belyavskii, 1913).

It is now worth saying a few words about the Austrian system of public education as well. Austria had three major types of public school: (1) regular (in the key cities of each province), (2) major (in all the large cities), and (3) lower (in all the cities, townships, and parishes) (Rekhnevskii, 1860b, p. 131). Austrian regular schools had the significance of higher German real and model schools. They normally had a principal and four to five teachers, including one catechist priest. Each school had four grades. In addition, these schools provided training for primary school teachers.

Regarding major schools had three to four teachers and one catechist priest, and comprised three grades.

Lower schools had one teacher and one to two grades.

All of the Austrian provinces had in place special school committees which oversaw the accurate fulfillment of school regulations.

On May 1, 1774, Vienna unveiled Austria's first regular school. Around the same time, the capital witnessed the establishment of four major and 14 primary schools. Each of the schools had at least 50 students (Rekhnevskii, 1860b: 135). Afterwards, the trend continued on to other regions of Austria.

The period when Felbiger started to put his school reforms into effect in Catholic Germany was the time of dissemination and practical application of the principles of 18th century French philosophy. This philosophy implied breaking the link with past and altering all types of human relations – religious, political, and social. In 1762, Jean-Jacques Rousseau released a treatise called 'On Education', a book that completely changed everybody's view of education. Prior to that, most ideas on education were predicated on religion, with education viewed as a necessary consequence

of Christianity and a way to further develop the religious principles. Its main purpose was to entrench in a disciple's mind the notion of the rule of faith, to make them a worthy member of the Church of Christ and to prepare them for the future, eternal, life. The new pedagogical system, which emerged out of the principles of 18th century philosophy, was distinguished by an aspiration for independence, a refusal to serve as an agent of religious interests, and a focus on educating a person as a human being, as a world citizen, developing in them, in accord with nature, all the material and spiritual powers with which nature has gifted them. Renouncing the focus on enjoying bliss in the afterlife, instead it focused on achieving happiness right in this worldly life through educating children in conformity with nature to help them become righteous and successful citizens.

Among the period's most prominent German pedagogues, the most ardent follower of the new ideas was Johann Bernhard Basedow, born on 1723 in Hamburg. Through the use of his pedagogical techniques, Basedow sought to just help make a person an educated, morally upright and happy individual. His pedagogical essays, with all their significant scholarly value, were seemingly composed in pursuit of financial gain, with a focus on saving up the funds needed to open up a philanthropinum, which he succeeded in doing, accumulating quite a significant sum of money. Basedow's essays produced a major revolution in education, his activity paving the way for eminent Swiss pedagogue and education reformer, Johann Heinrich Pestalozzi. Importantly, as early as the late 18th century increasingly more attention was given to innovations in the area of public education (Mamadaliyev et al., 2019: 224). Basedow's followers enriched the German pedagogical literature with their essays, promoting the need for education in all the classes of German society. Personally Basedow was a man of profound convictions who firmly believed in what he was doing and expected substantial results from the implementation of his ideas. Despite being paid a substantial salary, getting gifts from various governments, and having generated significant sums from the sale of his essays, the scholar died in extreme poverty. On his death-bed, he bequeathed his body to an anatomical theater (Obraztsova, 1999), which he saw as yet another way to benefit mankind.

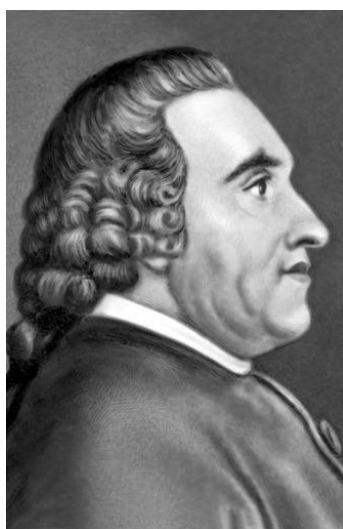


Fig. 4. Johann Bernhard Basedow (1723–1790).

Basedow's strange ideas and pipe-dream plans met with significant success particularly due to the fact that there was a pressing need for education reform in Germany at the time. Despite Felbiger's efforts, Germany's both public and higher education systems were in poor shape (Künoldt, 1897). They were dominated by routine and rigorous discipline, and with learning exclusively based on Latin philology real sciences were virtually not taught.

The educational system propounded by Basedow and his followers constituted a protest against the above-described state of schooling and direction for education, and therefore was a success. Basedow viewed philological and historical education, which dominated the schools at the time, as a key enemy of meaningful education. The scholar demanded that the school stop being a

servant of religious and state interests and be concerned only with educating a person as a human being – by way of real comprehensive learning, enlightening the mind, and physical improvement.

Thus, the educational ideas professed by Basedow in the 18th century had a lot in common with those voiced back in the 17th century by Komensky, which had failed to meet with success back then. Basedow's Dessau Philantropinum, just like other similar educational institutions, had little success and ceased to exist shortly (Piskunov, 1960). However, the intellectual movement and the very polemic engendered by Basedow's school with regard to education benefited German pedagogy immensely. Many of Basedow's followers, including Trapp, Becker, Campe, and Salzmann, created a whole sector of children's literature, enabling the parents themselves, without the school's intermediation, to educate their children in the right way (Rekhnevskii, 1860b: 142). Children's books in 18th-century Germany were a real phenomenon which epitomized the development of children's literature as a whole (Sergienko, 2017: 382).

5. Conclusion

Summing up, it should be noted that during the period between the 15th and 18th centuries German pedagogy had its ups and downs. A setback to the fledging effort to establish a system of public education, first undertaken back in the 15th century, was the Thirty Years' War. The German regions were divided based on religion – paradoxical as it may sound, it is this division that actually first gave rise to competition for congregation, and ultimately acted as a key driver in the process of creation of an extensive network of primary schools.

References

- Abramova, 2004 – Abramova, L.G. (2004). *Filosofskoe istolkovanie evropeiskoi pedagogiki vtoroi poloviny XVIII – nachala XX veka: Monografiya* [A philosophical construal of European pedagogy of the period between the 2nd half of the 18th and the early 20th centuries: A monograph]. Kaliningrad, Russia: BIEF. [in Russian]
- Belyavskii, 1887 – Belyavskii, A.V. (1887). *Istoricheskii ocherk razvitiya elementarnoi shkoly, v biografiyakh zamechatel'neishikh pedagogov i po ustavam pravitel'stv* [A historical essay on the development of the elementary school system – based on the biographies of eminent pedagogues and the statutes of governments]. Glukhov, Russia: Pechatnya Shumitskogo. [in Russian]
- Bezrogov, 2018 – Bezrogov, V.G. (2018). *Die un/sichtbare Welt: Retsepsiya Orbis Sensualium Pictus Ya. A. Komenskogo v Rossii 1-i pol. XVIII v.: Obrazovatel'nye praktiki i rannie perevody* [Die un/sichtbare Welt: The reception of Orbis Sensualium Pictus by J.A. Komensky in Russia in the 1st half of the 18th century: Educational practices and early translations]. *Detskie Chteniya*, 13(1), 220-284. [in Russian]
- Demkov, 1912 – Demkov, M.I. (1912). *Istoriya zapadnoevropeiskoi pedagogiki* [The history of Western European pedagogy]. Moscow, Russia: Tovarithchestvo I.D. Sytina. [in Russian]
- Fischer, 1912 – Fischer, F. (1912). *Basedow und Lavater: In ihren persönlichen und literarischen Beziehungen zueinander auf Grund ihres unveröffentlichten Briefwechsels und Tagebuch-Aufzeichnungen Lavaters*. Straßburg, Germany: J.H.E. Heitz. [in German]
- Jakobi, 1916 – Jakobi, F. (1916). *Lohn und Strafe bei J. B. Basedow*. Munich, Germany: Kempten. [in German]
- Krenenberg, 1896 – Krenenberg, G. (1896). *Gotthilf Salzmann und seine Bedeutung für unsere Zeit*. Frankfurt, Germany: Moritz Diesterweg. [in German]
- Krevin, 1915 – Krevin, E.P. (1915). *Russo – istochnik noveishikh techenii v nemetskoj pedagogike* [Rousseau, a source of novel currents in German pedagogy]. Petersburg, Russia: Tipografiya M.M. Stasyulevicha. [in Russian]
- Künoldt, 1897 – Künoldt, E. (1897). *Caradeux de la Chalotais und sein Verhältnis zu Basedow*. Oldenburg, Germany: Schulze. [in German]
- Mamadaliyev et al., 2019 – Mamadaliyev, A.M., Gordeev, I.A., Miku, N.V., Médico, A. (2019). *Teacher training for the system of primary education in Switzerland in the mid-nineteenth century*. *European Journal of Contemporary Education*, 8, 222-228.

[Marchukova, 2011](#) – *Marchukova, S.M.* (2011). O preemstvennosti pedagogicheskikh sistem Ya.A. Komenskogo i S.I. Gessena [On the continuity of the pedagogical systems of J.A. Komensky and S.I. Hessen]. *Vestnik Russkoi Khristianskoi Gumanitarnoi Akademii*, 12(2), 190-197. [in Russian]

[Obraztsova, 1999](#) – *Obraztsova, L.V.* (1999). Filantropizm i reformatorstvo v nemetskoj pedagogike: Monografiya [Philantropinism and reformation in German pedagogy: A monograph]. Marburg, Germany: Izdatel'stvo Marburgskoi Laboratorii. [in Russian]

[Paulsen, 1908](#) – *Paulsen, F.* (1908). Istoricheskii ocherk razvitiya obrazovaniya v Germanii [A historical essay on the development of education in Germany] (N. V. Speranskii, Trans.). Moscow, Russia: Tovarishchestvo I.D. Sytina. [in Russian]

[Piskunov, 1960](#) – *Piskunov, A.I.* (1960). Ocherki po istorii progressivnoi nemetskoj pedagogiki kontsa XVIII – nachala XIX v. [Essays on the history of progressive German pedagogy of the late 18th – early 19th centuries]. Moscow, USSR: APN RSFSR. [in Russian]

[Polyakova, 2017](#) – *Polyakova, M.A.* (2017). Reglamentatsiya shkol'nogo dela v nemetskiikh ustavakh konfessional'noi epokhi i pervye nemetskie shkoly v Moskve [Regulation of schooling in German statutes of the confessional era. The first German schools in Moscow]. *Religiya. Tserkov'. Obshchestvo*, 6, 318-343. [in Russian]

[Rajović et al., 2018](#) – *Rajović, G., Zuev, M., Vazerova, A.G., Trailovic, M.* (2018). Development of primary public education system in Serbia in 1832-1882. *European Journal of Contemporary Education*. 7(3): 623-629.

[Rajović et al., 2018a](#) – *Rajović, G., Bratanovskii, S.N., Vazerova, A.G., Trailovic, M.* (2018). Development of the secondary-level education in Serbia from 1808 to the 1870s. *European Journal of Contemporary Education*. 7(4): 927-934.

[Rekhnevskii, 1860a](#) – *Rekhnevskii, Yu.S.* (1860). Ocherk istorii narodnykh uchilishch v Germanii [An essay on the history of public schools in Germany]. *Zhurnal Ministerstva Narodnogo Prosveshcheniya*, 10, 5-39. [in Russian]

[Rekhnevskii, 1860b](#) – *Rekhnevskii, Yu.S.* (1860). Ocherk istorii narodnykh uchilishch v Germanii (okonchanie) [An essay on the history of public schools in Germany (the final part)]. *Zhurnal Ministerstva Narodnogo Prosveshcheniya*, 12, 117-156. [in Russian]

[Sergienko, 2017](#) – *Sergienko, I.A.* (2017). Nemetskie avtory – russkim detyam: Opyt bibliografii detskoi knigi vtoroi poloviny XVIII v. [German authors – for Russian children: The experience of children's literature of the 2nd half of the 18th century]. *Detskie Chteniya*, 12(2), 382-411. [in Russian]

[Speranskii, 1898](#) – *Speranskii, N.V.* (1898). Ocherk istorii srednei shkoly v Germanii [An essay on the history of the German secondary school system]. Moscow, Russia: Izdatel'stvo M. i S. Sabashnikovykh. [in Russian]

[Voeikov, 1873](#) – *Voeikov, P.N.* (1873). Istoriya klassicheskogo obrazovaniya v Evrope [The history of classic education in Europe]. Saint Petersburg, Russia: Tipografiya M.O. Ettingera. [in Russian]

[Weimer, 1913](#) – *Weimer, H.* (1913). Istoriya pedagogiki [The history of pedagogy] (K.A. Tyuleliev, Trans.). Saint Petersburg, Russia: Tovarishchestvo M.O. Wolf. [in Russian]

[Yuzhakov, 1903](#) – *Yuzhakov, S.N.* (Ed.). (1903). Bol'shaya entsiklopediya [The great encyclopedia] (Vol. 6). Saint Petersburg, Russia: Prosveshchenie. [in Russian]



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«66 % of Literacy Among the Male Population of School Age Brings it Closer to Common Education» vs «in the Largest Villages, it was Difficult to Meet a Literate Person»: the Main Statistical Indicators of Primary Education Among Don Cossacks in the XIX Century. Part 1

Artyom Y. Peretyatko ^{a, b, *}, Teymur E. Zulfugarzade ^c

^a International Network Center for Fundamental and Applied Research, Washington, USA

^b Volgograd State University, Volgograd, Russian Federation

^c Russian Economic University named after G.V. Plekhanov, Russian Federation

Abstract

The question about the degree of development of primary education in the Don in the XIX century remains controversial among historians. Archival documents and testimonies of contemporaries allow us to cover this question in completely different ways (both quotes in the title are taken from them). The article attempts to summarize statistical information about the development of primary education in the Don Cossack environment from 1799 to 1899. A number of myths prevalent in historiography (for example, about the significant role of zemstvos in the creation of new educational institutions in villages or about the crisis of Don education in 1880–1890) are debunked.

Keywords: history of education on the Don, primary education of the Don Cossacks in the XIX century, district schools, parish schools, parochial schools, literacy schools.

1. Introduction

“The Don Cossack Host is second to last in terms of school enrollments, and is the last one in terms of the number of schools as compared to other irregular military formations” (Nash krai, 1963: 467); “In the largest villages, even in those closest to towns and cities, it was difficult to meet a literate person” (Nash krai, 1963: 465); “The school is in the most wretched state in all respects” (Nash krai, 1963: 466). All these are excerpts from the documents featured in the milestone anthology “Our Land” (Nash krai), prepared by leading Soviet historians of Don Cossacks in 1963 (the list of authors included a number of respected researchers such as A.P. Pronshtein and I.P. Khlystov). Naturally, all the excerpts are original, but they, just like compilers’ comments do,

* Corresponding author

E-mail addresses: ArtPeretatko@yandex.ru (A.Yu. Peretyatko), teymur@yandex.ru (T.E. Zulfugarzade)

reflect only one facet of reality. The authors had to pick up archival materials echoing ideological statements defined in the preface to the section “Enlightenment on the Don”: “Primary and secondary education was in a plight until October 1917” (Nash krai, 1963: 459); “The reform of public education was increasingly curtailed by the government. The reactionary steps particularly intensified in the 80s-90s” (Nash krai, 1963: 459).

On the other hand, a polar opposite trend is now taking shape to idealize the pre-revolutionary Don education. For example, a Taganrog historian, L.A. Donskova, in one of her papers, says that the stance of Soviet historians on education was not only “a tribute to the narrow, class-biased and politicized approach of the Soviet era”, but also “suffered from one-sidedness and was unable to consider multiple and contradictory aspects of the government’s educational policies” (Donskova, 2008: 133). Yet she further provides a similar one-sided and idealized picture of “the authorities and society combining their efforts in the field of education”, based on “ideas of the common good and religious virtues” (Donskova, 2008: 138). Interestingly, the modern author repeatedly refers to information from the “Our Land” anthology of documents, but interprets them in a completely different way inconsistent with Soviet researchers. For example, while the anthology compilers saw the launch of new educational institutions in 1860-1870 as a least-evil measure by the government that did provide financing for the most of the facilities (Nash krai, 1963: 458), L.A. Donskova regards this increase in primary and secondary schools as an illustration of “consolidated efforts by the Don Oblast administration, zemstvos, the public” (Donskova, 2008: 133-135).

At the same time, neither Soviet historians nor today’s researchers made any attempts to systematize even the essential statistical information on education on the Don in the 19th century. In fact, the only person who tried to act on the matter was the secretary of the Don Statistical Committee, S.F. Nomikosov, who pointed out in 1884 that the number of students in the Don region doubled in 1830-1860, grew by 6 times in 1860-1870, and only by 1.7 times in 1870-1880 (Nomikosov, 1884: 575). It is already clear from this information that a popular Soviet statement claiming that “the introduction of zemstvo institutions on the Don in the 70s also contributed to the growing number of primary schools” (Nash krai, 1963: 458), is a historiographical myth, and in the zemstvo period on the Don, the pace of opening new school actually slowed down dramatically as compared to the previous decade. For this reason, we decided to elaborate on the idea of S.F. Nomikosov, and trace how the number of schools and their students grew on the Don in the 19th century, and then, using the information gathered as a basis, to develop an understanding of the factors that actually hampered and accelerated the expansion of education.

2. Materials and methods

Nevertheless, certain circumstances impeded the use of this research method. First of all, the borders of the Don Host Oblast underwent major changes in 1888 as new regions – Rostov-on-Don, Azov and Taganrog – were now included in it. Moreover, the region’s territorial division was also revised, and this did not allow us to use statistics on individual districts. A solution for this problem was offered by the materials of the commission headed by Lieutenant-General N.A. Maslakovets, which investigated the causes of impoverishment of Don Cossacks in 1899. In the process, the commission collected detailed data on primary education in the Cossack community (Protokoly, 1899: 251-262). On the other hand, before 1880, when parochial and literacy schools first began to open in the Don Host Oblast, local statistical figures separately indicated the number of students and students in Cossack villages (stanitsas) and peasant schools. So, this enabled us to compare the statistical indicators we are interested in for 1880 and 1890, but exclusively for the Cossack population of the region. Considering this, we decided to limit the scope of our research in the paper, and only deliver the systematized material on primary education in the Cossack community.

Although technically, even with this restriction, the data we used was not quite comparable. We know how many children attended stanitsa schools for the most of the 19th century. However, we have precise information that the schools taught not only Cossacks but children from other estates as well although their number was insignificant (for example, in early 1860, 7 serf peasants, a few dozens of clergy and merchant children took a training course there) (Krasnov, 1863: 401-403). On the other hand, a part of Cossacks could study in rural schools. Reviewing the year of 1890, we, on the contrary, knew how many Cossacks studied in primary and secondary schools, but

we have no data what proportion of them received education outside stanitsas. In any case, the number of students in primary schools specified in official statistics was approximate. In 1896, a contemporary gave the following description of the situation in Don rural schools: “In September, the school accepted 12, in October – 15 and in November – 24 students, more students were also brought in December and in January, but 20 students stopped going to school from mid-March, and another 15 in April” (Po voprosu..., 1896: 4). It is obvious that in this context the number of students reflected in the documents depended to the great extent on the counting method. Moreover, throughout the 19th century, Don officials and scholars complained at the outrageous inaccuracy of absolutely any official numerical data. Here is what K.A. Kartushin, an employee at stanitsa boards of the Ust-Medveditsky district, wrote about this: “Data is not collected based on any rational program but often fabricated to only show modifications in the data already available at hand and of the same value and origin” (Protokoly, 1899: 156). For this reason, the inaccuracy and crudeness of information we provide here would be inevitable even if the borders of the Don Host Oblast remained the same, and we had homogeneous material regarding the number of students in stanitsa primary and secondary schools or on the number of Cossacks who received primary education over one hundred years. And yet this does not downgrade the statistics we systematized. In 1902, the head of the Main Directorate of the Cossack Hosts, P.O. Shcherbov-Nefedovich, when found himself in a similar situation, wrote to the Minister of War in the preamble to the document prepared by him: “Some of the statistical tables enclosed in this report should only be considered approximately correct” (RGVIA. F. 330. Op. 61. D. 1861. L. 30b). The same refers to the diagrams that we created as they contain only rough figures but reflect general trends in the progression of Don education, and although with inaccuracies in Don statistics, specific numerical values can vary greatly in them from the actual ones, in most cases variances in these values by 10-20 % will not affect the general trends and patterns we have identified.

Speaking of the materials that constituted the basis of our paper, in this case, we preferred to use, if possible, testimonies and accounts of people related to Don education, rather archival sources. The fact is that most of these people (for example, S.F. Nomikosov, S.S. Robush, Kh.I. Popov) often tried to explain the data quoted by providing important information and valuable insights. Since the information is often unknown even in the scholarly community, and some of the texts on Don education, published in the late 19th century, are not analyzed or relied on by researches, we will extensively leverage from the historical descriptive method. The methods of historical comparison and historical systematization will be instrumental in drawing general conclusions and summaries on the trends in the development of the Don education.

3. Discussion and results

A Don region expert of the early twentieth century, A.A. Kirillov, who remains to this day one of the leading authorities on the history of the Don education, noted that first experiments to establish a centralized school system on the Don had been made since the middle of the 18th century. According to his accounts, the Cherkassk administration tried twice (in 1747-1758 and in 1766-1779) to open a seminary to train educated priests at the time, and in 1765, Ataman S.D. Efremov even ordered “to found public secondary schools in Cossack villages to educate children” (Kirillov, b.g.: 3).

However, such initiatives were blocked by Cossacks’ passive attitude and their indifference to knowledge. Another Don region expert of the early twentieth century, Kh.I. Popov, published a Host document in 1785, which described the view of a part of senior Cossacks on education: “The parents themselves do not care in the least to ensure a safe existence and good welfare for their little children for the rest of their lives on this side, because sciences, by enlightening one's reason, purifies it of the rudeness that a person without good education is usually infected with; all those who are accustomed to talk about school training as a useless exercise that cannot ever be of any need, raise their children in idleness from young years instead of giving them education” (Popov, 1905: 134). Meanwhile, the Host authorities at least wanted to provide stanitsas with good clerks to do proper bookkeeping, and to this end Don Ataman A.I. Ilovaysky personally ordained to announce at stanitsa assemblies that if parents decided to teach their children how to write, then by doing this they “by right will oblige us to be grateful to them all their life” (Popov, 1905: 134-135). He even proposed to find “decent and capable teachers” in stanitsas so that children could

learn efficiently from them (Popov, 1905: 135). However, of the nine stanitsas that responded to this document, which Kh.I. Popov was lucky to uncover, five informed that “there were no people willing to teach their children to write” (Popov, 1905: 136).

Initially, the authorities’ persistent intent to arrange an education system in the Don region was supported only by individual priests and officers. Thanks to them, private schools began to operate in Don stanitsas even before first official public schools were opened. A.A. Kirillov reports on one of the very first such schools: he cites a document of 1770, which contained a permission given to an Aksai priest, Fr. Vasily Petrov (Vlasov) “to build a school house in a decent place near a church” in order to “teach children writing, reading books, and church singing, and God’s commandments, and how to live a modest and virtuous life” (Kirillov, b.g.: 7-8). A.I. Ilovaysky in the letter, published by Kh.I. Popov, mentions a school in the Kletskaya stanitsa where “Father Aleksandr Dmitriev teaches children successfully both word and cursive writing” (Popov, 1905: 135). At least as early as from the beginning of the 19th century, Cossack officers started similar schools to train their children, and the teacher staff at the schools was no longer employed from the clergy, but from common people. A well-known Don military officer, General I.I. Krasnov wrote about his childhood before the Patriotic War of 1812: “Grandfather (Major General I.K. Krasnov) gathered around him all his grandchildren whom at the time had up to fifteen people of both sexes and different ages from a son and two daughters. <...>. Five of the boys were fit for studying; grandfather added the same number of children of his relatives to them, and, thus, created an in-home boarding school that had about a dozen students. At first our teacher was a young Cossack of the Bukanovskaya stanitsa, Avilov; and then one of our elder brothers, who had finished an educational course at the Richelieu Lyceum, came from Odessa” (Vospominaniya..., 1873: 265-366).

Consequently, first official public schools were launched on the Don only between the 1790s and 1800s and not because the government paid no attention to education before. On the contrary, we can see a certain symbolic meaning in the fact that the first serious educational institution, a primary public school in Novocherkassk, was opened in 1791, at the end of the Ataman term of A.I. Ilovaysky, who contributed much energy to promote education in the Don region (Kirillov, 1905: 6). Later, this school was reorganized from a primary facility into a secondary one, and subsequently, into a gymnasium; but it is more important to point out that by running the school, the host authorities gained experience of managing a primary educational institution. As a result, in 1800, similar primary public schools were opened in other districts as well (Kirillov, 1905: 13-15). Beginning in 1799, the authorities kept statistics on Don schools, which indicated the rapid growth in the number of schools and children studying in them. According to A.A. Kirillov, in 1799 the only official Don school (Secondary Public School) had 120 students, while in 1805 6 schools (Cherkasskoe, Ust-Medveditskoe, Nizhne-Chirskoe, Machikhskoe, Alekseevskoe and Aksayskoe) taught 490 children (Kirillov, b.g.: 10). We can see that the number of people receiving primary education increased by 4 times in five years, and the number of educational institutions providing this service grew by 6 times!

However, education progressed very inconsistently on the Don, and the boom before the Patriotic War of 1812 was followed by a stagnation period. In 1819, according to the Host Office, despite the statutory requirement that stipulated to have “one uezd school in each uezd” and “a parish school per one or two parishes”, there were only 4 uezd schools in the Don Host Oblast (the ones we know of based on the data as of 1805 – Cherkasskoe one, which was, however, relocated to Novocherkassk (Cherkassky district), Nizhne-Chirskoe one (2nd Donskoy district) and Ust-Medveditskoe one (Ust-Medveditsky district), as well as Kochetovskoe one opened later (Khopersky district); 2 schools with rather an unclear “uezd-style” status (Aksayskoe one (Cherkassky district) and the new Kamenskoe one (Donetsky district), familiar to us) and 3 parish schools (new Kachalinskoe one and Ilovlinskoe one (2nd Donskoy district) and Machikhskoe one familiar to us, also known as Mikhailovskoe one (Khopersky district) (Kirillov, 1907: 156). Compilers of the list somehow omitted the Alekseevskoe school that was opened in 1803 as the uezd school of the Khopersky district, which was also reported by A.A. Kirillov (Kirillov, b.g.: 9). However, the sheet of the Host’s expenditures for 1819, has an entry on 1860 rubles that were provided to launch the Alekseevskoe uezd school, so we can obviously suggest that it continued to exist, but the statistics on the Don, as we noted above, was kept in a very careless manner (Kirillov, 1905: 160). In any case, according to official records, the overall number of students in all the schools was not higher than 571 people (Kirillov, 1905: 156). In sum, since 1805, in fifteen years,

the number of schools almost doubled (6 vs. 10), but the number of students only showed an insignificant growth – from 490 to 571 children.

The director at the Novocherkassk gymnasium, S.S. Robush wrote in the early 1860 that prior to the introduction of the “Regulation on the management of the Don Host” in 1835, 13 schools were opened in total on the Don (8 uezd and “uezd-style” facilities and 5 parish facilities), 2 of which were closed down in 1820 (Mikhailovskoe and Ilovlinskoe parish schools, due to finding shortage) (Robush, 1867: 119). He also gives the earliest available statistical figures on students by school type, which we should note, is somewhat different from the one provided by A.A. Kirillov. Considering the fact that he covered the period from 1805 to 1860, we decided to utilize his data in the diagram below as basic figures and extend them with information supplied by A.A. Kirillov for 1799.

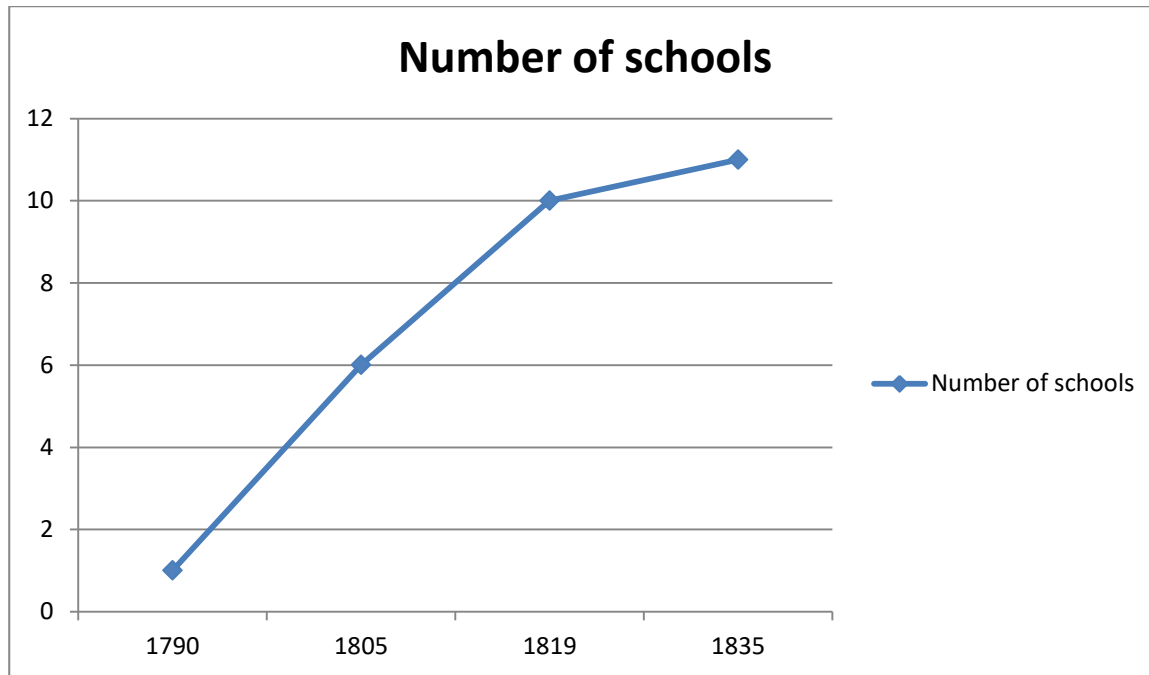


Fig. 1. Dynamics of the number of Cossack schools in the Don Host Oblast. 1799-1835
Sources: Kirillov, b.g.: 10; Robush, 1867: 119

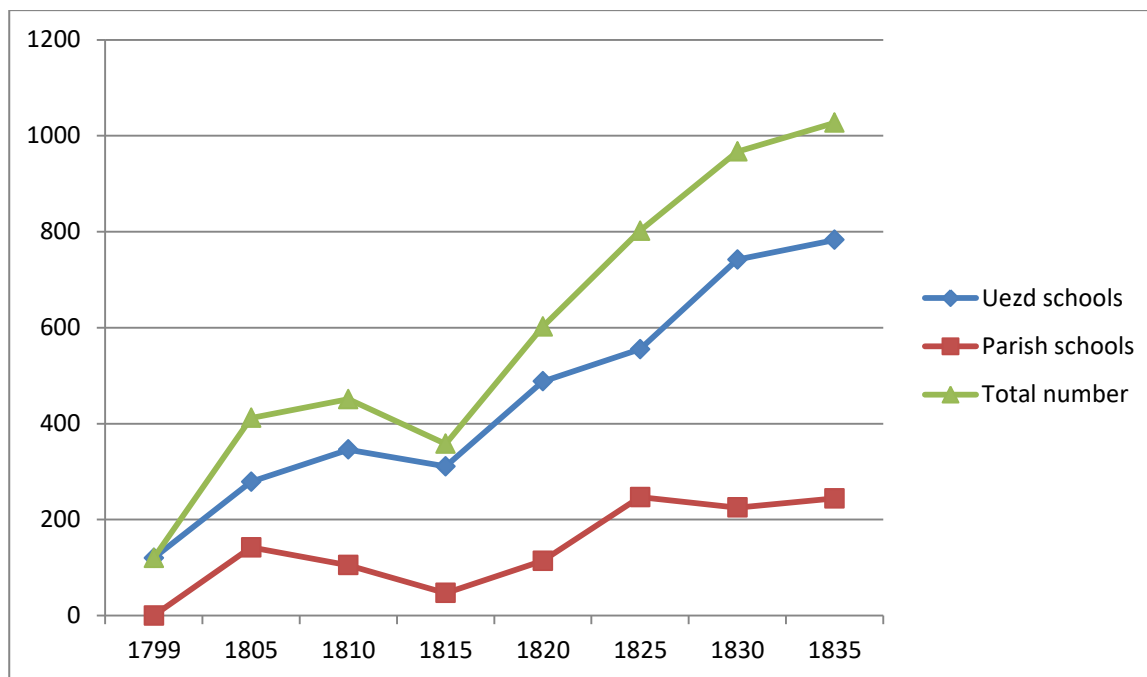


Fig. 2. Dynamics of the number of students in Cossack schools in the Don Host Oblast. 1799-1835
Sources: Kirillov, b.g.: 10; Robush, 1867: 119

These diagrams illustrate that in the future, the 1799-1805 growth rate for the number of students remained unachievable for the Don Host. We can assume that the educational services market was completely saturated with offerings by 1810. Another evidence of the suggestion is that after 1820 the number of Don schools was stable, and two of them shut down in the period from 1820 to 1835. As we can see, only uezd and “uezd-style” schools consistently increased their enrolments, while parish schools often experienced five year periods when the number of students went down. A particularly slow growth rate of the number of students is recorded in 1805-1815, and the fact, of course, should be attributed to the Napoleonic wars. And then, following a brief upsurge in 1815-1820, when those who could not study in the past five years, obviously, went to school, the growth rate not simply stabilized, but began to slow down in relative numerical terms.

The situation relapsed to the conditions that existed before 1790. Those segments of the Cossack population who wanted to receive an education, did it in the already existing schools, and that ensured only a slight increase in the number of students. Any attempts to create new parish schools encountered resistance of the local population that did not understand why school were needed. S.S. Robush gives the two most flagrant cases of the kind. In 1834, the Kazanskaya stanitsa decided to open a school, but already in the next year, in 1835, the facility was liquidated and apparently even did not have time to appear in general statistics (Robush, 1867: 123). “One Cossack who had the authority at the stanitsa assembly was offended by his son who studied at the school; the angry father set the whole stanitsa against the school so that the village refused to provide funding for the school” (Robush, 1867: 123). In the Melekhovskaya stanitsa, a school was already approved in 1836 by the authorities; however, the Cossacks unwillingness to study reached the level at which it was impossible to convince the stanitsa administration to find a house for the school, despite the efforts of “the teacher assigned to this stanitsa honestly tried to gather students privately in his apartment, but no matter how hard he struggled to achieve it, had no students (Robush, 1867: 123). S.S. Robush believed that such cases were linked with very strong rumors circulating in the Cossack environment that children would be sent to cantonists after school. Robush was personally contacted by the mother of a Cossack in the 1860s, who asked: “Well, Sir, will they not take our children to cantonists after they teach them?” (Robush, 1867: 124).

And, we should say, despite all its ambiguity, the “Regulation on the management of the Don Host” of 1835 took quite practicable steps to handle this problem. It was decided to dramatically increase the number of primary parish schools in stanitsas: according to the document, as many as

19 parish schools were to function in the Don region, but only 7 district (former uezd) schools (Robush, 1867: 120)! Based on this, the total number of schools suddenly soared from 11 to 26. More importantly, the reach of education extended geographically to increasingly cover localities farther away from the Host's administrative centers.

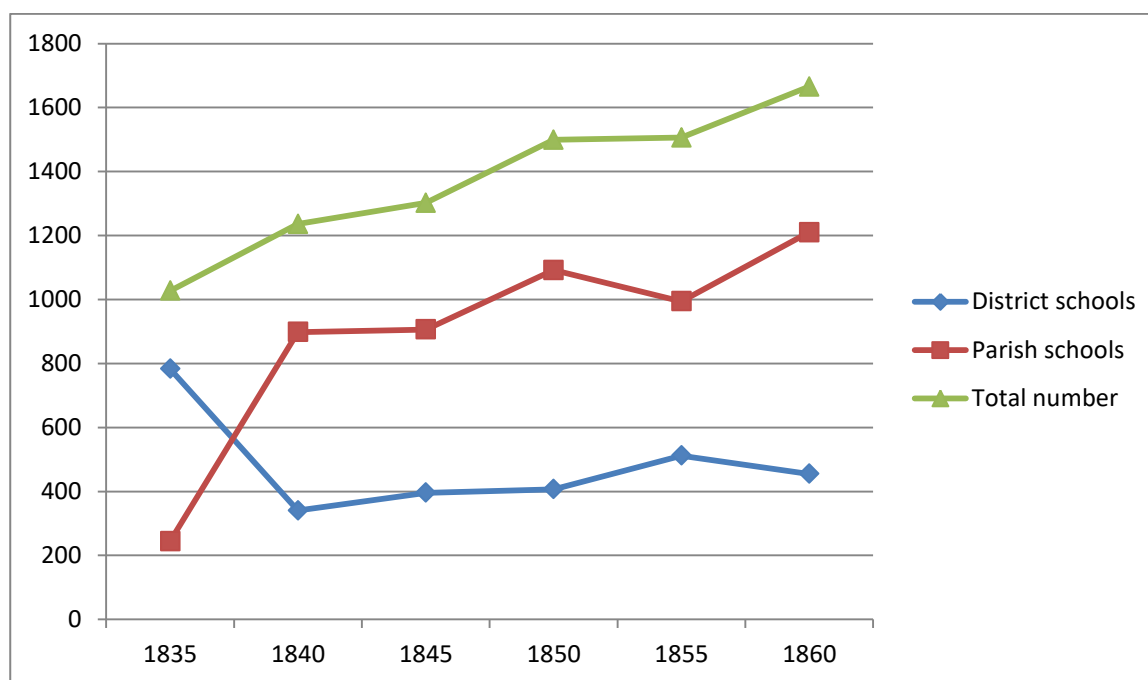


Fig. 3. Dynamics of the number of students in Cossack schools in the Don Host Oblast. 1835-1860
Source: Robush, 1867: 120.

As we can see, the implemented reforms led to a complete transformation in the student structure in the Don primary education, but they had almost no impact on the growth rates of their numbers. However, now the education development was slowed down by the authorities rather than by Cossacks themselves. In fact, only one new school was opened in the Don region from 1839 to 1859, located in the Kalmyk nomadic territory (Robush, 1867: 120). It seemed that the issue was not even in a tedious bureaucratic procedure to coordinate the launch of new schools, but in the general policy pursued at the time. In particular, Minister of War of the Russian Empire A.I. Chernyshev gave the new Don Ataman M.G. Vlasov this advice in 1836: “You already have a lot of scientists and scholars, you do not want to have any more, but you should strive for more old goodness and old-time simplicity” (Volvenko, 2015: 108-109). We should say that M.G. Vlasov was by no means a passive bearer of the imperial will – he formally executed the orders of his superiors and submitted almost no requests to opening new schools, but meanwhile he facilitated the work of already existing ones and founded new parish schools as soon as possible, until 1839, as it was set forth by the “Regulation on the management of the Don Host” (Robush, 1867: 120). A confidant of the Ataman, A.P. Chebotarev, described the position of his supervisor towards Nicholas I in general as a kind of masquerade: “With the utmost tact, he assumed an aspect of an unsophisticated old man who should be forgiven for anything that is incongruous with modern requirements, because he is a man of the past century. *He knew how to present himself in such a way that society was confident in his full readiness to encourage any academic progress in the region and all kinds of progressive action in it* (italics added by me)” (Chebotarev, 1875: 221-222). And as a result, the ataman term of M.G. Vlasov (1836-1848), as well as the one of his supporter, M.G. Khomutov (1848-1862), resembled in some way the time of the ataman term of A.I. Ilovaysky in the late 18th century – despite seeming stagnation in education, in the depths of Don society, a true explosion matured prepared by outwardly inconspicuous work in stanitsas.

And again this explosion occurred at the end of the administrative term of the old ataman who did much to develop education on the Don. S.S. Robush believed that the first visible sign of

the change in Cossacks' attitude to education was the initiative put forward by a common Cossack of the Mechetinskaya stanitsa, a certain "Chernikov", who "imbued with noble motives to be useful to his society, decided to open a parish school in 1858 at his own expense (Robush, 1867: 122). Unfortunately, the praiseworthy initiative fell at bureaucratic hurdles, and the correspondence with St. Petersburg concerning a new parish school dragged on for several years (Robush, 1867: 122). And in 1860, M.G. Khomutov stepped forward with a proposal to the imperial authorities, which was revolutionary for the Don education and at the same time was in line with the spirit of the new era. He petitioned to grant "permission to establish male and female schools in all stanitsas and populous settlements" (Krasnov, 1863: 403). This actually meant that now schools were allowed to open in any stanitsa that was ready to support them, and the opening should only be approved by a decision of the Host ataman without a corresponding request to St. Petersburg (Robush, 1867: 122). Regarding further developments in the Don education, Chief of Staff of the Don Host A.M. Dondukov-Korsakov wrote the following: "The nobility and Cossack communities in stanitsas repeatedly express their aspirations in this respect and eagerly wait for their justified hopes to become reality. <...>. Stanitsas, lacking educational facilities, resolve to allocate the donations of their citizens with the only request to open schools at their localities" (Karasev, 1896: 580).

S.S. Robush, who received such resolutions to open new schools, preserved some of them for history. Based on these resolutions, we may conclude that by the end of 1850, a substantial share of Cossacks in each Don Host stanitsa wished to give education to their children, but this intention was hampered by the scarcity of schools and large geographical distances between them. The clearest written account of the situation was given by inhabitants of the Pravotorovskaya stanitsa: "As educational institutions are located in remote areas, and especially with frequent harvests and high rental prices for apartments in the places, we cannot send our children to parish schools in other stanitsas; if we had such one in our stanitsa, each of us would be glad to give their child to studies" (Robush, 1867: 126). Other resolutions evidence how Cossacks tried to do without official schools, and why they were not content with the existing palliatives. For example, the Esaulovskaya stanitsa ran a "non-paid school" where teachers were local priests, but local inhabitants complained that such impromptu educators were "always busy performing occasional religious rites and obligations put on them", and therefore "in order to introduce youth into studies, it is in truth necessary that schools are established by the government" (Robush, 1867: 126). In the Raspopinskaya stanitsa, local people were exasperated that although they hired private teachers, the latter were "semi-literate themselves", and for this reason it was necessary to found a real school, and the authorities were to send a person there "who knows well the Law of God, sacred and Russian history, arithmetic, grammar and geometry" (Robush, 1867: 126).

And, as S.S. Robush noted, he was committed to satisfy such requests to the best of his capabilities. Already in 1861, 17 schools were opened in stanitsas; in 1862 – 13 male and 2 female schools; in 1863 – 11 male and 6 female ones; in 1864 – 8 male and 4 female ones (Robush, 1867: 129-130). Further on, however, the situation was reversed by the already specified trend of uneven development of the Don education, and the growth in the number of schools rapidly slowed down: in 1865, only 8 male schools were opened, and in 1866 – 1 female and 2 male ones (Robush, 1867: 130). However, the figures, provided by S.S. Robush, on new schools, opened between 1861 and 1866, did not correspond to his own data on the number of schools on the Don at the end of 1850 and 1866. Proceeding from the information, as well as from the reference materials in "The memorial book of the Don Host Oblast" (Pamyatnaya knizhka Oblasti Voiska Donskogo na 1873 g), the quantitative indicators for the Cossack primary education on the Don in 1860 grew as follows.

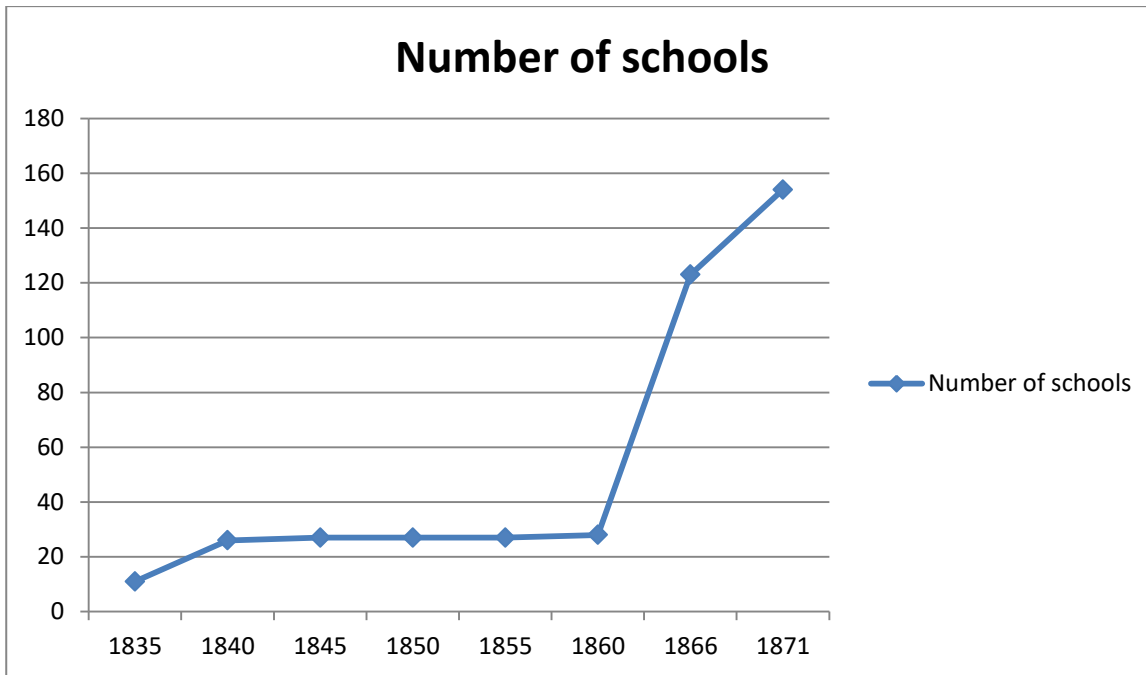


Fig. 4. Dynamics of the number of Cossack schools in the Don Host Oblast. 1835-1871
Sources: [Robush, 1867: 119-131](#); [Pamyatnaya knizhka, 1873: 69](#)

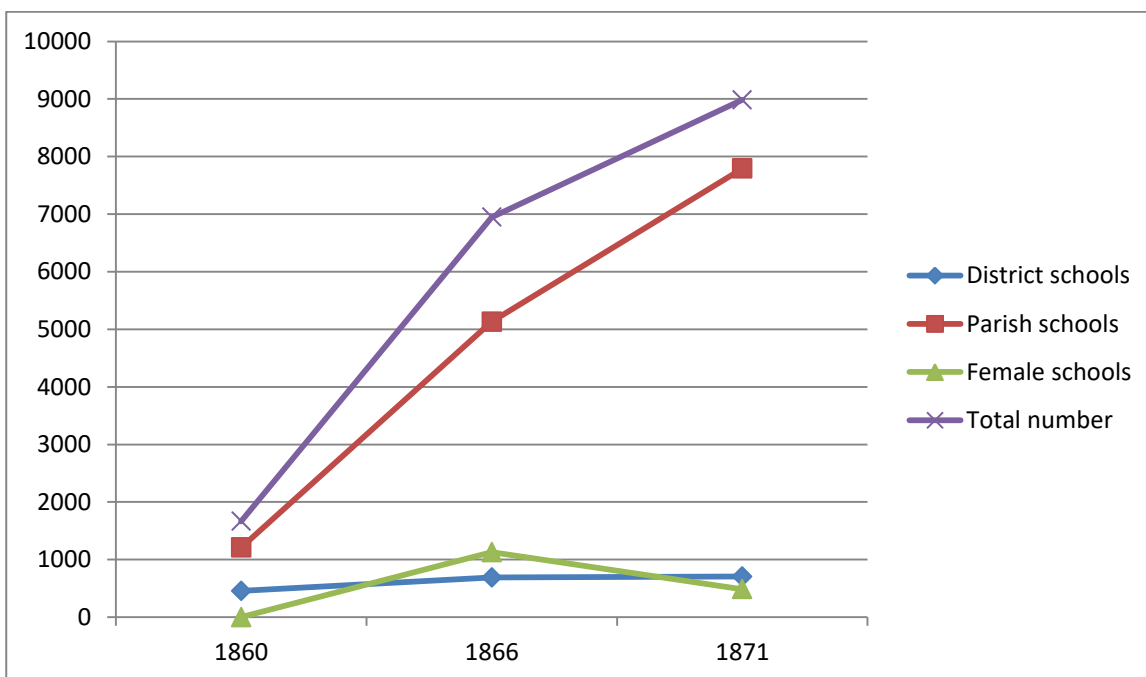


Fig. 5. Dynamics of the number of students in Cossack schools in the Don Host Oblast. 1860-1871
Sources: Sources: [Robush, 1867: 119-131](#); [Pamyatnaya knizhka, 1873: 69](#)

The diagrams show that the effect of the leap forward made by the Don education began to gradually fade as early in the second half of 1860. The slowdown cannot be linked to any external factor such as the Napoleonic wars or reactionary government policies. This simply meant that the energy dissipated, generated in 1830-1850, when the Don Atamans, M.G. Vlasov and M.G. Khomutov, being unable to open new schools, made their best to promote the very idea of education among Cossacks, by leveraging parish schools, a resource granted to them by the “Regulation on the management of the Don Host” of 1835. Evidently, it is the parish schools that

formed the basis for widespread literacy as district schools had fewer students even in 1870 (vs 1835). This was obviously explained by the fact that Cossacks preferred to send their children to local schools, according to the inhabitants of the Pravotorovskaya stanitsa, and therefore capabilities of district schools to enroll new students were limited. Special female schools, which emerged in 1860, also did not play a decisive role, and the number of female students in them was far smaller than in parish schools. We should mention separately that it was not until 1860 that literacy moved beyond the Cossack community to reach peasants – while there were only 7 students in parish schools in 1860 for 300,000 Don serfs (Krasnov, 1863: 403), by 1866, 55 dedicated rural schools had been opened, although the quality of teaching there was beneath any criticism, and there was even no accurate information on the number of students there (Robush, 1867: 132).

A dramatic increase in Cossack schools, in principle, required more teachers. However, dealing with the issue, M.G. Khomutov and S.S. Robush demonstrated rare far-sightedness, implying that they made early preparations to file a petition to “permit to establish male and female schools in all stanitsas and populous settlements.” Even before filing the petition, preparations set off in 1859 to open a specialized pedagogical department at the Novocherkassk gymnasium which would deliver a year course for future school teachers (Artinskii, 1907: 180-181). As a result, when new parish schools were to be launched in 1861, 7 out of 17 were successfully staffed with graduates of the department (Artinskii, 1907: 182). Consequently, a rapid increase in the number of educational facilities in Cossack stanitsas in 1860, in contrast with peasant settlements, did not mean a deteriorating professional level of the teaching personnel in them, but on the contrary, these schools received certified teachers for the first time.

Eventually, while in 1860, in the Don region, one student accounted for 321 Don inhabitants of both genders, which was the second to last indicator among provinces and regions in European Russia, (Krasnov, 1863: 402), by 1870 one student already accounted for 78 inhabitants (Nomikosov, 1884: 578)! Hence, it was in 1870 when a contemporary statistician managed to measure the proportion of students among the total number of children for the first time. According to the calculations of the above S.F. Nomikosov, by the time, 11.2 % of boys and more than 2% of girls studied in the official educational institutions (Nomikosov, 1884: 579). It is not surprising that 1870 saw the idea taking shape of the possibility to introduce universal primary education in the Don Host Oblast, at least in the long term. Nevertheless, the same S.F. Nomikosov took efforts in the early 1880s to prove the futility of the vision, arguing that there were no funds required to correspondingly “increase the number of schools” (Nomikosov, 1884: 579).

4. Conclusion

If we look at the relative growth rate, we will see that each of the periods in the Don education development in the 19th century consisted of several stages, with periods of stagnation followed by the rapid growth in primary schools and students. Below we will try to provide a description of each of the stages.

1) 1799–1805. This time brings about the launch of first schools outside Cherkassk, and the event was facilitated by the activities to spread literacy rolled out by enthusiastic priests and policies of the Don atamans in the 18th century. Although the number of Cossacks wishing to study in the early 19th century seemed not to be too big, there were already enough of them to ensure the normal functioning of schools, at least in large administrative centers. Considering this, it is clear why *uezd* and “*uezd*-style” schools become the main type of primary school at the time. The number of schools and pupils increase by several times, but the increase is insignificant in absolute figures – we speak about the opening of individual schools and several hundred students in them.

2) 1805–1815. New schools continue to be started, but the number of students goes down (a unique situation for the period under review). Logically, the situation was pre-determined by the Napoleonic wars when a significant part of the male population was conscripted.

3) 1815–1835. The first period of relative stagnation in the Don education. Almost no educational institutions open, and the number of students grows by 100–200 people over the five-year period, and this is slower even in absolute terms as compared with the 1799–1805 period. Moreover, the growth rate slows down every five years, and we can speak of a visible crisis in primary schooling. Apparently, the crisis gradually developed as *uezd* schools depleted its

capabilities. It was inconvenient for most Cossacks to take their children to study in remote administrative centers, parochial schools were scarce, and the number of students was insignificant there. Although the authorities did not object to the opening of such schools, there were practically no community initiatives to this end; sometimes the new schools had to close as Cossacks were unwilling to support them.

4) 1835–1839. This period marked a sharp increase in the number of parish schools initiated from the top, and they became the main educational institutions of primary education for the Don Host. Although the number of students indicated only a slight growth, the period created prerequisites for its further improvement.

5) 1839–1861. For the first time in the history of the Don education, stagnation resulted from the wrong policy of the imperial government. Cossacks demonstrated a stronger desire to study, but very few schools were opened, first because of the policy on Don Cossacks, pursued by Nicholas I, and later because of the bureaucratic complexity that made it very difficult to establish new schools. At the same time, Don Atamans M.G. Vlasov and M. G. Khomutov seemed to sympathize with the idea of enlightenment, and created the foundation to further accelerate the development of primary education. In particular, as early as in 1859, they raise the issue of teacher training for future schools, and in 1860, M.G. Vlasov petitioned to grand “permission to establish male and female schools in all stanitsas and populous settlements”.

References

[Alyayev, 2005](#) – *Alyayev, M.V. (2005). Agrarnye otnosheniya na Donu i ikh evolyutsiya: 1861-1914 gg. : dissertatsiya ... kandidata istoricheskikh nauk [Agrarian relations on the Don and their evolution: 1861-1914 : dissertation ... candidate of historical sciences]. Volgograd, 227 p. [in Russian]*

[Artinskii, 1907](#) – *Artinskii, I. (1907). Ocherk istorii Novocherkasskoi voiskovoi gimnazii [Essay on the history of the Novocherkassk military gymnasium]. Novocherkassk, 469 p. [in Russian]*

[Volvenko, 2003](#) – *Volvenko, A.A. (2003). Vosstanovlenie donskogo zemstva: upushchennye vozmozhnosti (1882-1917) [Restoration of the Don Zemstvo: Missed Opportunities (1882-1917)]. State Power and Local Self-Government, 4: 51-59 [in Russian]*

[Vospominaniya..., 1873](#) – *Vospominaniya starogo dontsa. Iz posmertnykh zapisok general-leitenanta Krasnova. [Memories of the old Don Cossack. From the posthumous notes of Lieutenant-General Krasnov]. Voennyi Sbornik, 1873, 12: 363-380 [in Russian]*

[GARO](#) – State archive of the Rostov region.

[Donskova, 2008](#) – *Donskova, L.A. (2008). Vzaimodeistvie vlasti i grazhdanskogo obshchestva v sfere obrazovaniya v XIX-nach. XX vv. (po materialam Dona) [The interaction of government and civil society in the field of XIX-beg. XX centuries. (based on the materials of the Don)]. Vestnik Taganrogskego gosudarstvennogo pedagogicheskogo instituta, 2: 133-138. [in Russian]*

[Karasev, 1896](#) – *Karasev, A.A. (1896). Zapiska knyazya A.M. Dondukova-Korsakova o Zemle Voiska Donskogo [The note by the Prince A. M. Dondukov-Korsakov about Don Host Oblast]. Russkii arkhiv, 12: 569-591 [in Russian]*

[Kirillov, b.g.](#) – *Kirillov, A.A. (no date). Kratkie svedeniya o sostoyanii narodnogo prosveshcheniya na Donu za XVIII v. [Brief information about the condition of public education on the Don for the XVIII century]. No place, 11 p. [in Russian]*

[Kirillov, 1905](#) – *Kirillov, A.A. (1905). K istorii narodnogo obrazovaniya na Donu [On the history of public education on the Don]. Sbornik Oblastnogo voiska Donskogo statisticheskogo komiteta. Vol. 5. Novocherkassk, pp. 1-16 [in Russian]*

[Kirillov, 1907](#) – *Kirillov, A.A. (1907). Materialy po istorii narodnogo obrazovaniya na Donu [Materials about the history of public education on the Don]. Sbornik Oblastnogo voiska Donskogo statisticheskogo komiteta. Vol. 7. Novocherkassk, pp.155-161 [in Russian]*

[Krasnov, 1863](#) – *Krasnov, N.I. (1863). Materialy dlja geografii i statistiki Rossii, sobrannye oficerami General'nogo shtaba. Zemlja vojska Donskogo [Materials for geography and statistics of Russia collected by officers of the General staff. Don Host Oblast]. SPb., 596 p. [in Russian]*

[Maslakovets, 1880](#) – *Maslakovets, N.A. (1880). Ob'yasnitel'naya zapiska k voprosu o primenenii k oblasti vojska Donskogo zemskoi reformy na osnovaniyakh, sootvetstvuyushchikh*

mestnym usloviyam kraya i bytovym osobennostyam glavnoi (kazach'ei) massy ee naseleniya. [Explanatory Note about the Question of the Application of the Reform of Zemstvo to the Don Host Oblast on the Grounds Corresponding to the Local Conditions of the Region and the Everyday Peculiarities of the Main (Cossack) Mass of its Population]. Novocherkassk, 124 p. [in Russian]

Maslakovets, 1899 – Maslakovets, N.A. (1899). O zanyatiyakh vysochaishe uchrezhdennoi 16-go iyunya 1898 goda Komissii v oblasti voiska Donskogo i o dostignutykh eyu rezul'tatakh: Doklad sostoyashchego v rasporyazhenii voennogo ministra General'nogo shtaba general-leitenanta Maslakovtza 23 avg. 1899 g. [About the activity of the Commission in Don Cossack Hosts which was supreme approved on June 16 1898 and about its results: Report of the Lieutenant-General of the General Staff Maslakovets, which is the order of the War Minister. Aug. 23 1899]. SPb., 123 p. [in Russian]

Nash krai, 1963 – Nash krai: Dokumenty po istorii Donskoi oblasti [Our land: Documents on the history of the Don region]. Rostov-na-Donu, 1963. 576 p. [in Russian]

Nomikosov, 1884 – Nomikosov, S.F. (1884). Statisticheskoe opisanie Oblasti Voiska Donskogo [Statistical description of the Don Host Oblast]. Novocherkassk, 774 p. [in Russian]

Otchet, 1896 – Otchet Donskogo eparkhial'nogo uchilishchnogo soveta o tserkovno-prikladnykh shkolkakh i shkolkakh gramotnosti Donskoi eparkhii za 1894-1895 uchebnyi god [Report of the Don Diocesan School Council on the parochial schools and literacy schools of the Don Diocese for the 1894-1895 academic year]. Novocherkassk, 1896. 151 p. [in Russian]

Pamyatnaya knizhka, 1873 – Pamyatnaya knizhka Oblasti Voiska Donskogo na 1873 g. [The memorial book of the Don Host Oblast in 1873]. Novocherkassk, 1873. 174 p. [in Russian]

Po voprosu..., 1896 – Po voprosu o vvedenii obyazatel'nogo obucheniya sredi naroda [About the question of the introduction of compulsory education among the people]. Novocherkassk, 1896. 16 p. [in Russian]

Popov, 1905 – Popov, Kh.I. (1905). Materialy po istorii narodnogo prosveshcheniya na Donu [Materials about the history of public education on the Don]. *Sbornik Oblastnogo voiska Donskogo statisticheskogo komiteta. Vol. 5.* Novocherkassk, pp. 133-136 [in Russian]

Protokoly, 1899 – Protokoly Komissii po issledovaniyu nuzhd kazach'ego naseleniya Donskoi oblasti [Logs of the Commission for the Study of needs of the Cossack Population of the Don Region]. No place, 1899. 289 p. [in Russian]

RGVIA – Russian state military and historical archive.

Robush, 1867 – Robush, S.S. (1867). O narodnom obrazovanii v voiske Donskom [About the public education in the Don Host]. *Trudy Donskogo voiskovogo statisticheskogo komiteta. Vol. 1.* Novocherkassk, pp. 119-137 [in Russian]

Tikidzh'yan, 2016 – Tikidzh'yan, R.G. (2016). Voennaya modernizatsiya i voennaya sluzhba donskikh kazakov v kontekste rossiiskoi modernizatsii vtoroi poloviny XIX – nachala XX vv.: aktual'nye problemy izucheniya [Military modernization and military service of the Don Cossacks in the context of the Russian modernization of the second half of the XIX – early XX centuries: actual problems of study]. *The South of Russia and Neighboring Countries in Wars and Armed Conflicts.* Rostov-on-Don, pp. 109-116 [in Russian]

Chebotarev, 1875 – Chebotarev, A.P. (1875). Maksim Grigor'evich Vlasov, ataman voiska Donskogo, 1836-1848. Biograficheskii ocherk i vospominaniya o nem ego ad'yutanta [Maxim Grigorievich Vlasov, Ataman of the Don Cossacks, 1836-1848. Biographical sketch and the memories of him his adjutant]. *Russkaya starina*, vol. XIII, pp. 215-239 [in Russian]

Volvenko, 2015 – Volvenko, A.A. (2015). Chebotarev A.P. – "the Grey Cardinal" of Cossack Reforms of the Epoch of Liberation? *History and Historians in the Context of the Time*, 2: 106-114. [in Russian]