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**PREPARING TEACHERS FOR THE IMPLEMENTATION OF  
EDUCATION TECHNOLOGIES IN CONTEMPORARY  
EDUCATIONAL PRACTICE**

Elena M. Klemyashova (a)\*, Natalia A. Savotina (b)

\*Corresponding author

(a) Russian Academy of Education, Institute for the study of childhood, family and upbringing, Moscow, Russia,  
elena.k07@mail.ru

(b) Russian Academy of Education, Institute for the study of childhood, family and upbringing, Moscow, Russia,  
nasa-amigo@rambler.ru

***Abstract***

At the present stage of the development of education there is an urgent problem of improvement of teachers' professional competencies in the field of children's education. In this regard, the training of a teacher capable to organize the educational process with the use of modern educational technologies is becoming very important and relevant. The aim of the article is to develop scientific and methodical support of teachers' training for the implementation of educational technologies in the practice of contemporary education. In the process of its preparation methods of research were used: logical-theoretical and prognostic analysis of educational materials, modeling method, questionnaire, conversation. The article presents the scientific and methodical support for the teachers' training, including a series of thematic modules: "Development of educational technologies in the practice of contemporary education", "Pedagogical support for the development of education using technologies of patriotic and civic education", "Socialization of children and youth through innovative forms and technologies of environmental education", "Introduction of children and youth to cultural heritage". The content of preparation for the implementation of educational technologies is aimed at the formation of teachers' high motivation for educational activities, mastering the technologies in key areas of education, comprehension of specific character of active and interactive technologies, mastering the skills of their use in educational practice.

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**Keywords:** Teachers' training, professional competency, education technology, technological support of education.



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## 1. Introduction

Teaching practice today has a lot of forms, means and methods of education. The results of their application are not always unambiguous due to different experience of teachers, professional competence or lack of knowledge. The search of ways for improvement of education, the attempt to make it manageable, minimal in expenses, universal in application lead the teacher to the need of educational technology usage. The use of available means and methods of education within a certain educational technology, their selection are problematic for the novice teacher, especially if you want to solve the problem quickly, the activation of educational resources at the expense of the technology used. Therefore, the problem of teachers' training for the implementation of education technologies becomes urgent. Its decision facilitates improvement of education, increase of controllability of educational process at the minimal expenses and efficiency of results.

Today we will not dispute the fact that educational success in education depends on increasing of all participants' role in the educational process, focusing on the ever-increasing demand of students and parents, a particular region, local communities. For this reason, the system of education should not be confined to the educational community and the Educational Department. Therefore, the applied technology should contribute to the implementation of such activity, in which knowledge, methods and content of the activity can function productively and facilitate the formation of the value position of children and youth: civic education in the system of historical and patriotic clubs, summer recreation camps; activity in perpetuating the memory of the defenders of the Motherland; environmental education of youth; education by means of artistic work.

Comparative analysis of psychological and pedagogical researches, the study of educational practice show insufficient readiness of the teacher to the choice, modeling, designing and application of educational technologies in educational activities. We associate their effective implementation in educational process and educational practice with the purposeful training of teachers.

The problem of teachers' training for using of educational technologies began to be discussed in the Russian pedagogy at the end of the XXth century. Priority of research projects belongs to Slastenin (2000) and Schurkova (2002), who developed a new course program "Pedagogical technology" for higher educational institutions and began the experiment on its development. In the textbook "Pedagogical technology" the technology is presented as a separate scientific subject, which includes applied material for teaching and improving the skills of teachers in the field of education, ways of mastering pedagogical technology, methodical material for independent work of the future teacher for the formation of professional skills. The work involves two areas: the first is the mastering technological side of professionalism in the classroom under the guidance of a teacher; the second one is students' independent work outside the academic classes in accordance with the instructions of the teacher.

In pedagogy of Russian high school the interest in using game technologies in professional training of future teachers can be called a system one. In this regard the work by N.A. Rakova "Game technologies in the system of professional training of the future teacher" (Rakova, 2000) is of interest, as it sets out the history of game technologies, stages of this technology, conference games, modification of business games (simulation, role-playing, psycho-and sociodramas, "business theater"), different elements of professional teachers' training system aimed at the formation of skills in various types of educational activities.

In the work "Preparation of the future teacher for civic education in a modern school" by Savotina (2004) there are reflected not only the peculiarities of knowledge system mastering by teachers on this area of education, but shown the specific features of the development of practical skills for civic education modeling, non-standard forms of work in the education of a citizen (volunteer activities in shelters and orphanages, the organization of children's leisure in the neighborhood, participation in charity events), programme-purposeful education.

In recent years, there has been successfully implemented the integration of pedagogy, psychology and ecology in the field of interactive technologies for environmental education. For instance, the educational-methodical textbook "Environmental education and education of youth" (Samkova, Klemeshova, & Kurakov, 2016) covers the role of cultural values in the provision of environmentally oriented development of the personality, presents the comprehensive educational program, "Nature. Man. Culture»; various forms and methods: ecological projects, game, art technologies, modern Internet-technologies in ecological education of children and youth; methods of diagnostics of emotional and moral attitude of schoolchildren to nature.

## **2. Problem Statement**

The system of various methods and technologies used in modern practice of civil, patriotic, environmental education, introduction of students to the cultural heritage is presented.

Traditional and author's technologies aimed at the formation of civic qualities of the individual, emotional and moral attitude to nature, people around, their country, the development of the general culture of schoolchildren are offered.

Indicators and their content characteristics are developed for studying the spectrum of emotional and moral relations of pupils with subjects and objects of historical and cultural heritage.

The presented contemporary technologies of modeling and designing of activities in different areas of education can create conditions for the introduction of students into the world of values, on the basis of which a creative position in relation to the society, the state, the people around, themselves is formed.

The proposed methods, forms, means and technologies, in general, are capable, by virtue of a combination of certainty and flexibility, to provide functional saturation, efficiency and long-term prospects for effective education.

## **3. Research Questions**

How to improve scientific and methodical support in the field of teacher education in order to help teachers implement educational technologies in contemporary education practice?

## **4. Purpose of the Study**

The aim of the research is to develop scientific and methodical support of teachers' training for implementation of educational technologies in the practice of contemporary education. The tasks of the research include: scientific and methodical support of teachers' training, represented by a series of thematic modules; development of the content of teachers' training for the implementation of educational

technologies; mastering technologies in key areas of education; highlighting the specific features of active and interactive technologies; mastering skills of using educative technologies in educational practice.

## **5. Research Methods**

The methodological basis of the research were philosophical and social ideas about the active role of the individual in the knowledge and transformation of the social environment, the correlation between the society and the individual, human values as the basis for the formation of the personality, socialization as a socio-cultural process, the specific historical nature of education, the concept of development of education and upbringing in the Russian Federation. In the course of research the set of methods was used: theoretical analysis of original sources, documents (comparative-historical, comparative); direct study of the teachers' training process by diagnostic methods (interviewing, testing, talking), indirect and direct observation; logical-theoretical and prognostic analysis of educational materials. With the help of these methods, the correction of the key directions of education and the content of the main modules of teachers' training are determined; the choice of modern modeling, design, game and art technologies for different directions of education is substantiated.

## **6. Findings**

### **6.1. Results**

Systematization and analysis of research on the problems of education show that, despite the existing potential and activation of individual segments of education there is required careful adjustment of the key areas of education. The main focus of the educational work is to use the "living forms of work" on the education of patriotism and civic consciousness, based on public initiative, the activities of youth organizations, historical and local lore clubs. This requirement is relevant for all areas of education; it involves not only the absence of isolation, but also a comprehensive relationship and interdependence of different areas of education: patriotic, civil, spiritual and moral, labor, environmental, aesthetic, physical, etc.

However, the majority of educational institutions continue the tradition of the declarative approach in the education because of which in our opinion there appears an admissible "fashion" in education, for example, on patriotism as a means of improving the social status, comfortable socialization. The roots of this phenomenon are seen both in the bureaucratic requirements for the teacher-educator, and in the distorted control over the process of education, and the lack of professionalism of the educator. A significant part of the graduates of pedagogical higher educational institutions do not have the necessary knowledge for educational work, are indifferent to it, do not have value guidelines that contribute to the education of similar set of symptoms in pupils. According to the school headmasters, the teacher lacks organizational skills (68%), tolerance (71%), and the ability to expand the school's social contacts (19%). According to students' opinion, the modern educator is hampered by the lack of kindness (22.5%), reluctance to understand the pupil (62.2%), and his arrogance (62.1%).

Due to these reasons it is possible to activate the educational potential of education through the system of influences in the educational space in different areas of education. Common influence is advisable to combine into four modules, which allow providing educational influence not only through the

knowledge, but also provide an opportunity to consolidate them in the process of self-activity in the educational process and social activities outside the institution.

Taking into account the above features the system of work on the teachers' training includes a series of thematic modules:

*Module 1.* "Development of educational technologies in the practice of modern education". Mastering the content of this module is aimed at systematization of approaches to using of educational technologies and identifying key challenges for their implementation; reasoning of "critical threshold" and the boundaries of applicability of educational technologies; the establishment of the ratio of mechanical and creative, universal and personal in educational technology; regarding ethic components in the relations between the subjects of education in the implementation of the technology.

*Module 2.* "Pedagogical support of education development with the use of technologies of patriotic and civic education" is aimed at mastering modern methods and technologies for the development of skills of organizing activities on civic education in a multicultural environment, the implementation of prevention and pedagogical correction of extremist behavior of children and youth. Practical work within the framework of the module provides for activities on pedagogical design, improvement of professional culture and civic consciousness of the teacher: creative works in the form of a portfolio, pedagogical "piggy bank", preparation of educational activity files, volunteer activities in orphanages, social shelters, participation in charity events.

*Module 3.* "Socialization of children and youth through innovative forms and technologies of environmental education" includes replenishment of the pedagogical arsenal of the educator with specific methodical developments, introduction to the features of active and interactive technologies of schoolchildren's environmental education, development of their usage, training in the algorithm of reproduction based on samples of own similar technologies. The module presents business and role games, simulation, social and environmental projecting, case methods and socio-psychological trainings.

*Module 4.* "Introduction of children and youth to the cultural heritage" involves the acquaintance of teachers with a variety of forms and means of cultural orientation technologies – art technologies, projects, organization of festivals, celebrations aimed at studying the values of culture of the past and the active mastering modern cultural achievements. The indicators and their content characteristics presented within the framework of this module will help the teacher to study the spectrum of emotional and moral relations of students with subjects and objects of historical and cultural heritage.

At the educational institution *the work on civil and patriotic education* is logical to be built on traditionally justified levels: *the knowledge one*, which includes a minimum amount of knowledge on the history of the Motherland and the native region, as well as a clear idea (in the framework of humanities and social subjects) on the basis on which the civil society and the constitutional state are built; *the motivational one*, aimed at the development of a positive attitude to socially useful activities, the search for positive ways to the civil self-actualization; *the activity one*, aimed at testing the readiness and ability to exercise free choice in life situations and in solving social problems. The complexity of such work should be supported by the specific features of the practical skills development in modeling and designing civic education. In it non-standard forms of civic education work are important: volunteer activity in shelters and orphanages, various models of the organization of children's leisure in the neighbourhood, participation in charity actions, programme and target design of civic education. We have seen that such a strategy of work helps

young people not to lose vital guidelines based on the moral imperative: a sense of enlightened patriotism and civic responsibility.

An important area of educational work at the school is the implementation of environmental education technologies for children and youth. Theoretical comprehension of the problem of ecological culture formation and the analysis of the practice of this process organization in the educational system of the Russian Federation showed that this problem, despite its being actively long-term investigated, is relevant in connection with the unfavorable current environmental situation, as well as new requirements for the pedagogical process associated with the introduction of Federal State Educational Standards (FSES) in preschool, primary, secondary and complete secondary schools.

The analysis of the dynamics of pupils' attitude to nature, identified on the basis of the data of diagnostic studies of the Institute for the study of childhood, family and education (Moscow), indicates a steady decline in pupils' interest in environmental activities, the destruction of eco-cultural landmarks and deecologization of consciousness. Thus, in recent years, school-leavers have decreased cognitive interest in environmental knowledge by half compared to primary school pupils (from 64% to 27%). From the fifth to the eighth grades, adolescents experience a decline in the practice of environmental orientation from 83% to 58%, and by the tenth grade this figure falls to 43%.

In situations of moral choice, 57% of senior pupils show a more selfish attitude towards nature (the corresponding figure for third-graders – 36%, eighth-graders - 48%). These data, unfortunately, indicate that younger pupils possess a much larger set of practical skills and skills of ecocultural interaction with the world of nature. By senior grades, pupils are increasingly focused on anthropological values, supported in the daily practice of their relations with the world. In this regard, it is necessary to update radically the systems of environmental education organization at educational institutions.

The contemporary educational process should be aimed at comprehension of the beauty of nature, its awareness by children as the highest value, the development of the ability to perceive and feel the nature, protect it, cherish it. The implementation of these tasks will contribute to the creation of a special school ecological and developmental environment, filling educational activities with moral and environmental ideas, meanings, saturation of the educational process of the school with special techniques, technologies, various organizational forms of activities, methods and techniques for the development of environmental culture of pupils.

The main directions of environmental education include scientific and environmental (bio-ecological, environmental monitoring); ecological-ethical education, ecological-legal, ecological-economic, ethno-ecological; ecological-patriotic; ecological local history and tourism; ecological-aesthetic. The integration of environmental education with the formation of a culture of healthy lifestyles provides the development of ecological-ecological direction: social ecology, bio-and environmental policy.

The emphasis and the ratio of the directions of ecological education change at different age stages. Socially significant practical experience of primary school pupils is formed through the implementation of a variety of environmental projects and technologies. These include investigative, creative, gaming, collective creative activity, role-playing and business games, visits to cultural centers, meetings with representatives of various professions related to the environment.

The process of environmental education at secondary and complete secondary school is conducted on the basic Russian values – patriotism, civism, family, health, labour and creative work, science, arts,

nature. The content of environmental education at secondary and complete secondary school is aimed at formation of general culture of the Russian citizen responsible for the future of the country, making his contribution to the preservation of its natural richness, respecting folk traditions.

The aim of environmental education at secondary and complete secondary school is the formation of ecological culture as the one of value attitude to the world of nature, developed ecological consciousness, reasonable consumption, healthy lifestyle, activity in which basis there is ecological imperative.

Environmental education technologies for secondary (5-9 grades) and complete secondary school (10-11 grades) are implemented during extra-class activity of ecological and natural science character; in the activity of children organizations and clubs in the frames of children's additional education; in the course of specially organized events – excursions, practical and laboratory classes, field ecological practice; summer ecological camps; celebrations, contests, ecological projects, etc.

For senior pupils there are included contemporary active technologies – projects, games, cases, trainings and so on. Such technologies comprise complex ecological-economic games – “Civilization”, “Blue planet”, business games – “We are building Ecocity”, “Ecological balance”, practice of case solving “Ecological boomerang”, social-ecological project “Step by step”, technology “case-study”, ecological trainings, art-technologies, contemporary Internet-technologies and other forms of activity.

One of urgent problems of the contemporary society and the important target priority of educational activity in the terms of implementation of FSES of new generation is *introduction of children and youth to cultural heritage*. This leads to the necessity of development and implementation of technologies connected with cultural activity into the school educational process. Such technologies including the combination of intellectual and emotional creative activities possess high pedagogical potential and become the area of individuality formation and personal self-actualization. At the basis of technologies there is the imperative of spirituality defying emotional-moral attitude of the person to cultural heritage of the humanity. Emotional-aesthetic experience, development of moral and aesthetic feelings, ability to percept objects and phenomena of artistic sphere, arts, positive experience of interaction with cultural heritage – all these to the great extend facilitate the development of pupil's general culture and are actual features of person's upbringing. To investigate the spectrum of emotional-moral relations with subjects and objects of cultural heritage there are developed indicators and their content characteristics closely interconnected and depending on psychological, age peculiarities and general cultural development of pupils. Thus indicators of pupil's emotional-moral attitude to cultural heritage comprise: manifestation of emotional-sensitive perception of cultural phenomena, artistic-aesthetic objects, arts, their comprehension; manifestation of emotional responsiveness, ability for emotional mood and reaction to artistic objects and phenomena; ability for the development of emotional-empathetic sensitiveness, empathy, penetrating into artistic images; ability for associative and figurative perception of cultural and artistic objects, inspired attitude to them, ability for fantasy, productive imagination; ability for reflection as the process of personal self-cognition of inner psychic conditions, personal forms of perception and appreciation of cultural objects.

The biggest difficulty during implementation of the educational technology is prevention of risks connected with estimation of this or that educational technology, the choice of the most reasonable one for this very pedagogical situation: defining of expert assessment criteria; measurability of indicators, comparison of this very quality with the given standard; defining of the quality degree of the educational

technology. While checking the quality of educational technology applied at school it is also necessary to regard specific educational results: moral knowledge, views, behavior, potential of upbringing.

The experience of usage of different educational technologies clearly demonstrates that the peculiarity of Russian mentality of education has always been the emotional-will component involving expedience of using in educational practice of such algorithm of stable moral qualities formation: feelings + knowledge + behaviour. Acknowledging the implicitness of connections of three main personal spheres we give the leading role while implementation of different educational areas to the activity sphere of the person. The quality of mastering knowledge is defined by the diversity and the character of kinds of activity where this knowledge can function. The sample (image) in education can't be either formed or restored or used without activity of the subject. That's why it is necessary to form the activity system in the frames of offered modules as the basis for the development of socially important value orientations where they may have the opportunity to be formed productively.

Educational potential of a modern teacher which we connect with application of different educational technologies allows the teacher to model meaningful area of his pupil – future citizen, to provide the process of mutual understanding, facilitates manifestation of pupil's positive set of symptoms.

The majority of technologies are aimed at the formation of the backbone quality of the person – subjectivity. Pupil's subjectivity is his need for manifestation of independence, activity in organization of interaction with the environment; it is the ability to manage own actions, to plan and implement programmes; it is the ability for adaptation to the changing social-cultural situation. The development of the person into a true subject is possible only when he comes into the contact with the world and changes the subject situation of his own life and himself (his qualities and forces) in the process of solving practical and spiritual-creative problems. Under the influence of the set of measures aimed at widening of social field of activity there takes place the improvement of psychological climate on educational environment and development of such civic qualities as activity in social events, responsibility, tolerance, mutual help, mercy, mutual respect.

It is necessary for the pedagogue to understand that these moral values must not be imposed, and the main task of the educational technology is to create the emotional-intellectual field of tension where there takes place comprehension of value existence, gaining of personal value sense.

## **6.2. Discussion**

Studying of experience of educational technologies implementation in educational practice leads us to the need of definition of key tasks in the organization of technological process in education. We include into the most important of them: the creation of a mechanism for the unified system of collection, processing and storage of information on implemented in practice education technologies; coordination of all subjects on the basis of the analysis of the materials; assessment of the state of education subjects and the results of education in the field of technology influence; identification during the implementation of educational technology of positive factors of education and taking measures to neutralize the negative factors; formulation of strategic directions and provision a forecast of the development of educational system of the educational institution in the context of the activation of educational resources through the technology used.



## 7. Conclusion

We associate readiness of the teacher to the use of educational technologies in the practice of education with scientific and methodical support of teachers' training in the frames of thematic modules on key areas of education.

The content of teachers' training for the implementation of educational technologies is aimed at strengthening the motivation for educational activities, the development of technologies, understanding their specific features, mastering the skills of their use in educational practice.

It is established that work within the presented modules allows receiving positive results on formation at teachers of motivation to educational activity, development of educational technologies, mastering skills of their use in educational practice if it is presented as the process of purposeful and conscious mastering by experts of specificity of various methods, active and interactive technologies in the main directions of education (civil, patriotic, moral, environmental, introduction of pupils to cultural heritage), including author ones (models of social activity stimulation, development of subjectivity, formation of a multicultural position), aimed at the formation of civil qualities of the person, emotional and moral attitude to nature, people around, his country, the development of general and ecological culture of schoolchildren.

### 7.1. Recommendations

The materials presented in this article can be effectively used by the governing bodies of higher education to improve the pedagogical skills of teaching staff using modern methods and technologies of education; by the administration of higher educational institutions to conduct instructional and methodical classes on the study of approaches to the organization of the educational process, by educators and teachers in the course of educational work.

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