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## DIGITALIZATION OF THE MODERN EDUCATIONAL PROCESS

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### ABSTRACT

Based on the analysis of the existing practice of organizing the educational process, the use of methodological experience, as well as the generalization of existing models for organizing the learning process in the context of the digitalization of society, the authors highlight the principles, methods and stages of organizing the educational process in a higher educational institution.

The conclusion is made about the need to expand the possibilities of using digital technologies to ensure the individualization of education in higher education training programs.

### KEYWORDS

digital technologies, digital transformation of education, digitalization of education, innovation processes, educational process.

### INTRODUCTION

The spread of digital technologies leads to qualitative changes in all spheres of activity, including education, which implies innovative processes in the organization of the educational process for professional training programs. The understanding of modern education is based on the improvement of the educational environment, aimed at intensifying the educational process through the use of digital technologies. In the information society, pedagogical activity is implemented in the educational process aimed at increasing interest in learning through new forms of organizing the educational process associated with digital objects. The effectiveness of the learning process in the new conditions depends not only on the ability of teachers to use information technology in teaching, but also on the ability to study, create new ones and creatively implement them in the learning process.

The digital transformation of education involves, first of all, a rethinking of the goals of education and, accordingly, a change in the technologies for organizing the educational process. Improving the quality of the educational process based on the digital transformation of education involves the creation of the necessary conditions and a favorable information environment for motivated and active participation of students, as well as the need to develop scientific methods, regulatory support for the organization of the educational process in the new conditions.

In accordance with the tasks of the innovative development of modern society, the digital transformation of education, the need to reform the organization of the educational process in higher education on this basis is obvious.

The main directions for improving the state policy in the field of education of the Russian Federation are defined in the state program "Development of Education" [5]. Its implementation is reflected in the decree of the President of the Russian Federation "On national goals and strategic objectives of the development of the Russian Federation for the period up to 2024" [3]. One of the main national goals is called "digital transformation", within the framework of which «achievement of "digital maturity" of key sectors of the economy and social sphere, including healthcare and education..." is carried out. One of the target indicators that characterize the achievement of national goals by 2030 is "ensuring the presence of the Russian Federation among the top ten countries in the world in terms of research and development, including through the creation of an effective system of higher education».

The “Strategy for the Development of the Information Society in the Russian Federation for 2017-2030” defined the basic principles for creating an information society in our country, as well as “measures to implement the domestic and foreign policy of the Russian Federation in the field of information and communication technologies aimed at developing the information society ...” [8].

The essence of information and communication technologies is emphasized in the “Okinawa Charter of the Global Information Society” [7] as one of “the important factors influencing the formation of the society of the twenty-first century” and aimed at developing skills in the use of information technologies in the field of education.

The effectiveness of modern education is determined by the processes and content of the conditions that characterize the information society. In accordance with this, the content of education is determined on the basis of a rethinking of its goals and results, the introduction of new ways and technologies of education.

The basis of the modern educational environment is the concept of “e-learning”, enshrined in the Federal Law “On Education in the Russian Federation”. The main emphasis is placed on information, the use of which is necessary for the implementation of educational programs, the possibilities and potential of information technologies that ensure the improvement of the educational process. The main one in this context is “interaction between students and teachers” (Article 16) [4]. Distance educational technologies, as a separate independent category of organization of the educational process, are defined as “educational technologies implemented mainly with the use of information and telecommunication networks” (Article 16) [4]. In this case, the mediated (at a distance) nature of the interaction between students and teachers based on information technology is emphasized.

#### **FORMULATION OF THE PROBLEM**

Thus, consideration of the issue of the organization of the educational process in the context of the transformation of education must be carried out on the basis of the use of the pedagogical potential of digital technologies in the education system.

#### **DISCUSSION**

This aspect was studied in the monograph by A. Yu. Uvarova, I. D. Frumina, who defined the essence of digital transformation as “updating the planned educational results, the content of education, methods and organizational forms of educational work, as well as evaluating the results achieved in a rapidly developing digital environment for a cardinal improving the educational results of each student” [9, p. 15].

Therefore, the organization of the educational process in the context of digitalization of education is aimed at achieving educational results using the potential of digital technologies and ensuring the personalization of the learning process.

Exploring this issue, the authors presented the structure of the digital transformation of education in three elements [9, p. 16]:

- development of digital education infrastructure.
- development of digital teaching and learning materials, tools and services, including digital assessment.
- development and dissemination of new models of organization of educational work.

There is no doubt that the spread of digital technologies leads to qualitative changes in the field of education. The formation and development of the digital infrastructure of education reflects, first of all, the external side of the digitalization of society, which includes the very process of developing and implementing information technologies, legal, regulatory, documentation and financial resources. The inner side of the digitalization of society reflects the process of organizing education and training directly in an educational organization, taking into account the focus of professional training, the possibilities of using information and communication technologies (technical and information and methodological support).

When organizing the educational process of students in the context of digitalization of education, it is necessary to take into account several basic principles:

- modularity, which allows to form the content of the work programs of academic disciplines, ensuring the preparedness for the professional activities of specialists through combinations of choices from each module;
- variability, providing for a variety of training modules, learning technologies, organization of independent work, the use of flexible organizational forms;
- interactive cooperation, providing a joint solution of educational problems, the manifestation of students' creativity;
- creation of an innovative space for initiative and manifestation of independence and individuality of students.

These principles allow the teacher to more competently build an individual learning trajectory. The need to change the teaching methods is due to significant changes in society, an increase in the amount of information that corrects the educational objectives of higher education and ensures the creation of a qualitatively new educational environment. In accordance with this, the educational process is built, first of all, on the basis of setting and analyzing goals and objectives that correspond to the digitalization of society.

To achieve the goal of the educational process, three successive and interrelated stages can be distinguished: theoretical, technological and procedural.

The theoretical stage includes the definition of content that meets the requirements of the Federal State Educational Standard, its structuring, the selection of information blocks and the construction of classes based on personalization. The allocation of the modular principle of individuality determines the content of the material being studied, takes into account the level of preparedness of students, changes in its potential throughout the period of study. The transformation of education provides for the organization of the educational process using digital technologies, which leads to changes in the means and methods of teaching, the manifestation of independence by students in organizing their educational activities and creativity in preparing for classes.

The technological stage of organizing the educational process in the context of digitalization of education should ensure the implementation of learning goals with the greatest efficiency, and for this it is necessary to take into account several components:

- the initial level of students, the development of their creative potential in the information and educational environment;
- program content of the educational process, focused on the needs of the modern information society;
- technological component of the educational process, characterized by traditional forms and methods in combination with new forms of information provision;
- psychological, pedagogical and informational support of the educational process in the conditions of informatization of education;
- formation of information competence of teachers, availability of information skills of students, their continuous improvement;
- providing all components of the educational process with sufficient information, methodological recommendations that provide the possibility of independent work.

The procedural stage is aimed at mastering professional activities by students and organizing interaction between students, teachers and practitioners in order to acquire practical skills through the active use of the information and educational environment. The success of mastering professional skills in the conditions of the innovation space ensures the choice of the ways and means of participation in the educational process by the educators. In this regard, the interaction between the subjects of the educational process is built in parallel in the conditions of full-time, distance learning, independent work of students.

In the context of the digitalization of society, the educational process of students should be adjusted on the basis of system-structural and modular approaches, including a cognitive component (content content involves taking into account digital resources that ensure the relationship between teachers and students); activity (mastering knowledge in unity with innovative technologies, creating an innovative space for initiative and individual responsibility of students); structural (structuring the content of academic disciplines in accordance with the stages of education; the relationship of theoretical knowledge with the profile of the future professional activity of students and the skills of pedagogical activity, orientation towards independent development of educational material).

The need dictated by the digitalization of society requires the systematic and purposeful introduction of information technologies in various types of the learning process, in connection with which it is expected to constantly and regularly update the methodology for using digital technologies, how they are developed and applied. Great emphasis is placed on the ability of future teachers and the ability to independently work with information.

It should be emphasized that the use of digital technologies in the educational process contributes to a more effective study of theoretical material, and the ability to work with information is formed. To organize classes using digital technologies, it is necessary, first of all, to arrange training sessions and independent work from individual digital elements, prepare practical and creative tasks, provide additional reference literature, and provide special equipment.

Therefore, the entire technology of digital support of the educational process should be aimed at ensuring the search, collection and storage of information.

## CONCLUSIONS

In general, based on the study of this issue, several preliminary conclusions can be drawn:

- the use of digital technologies in the educational process contributes to the solution of a number of problems, as it expands the possibilities for the implementation of the process of education and training, as well as their methodological support;
- digital technologies are part of educational technologies, because due to their versatility they can be used:
  - as a means of teaching a fairly wide content (formation of professional and informational competencies; social activity of future specialists; self-learning);
  - teaching aids, as auxiliary in relation to other types of pedagogical activity and used directly in the classroom;
  - means of organizing the educational process in the context of the activities of the entire educational organization (planning and control of the educational process, management decisions aimed at organizing all elements of the educational process);
  - organization and planning of the process of education and upbringing within the framework of training sessions.

Based on the use of digital technologies in the educational process, it is possible to achieve the necessary educational results and move towards the personalization of the educational process of highly qualified personnel.

Digital technologies are procedural in nature, which makes it possible to technologically solve the problem of organizing the educational process by expanding its capabilities (informational, operational, methodological, etc.).

Consequently, the organization of the educational process based on digital technologies can be used as the basis for the development of the main elements of the educational process, its educational and methodological support. The result of the digitalization of education will be an innovative educational environment, the functional specificity of which depends on the following conditions: the technical and technological state of the environment, the digital competence of the subjects of the educational process, educational technologies implemented mainly with the use of information and telecommunication networks.

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## **ЦИФРОВИЗАЦИЯ СОВРЕМЕННОГО ОБРАЗОВАТЕЛЬНОГО ПРОЦЕССА**

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### **АННОТАЦИЯ**

На основе анализа существующей практики организации образовательного процесса, использования методического опыта, а также обобщении существующих моделей организации процесса обучения в условиях цифровизации общества авторами выделены принципы, методы и этапы организации образовательного процесса в высшем учебном заведении.

Делается вывод о необходимости расширения возможностей использования цифровых технологий для обеспечения индивидуализации обучения по программам подготовки высшей школы.

### **КЛЮЧЕВЫЕ СЛОВА**

цифровые технологии, цифровая трансформация образования, цифровизация образования, инновационные процессы, образовательный процесс.