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Digitalization of education: analysis of problematic issues

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Abstract:

The article explores the problematic issues of the digitalization of education. Both the problems of implementing the digitalization policy and its consequences for modern society and science are analyzed. The prospects for the development of digitalization in the national education system are determined.

Introduction: The article is devoted to a theoretical study of the problematic issues of the digitalization of education. The relevance of this study is due to the special role of education in the life of modern society, which is guided by the principles and values of the post-industrial era. The quality of human potential and the readiness of people to withstand natural and social challenges largely depend on the efficiency of the education system.

Aim/tasks: The main purpose of the study is to identify the main problems and outline the prospects for digitalization in education based on the analysis of scientific sources.

Methodology: The following methods were used to conduct the study: analysis, systematization, and generalization - in order to identify the essence of the problems of digital transformation in education. Scientific analysis allowed us to identify existing research and publications related to this topic. The systematization helped to structure the collected information, and the generalization allowed to formulate the main conclusions and recommendations for further steps in the development of digital education.

Results: Digital transformation, which has become an integral part of the modern world, is changing almost all areas of life, including education. However, the transition from traditional to digital education is interpreted ambiguously by scientists and requires deeper study. The current era of digital transformation of education requires not only digitization of existing processes, but also fundamental changes in approaches to teaching and management of educational systems.

Keywords: Digitalization, Education, Digital Transformation, QR code

Introduction:

Digital transformation initiatives in education are often limited to creating digital versions of traditional textbooks, introducing electronic resources, and providing access to high-speed internet. However, the digital economy requires a deeper transformation [1]. According to experts, this consists not only in the "digitization" of individual processes, but also in a comprehensive

review of the goals, structure, and content of the educational process.

N. Bobro points out that "the use of digital technologies in education is now one of the most important and sustainable trends in the development of the global educational process. These technologies allow to intensify the educational process, increase the speed and quality of perception, understanding and assimilation of knowledge, diagnostics and control" [2, p.113].

Digitalization involves the conversion of information into a digital format to optimize its use in various areas of human activity and create new communication and cognitive opportunities. Digital technologies create a new virtual environment that helps to change the traditional ways of interaction and perception of information.

In defining the positive potential of digitalization, we note that digital technologies create many options when designing educational processes. At the same time, the educational space formed as a result of the digitalization process has the features of universality. The variety of informal offers and the possibility of their use in education is very large [3; 4]. The combination of virtual and real learning components allows teachers to transfer knowledge both directly and indirectly. A distinctive feature of this approach is that it is possible to take advantage of the advantages of these methods and avoid their disadvantages.

Digitalization creates an individualized learning environment, which can include online platforms that allow students to individually manage learning content and personally create a kind of virtual desk. Digitalization in education makes it possible to enrich real-life learning situations with digital data. For example, students can develop the skills to determine the place of origin or content of any item or document by simply taking a picture of its QR code.

Learning formats with the help of digital games, which are beginning to be used in vocational education, have a positive impact on the formation of significant personality qualities of a modern professional. Game simulations allow you to reproduce real-life situations in the classroom in accordance with the learning profile [5]. Of course, digital technologies implemented in the educational process allow to develop skills of effective search and processing of information, new forms of "remote" communication, and visualization of the studied processes.

The realities of the modern educational process are such that the main feature of education is its global nature, which is due to integration processes and interaction between states in various spheres of society. Thus, education is gradually turning from national priorities of developed countries into global priorities.

The introduction of technologies in various spheres of society is always accompanied by changes, as new and old (traditional) elements intersect. Thus, innovation can be seen as a process of creative destruction, which at the same time is the creation of something new. In this regard, technological advances and developments inevitably entail various kinds of conflicts and problems [6;7].

It is worth noting that there are many problems both in the implementation of the digitalization policy and in its consequences for modern society and science. One of them, for example, is related to the fact that the very concept of "technology" was initially used only concerning production processes, and not in the humanitarian sphere. After "technism" became generally accepted in the field of education, it changed the very nature of the educational process, turning it into the production of human capital [8, p.843]. In this model, the student is seen as an element that should be improved by the teacher, and after graduation - to take its place in the overall system of social relations. This approach changes the very essence of the educational process, its values and ideals. This leads to a rethinking of the importance of education, which becomes an integral part of the economic mechanism of society aimed at developing competitive human resources. However, it is worth remembering that this approach may lose the humanistic aspect of education, reducing it to an effective tool for achieving economic goals.

Another problem discussed in science and practice is the issue of the psychological and pedagogical readiness of teachers in educational institutions for innovative activities. At the same time, pedagogical innovations should correlate with the content of state education and training programs. At the same time, teachers are often involved in the innovation process spontaneously, without taking into account their professional and personal readiness for innovation. This can lead to ineffective implementation of innovations and loss of trust in them among the teaching staff.

In the context of the digitalization of humanities knowledge, a large amount of information fills the entire field of knowledge, which can affect the quality and depth of this knowledge. Deeper meanings and senses may remain beyond the reach of the researcher, making his or her work superficial and unproductive in terms of the development of scientific knowledge and human self-improvement.

It is worth noting other problems and risks of modern education caused by the introduction of technological innovations. Researchers of the problems of modern education note the violation of the integrity of the individual. They argue that the technologization of modern life in general, and education in particular, leads to a gap between feelings and thinking, reason and emotions, as well as to the growth of rationality and pragmatism among people [9;10].

There is also an increasing focus on consumption and a lack of appreciation for the value of labor (in particular, a lack of attitude toward one's own work). The process of consumption extends to everything: information, technological, scientific and cultural achievements. This leads to the fact that a student receives the most sophisticated technological tools and knows how to use them, but this does not lead to his or her cultural growth and enrichment.

Thus, our study has identified a number of problems and prospects for the development of digitalization in the national education system. Among the benefits of digital transformation are radical changes in the labor market, the emergence of new competencies, improved cooperation, increased civic responsibility, and their ability to make independent decisions. The transformation of educational processes, an increase in the role of the student in finding information and solving problems, the development of communication and creative abilities, cost-effectiveness, the absence of time and geographical restrictions, and the possibility of individualization and optimization of the teacher's work are also noted.

However, the transformation of education also poses risks, such as the dehumanization of educational and then all other social relations, the possible deepening of the crisis of people's intellectual culture, their ability to create, and the growth of pragmatism and individualism based on the values of personal comfort and selfish consumption.

The nearest prospects for the development of digitalization in the national education system include three key areas:

- equipping educational institutions with high-quality software and information systems that provide access to educational resources;
- introduction of information (distance) technologies that provide for indirect interaction between students and teachers;
- online learning (e-learning), which allows the organizing of educational activities and online interaction between students and teachers.

Undoubtedly, the development of digitalization will change the requirements for students and learners and will stimulate the formation of new organizational educational structures. The deployment of digital educational formats also implies complex changes in the architecture of education, and inevitable changes in the usual forms and methods of teaching.

Conclusions:

Digital transformation brings about radical changes in educational processes, stimulates the development of new competencies, and contributes to the improvement of knowledge. However, the

implementation of the digitalization policy is accompanied by a number of problems that relate to both the process of digital transformation and its consequences for society and science. The key problems are the change in the nature of the educational process and the lack of readiness of teachers for innovation. Also, in the context of the digitalization of humanities knowledge, it is important to take into account that a large amount of information can affect the quality and depth of this knowledge, making research superficial and unproductive. Other problems caused by technological innovations, such as the violation of the integrity of the individual and the focus on consumption, are also outlined. Failure to address these problems can lead to the dehumanization of education and social relations, a decline in intellectual culture and creativity, and the rise of pragmatism and individualism.

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