

DIGITAL TECHNOLOGIES AND NEW DIMENSIONS OF EDUCATION

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Abstract: The article analyzes the new pedagogical opportunities and the transformation of teaching methods that have emerged as a result of the integration of digital technologies into the educational process. It substantiates that the use of information and communication technologies in the modern educational environment is an important factor in developing students' independent thinking, creative activity, and professional competencies. During the research process, pedagogical observation, analysis, and comparison methods were used. The results show that the educational process organized on the basis of digital technologies increases the effectiveness of students' learning.

Keywords: digital education, information technologies, e-learning, innovative pedagogy, educational technologies, distance education.

Introduction. In recent years, the rapid development of information and communication technologies has led to significant changes in all spheres of society, particularly in the education system. In the context of globalization and digital transformation, the education system is developing through integration with modern technologies [1]. Digital technologies have become an important tool for modernizing the educational process, presenting educational materials in an interactive form, and expanding students' opportunities for independent learning.

In the digital educational environment, electronic resources, multimedia technologies, artificial intelligence, cloud services, and distance learning platforms are widely used. Such technologies not only enrich the content of education but also fundamentally change the structure and organization of the learning process. As a result, along with traditional classroom instruction, hybrid and distance learning formats are becoming increasingly widespread [2].

Today, e-learning platforms, distance learning systems, artificial intelligence technologies, and virtual laboratories are effectively used as tools to improve the quality of education. These technologies elevate the interaction between teachers and students to a new level and contribute to a more efficient organization of the knowledge acquisition process [3].

In scientific literature, the pedagogical advantages of digital education, its impact on the educational process, and its integration with innovative teaching methods have been widely studied [4].

Researchers emphasize the possibilities of forming individual learning trajectories, organizing the educational process flexibly, and applying interactive teaching methods through digital technologies.

The main purpose of this research is to scientifically analyze the new dimensions of the educational process based on digital technologies and determine their impact on educational effectiveness.



Digital Educational Environment. The digital educational environment is a complex system consisting of several interconnected components. This system includes the following main elements:

- e-learning platforms;
- multimedia and interactive educational resources;
- distance learning technologies;
- artificial intelligence and analytical systems;
- cloud technologies [5].

The integration of these components creates opportunities for effective management of the educational process, rapid transfer of knowledge, and monitoring of students' activities.

Research Methods. In this research, several scientific methods were used to determine the role and effectiveness of digital technologies in the educational process.

Pedagogical analysis method. Modern scientific literature, research articles, and pedagogical studies were analyzed to examine the impact of digital technologies on the educational process. This method allowed identifying theoretical foundations and systematizing existing scientific approaches [6].

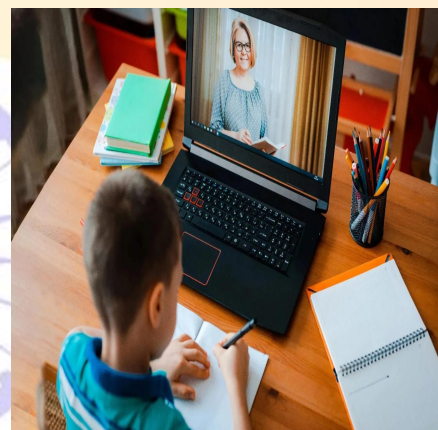
Comparative method. The effectiveness of traditional teaching methods was compared with educational processes organized using digital technologies. As a result, significant differences in terms of efficiency and interactivity of the learning process were identified.

Observation method. The use of electronic platforms, interactive software, and multimedia tools in the educational process was observed. This method made it possible to analyze changes in students' activities and their participation in the learning process [7].

Systemic approach method. The educational process was considered as a complex system, and a pedagogical model integrated with digital technologies was developed. This approach made it possible to analyze all elements of the educational process in an interconnected manner.

Results. The results of the study show that the use of digital technologies significantly increases the effectiveness of the educational process. In particular:

- ❖ educational materials can be presented in visual and interactive formats;
- ❖ students' independent learning skills are developed;
- ❖ the teaching process becomes individualized;
- ❖ a rapid feedback mechanism is formed within the educational process.



Discussion. Digital technologies play an important role in the modernization of the education system. However, in order to effectively implement these technologies, several pedagogical and organizational conditions must be created.

First of all, it is essential to develop teachers' digital competencies. A modern teacher should possess not only subject knowledge but also the ability to effectively apply digital technologies in the educational process.

In addition, providing educational institutions with modern technical equipment, developing electronic learning platforms, and implementing interactive teaching methods are among the important tasks.

The digital educational environment requires the integrated use of interactive methods, distance learning technologies, and electronic resources. This contributes to improving the effectiveness of the educational process and raising students' knowledge levels to a higher stage.

Conclusion. According to the results of the study, digital technologies are an important factor in the development of the education system. They enable the modernization of the learning process, improvement of educational quality, and development of students' independent thinking skills. The educational process organized on the basis of digital technologies contributes to the formation of modern knowledge and competencies through the application of innovative pedagogical approaches. This ensures the development of the education system in accordance with the global process of digital transformation. In the future, the introduction of artificial intelligence, virtual reality, and augmented reality technologies into the education system will enable the educational process to reach a new stage of development.

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