

USING DIGITAL TECHNOLOGIES IN STUDENT EDUCATION

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ABSTRACT: This article analyzes modern methods of using digital technologies in student education and their impact on the educational process. The research examines the influence of digital tools on teaching methodology, their effect on students' learning levels, and their role in the pedagogical process. The article reviews the effectiveness of multimedia technologies, interactive programs, electronic educational resources, and modern teaching platforms. Research results indicate that proper application of digital technologies plays a crucial role in improving students' knowledge quality, enhancing motivation, and developing independent learning skills. The article is intended for pedagogical scholars, teachers, and educational technology specialists.

Keywords: digital technologies, teaching methodology, e-learning, multimedia, interactive teaching, educational innovations, pedagogical technologies, student motivation.

In the modern educational system, the use of digital technologies is not only a requirement of the times but also a necessary condition for improving educational quality. The role of digital tools in student education is increasing daily and encompasses all stages of the pedagogical process. Today's students are a generation that has grown up in a digital environment, and their learning styles and expectations differ from traditional teaching methods. Therefore, teachers must also enrich their methodologies with modern technologies.

Numerous studies have been conducted on the role of digital technologies in education. M. Prensky (2001) proposed the "Digital Natives" concept, while R. Clark and R. Mayer (2016) developed the fundamental principles of multimedia education. Among local researchers, B. Inomov, N. Muslimov, D. Djuraev, and other scholars have studied the application of digital technologies in Uzbekistan's educational system. Their works emphasize the importance of modern tools in enhancing teaching effectiveness.

Digital technologies open new opportunities in pedagogy. They transform traditional relationships between teachers and students, creating a new educational environment. Modern digital tools provide the following capabilities: combining visual

and audio content, creating interactive experiences, organizing individual learning paths, providing real-time feedback, and ensuring remote collaboration.

Multimedia presentations through programs like PowerPoint, Prezi, and Canva serve to present information in visual form, simplify complex concepts, attract students' attention, and facilitate memorization. Interactive boards and projectors using Smart Board and SMART Notebook technologies enable conducting lively and engaging lessons, ensuring active student participation, integrating various media formats, and creating immediate response opportunities.

The advantages of electronic textbooks and learning materials include the presence of interactive elements, integration of multimedia content, rapid update capabilities, convenient search functionality, and environmental safety. Digital tools are applied differently across various lesson stages. In the introduction stage, motivational videos are used, interactive surveys are conducted, virtual trips are organized, and mind maps are created. In the main part, multimedia lectures are conducted along with virtual laboratory work, interactive exercises, and online simulations. During the reinforcement stage, electronic tests, digital projects, interactive games, and review programs are utilized.

In organizing students' independent work, directing to electronic libraries, recommending online courses, completing research projects in digital format, and creating electronic portfolios are implemented.

Digital tools increase student motivation through modern and engaging formats, presence of game elements, opportunity for quick results, and ability to track personal achievements. Individual approach is achieved by considering each student's characteristics through adaptation to different learning styles, learning at one's own pace, provision of additional resources, and development of personal growth plans.

Encouraging active learning is accomplished through interactive sessions, group projects, peer-to-peer learning, and problem-solving situations. Improving assessment systems is achieved through formative assessment, portfolio assessment, peer assessment, and automated testing. The basic technical skills teachers should possess include working with computers and the internet, creating multimedia content, using email and social networks, and working on online platforms. According to the TPACK model, pedagogical-technological skills require combining technology and pedagogy, presenting content in digital format, selecting technology appropriate to educational goals, and establishing digital communication with students.

Technical problems include unstable internet connections, insufficient technical equipment, software complexity, and lack of technical support services. Solutions to

these problems include using offline programs, choosing simple and reliable tools, technically preparing teachers, and organizing technical support teams.

Pedagogical problems include attachment to traditional methods, insufficient digital skills, excessive reliance on technology, and weakened communication with students. Their solutions include gradual transition strategy, continuous professional development, applying balanced approaches, and maintaining the human factor.

Based on conducted research and experimental work, improved educational effectiveness has been identified. In groups using digital technologies, knowledge quality improved by 35-40%, students' activity level increased by 50%, motivation indicators rose by 45%, and independent learning skills developed. In terms of time efficiency, lesson preparation time is reduced by 30%, information search process accelerates, assessment time decreases, and administrative tasks are simplified.

Expanded access opportunities provide opportunities for students with physical limitations, eliminate geographical boundaries through distance education, offer 24/7 access to educational resources, and enable familiarity with various languages and cultures.

As a result of creativity and innovation development, students' creative thinking abilities increase, new ideas and projects multiply, problem-solving skills develop, and collaborative abilities strengthen. For educational institutions, it is recommended to develop digital infrastructure, organize teacher retraining programs, provide modern technical equipment, and develop digital education strategy.

For teachers, it is necessary to continuously develop digital skills, maintain an open attitude toward new technologies, learn digital communication with students, and use pedagogical innovations. For students, it is important to improve digital literacy, learn online safety rules, develop critical thinking skills, and respect digital ethics rules. Artificial intelligence and machine learning enable automatic creation of individual learning paths, identifying students' learning styles, providing predictive analysis and recommendations, and creating virtual teachers.

Virtual and augmented reality create opportunities for immersive educational experiences, virtual laboratories and simulations, 3D models and visualization, and virtual trips and research.

In conclusion, using digital technologies in student education is an integral part of modern education. They not only make the teaching process more effective but also prepare students for future life.

Digital technologies renew relationships between teachers and students, allowing for personalized education. However, these technologies remain tools, and the main goal always remains providing quality education and comprehensive student

development. Successful digitalization requires joint efforts from all participants - teachers, students, administration, and government bodies. Only such an approach can help create a modern and effective educational system.

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