THE PLACE OF DIGITAL TECHNOLOGIES AND ARTIFICIAL INTELLIGENCE IN THE EDUCATIONAL

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ABSTRACT: *This article highlights the advantages of digital technologies and their use in the educational system. Also, the role and importance of artificial intelligence and digital technologies not only in the educational system, but also in the development of all fields is explained. In addition, comments are given about the advantages of artificial intelligence and its application in fields. Robotics Process automation is not artificial intelligence per se, but it allows computers to take over simple tasks, such as spreadsheet software and core business systems, that would otherwise be performed by humans when making judgments. is increased, in other words, repeated operations of a personal computer. In the future, we aim to automate the entire business by connecting it with handwritten character recognition, voice recognition and response systems with applications of artificial intelligence.*

KEY WORDS: *Artificial intelligence, digital technology, transformation, online education, distance learning, interactive lessons, individualization, automatic assessment.*

Introduction. Digital technologies and artificial intelligence are changing the education landscape and ushering in a new era of innovation and transformation. Artificial intelligence technologies are reshaping traditional learning models, offering innovative digital tools that adapt to the individual needs of learners, simplify administrative tasks, and provide valuable insights through data analysis. From intelligent teaching systems to immersive virtual reality experiences, artificial intelligence is changing how knowledge is imparted and acquired.[2]

This dynamic interplay between technological advancements and the evolution of education highlights the importance of understanding and harnessing the impact of artificial intelligence to create more flexible, inclusive, and effective learning environments.

The role of the educational system tools in which digital technologies are introduced is played by multimedia, overhead projectors, computers, laptops, Internet-connected televisions, telephone lines, smart boards, and projectors. Today, equipping the education system with them ensures high-quality lessons for students. The pandemic has proven that the use of digital technologies in the education system is effective. Online lessons

taught via television can be considered a prelude to the transition to digital education. This process has proven that students can receive education without leaving their homes.[3]

Literature review. Digital technologies have brought about a huge change in education. Online education and distance learning (e-learning) have developed rapidly during the pandemic and have made education more convenient for teachers and students. The effectiveness of distance learning has increased through platforms such as Zoom, Microsoft Teams and Google Classroom. These platforms have made it possible to organize classes, seminars and practical exercises in real time. Interactive lessons have also become more effective with the help of digital technologies. Teachers are presenting their lessons using videos, animations, simulations and virtual laboratories, which makes it easier for students to understand the lessons. Also, with the help of electronic libraries and resources, students have the opportunity to quickly access the necessary information**.**

Also important is the issue of access to information. Digital technologies provide students with quick and convenient access to information on a global scale, which further enriches the learning process. Digital resources, online courses and scientific articles help to improve the quality of education.

Artificial intelligence (AI) creates the opportunity to further individualize education. The concept of personalization has been taken to a new level with the help of AI: the learning process of students is adjusted to their level of knowledge. For example, adaptive learning systems provide course materials in accordance with the learning style of students. This, in turn, meets the specific needs of each student and increases efficiency.

Systematic approaches are being developed using AI to create targeted curricula. AI systems are used to assess students and predict their success. For example, based on the results of students' exams and other data, AI algorithms allow them to predict their academic performance in advance.

Automated assessment systems also strengthen the role of AI in education. Exams and tests are automatically graded, which helps save teachers' time. With the help of virtual assistants (chatbots, consultants), students can receive constant help, which makes education more interactive and effective.

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Artificial intelligence is shaping the future of K-12 education by creating a more personalized, effective, and globally accessible learning environment. As technology continues to evolve, the careful integration of AI has the potential to optimize educational

outcomes, equip students with the necessary skills, and prepare them for success in an increasingly digital and interconnected world.[4]

The scientific literature and research will be very useful for analyzing the place of AI and digital technologies in the education system. The following scholars and their works will help to understand this topic:

1. Andreas Schleicher - Conducted research on the development of education systems using digital technologies. Schleicher's works are aimed at comparing education systems internationally and identifying the role of artificial intelligence in their modernization.

2. Carolyn A. Gabriel and Eugene W. Anderson's book, "Artificial Intelligence in Education," discusses the study of artificial intelligence technologies in education, how they affect educational processes, and how students and teachers adapt to them.

3. Heffernan and Koedinger are known for their research on "Intelligent Tutoring Systems," which shows how artificial intelligence can be used to provide individualized assistance to students and optimize results.

4. Norman Crowder - Crowder has worked on how AI-powered curriculum and software can be used in the educational process. He emphasizes the adaptive role of technology in education through his "Adaptive Learning" approach.

5. Neil Selwyn - Selwyn, who studies the impact of digital technologies on education, analyzes approaches to the introduction of artificial intelligence and digital technologies into the education system.

6. Ryan S. Baker and George Siemens - Through their work in the field of "Learning Analytics", they have studied the possibilities of using digital technologies to monitor educational processes and analyze student success. Through this research, we can learn how artificial intelligence and big data analysis tools can be used in the education system.

By studying these works and the work of scholars, one can fully understand the role of artificial intelligence and digital technologies in the education system, their benefits, opportunities, and potential limitations. These works often include the challenges that digital technologies can bring to education, as well as issues of security and privacy.

One of the key benefits of AI in education is its ability to provide immediate and constructive feedback to students. Automated assessment systems powered by AI algorithms can quickly grade and provide feedback on assignments, quizzes, and exams, allowing students to understand their strengths and weaknesses in real time. This timely feedback facilitates self-reflection and allows students to make necessary improvements, leading to improved learning outcomes.

Additionally, AI can support collaborative learning environments. Intelligent teaching systems and virtual teaching assistants can facilitate group discussions, provide guidance, and enhance collaboration among students. These AI-powered tools encourage active participation, critical thinking, and problem-solving skills, creating dynamic learning environments that reflect real-world scenarios.

However, the integration of AI into education also raises issues that need to be addressed. Privacy and ethical issues arise when working with student data, as AI relies

on the collection and analysis of personal data to provide personalized experiences. Protecting the privacy of student data and ensuring the ethical use of AI technologies are important issues for educators and policymakers.[5]

Research methodology: The research used scientific abstraction, grouping, comparison, retrospective and prospective methods. The article compared the organizational and legal frameworks for using digital technologies to improve the efficiency of online and offline education systems developed in world practice with the existing frameworks in our country, and drew appropriate conclusions.

Analysis and results. The impact of AI in education is far-reaching, shaping the future of K-12 education by introducing transformative changes that improve learning experiences, increase efficiency, and encourage personalized learning:

1. Personalized Learning: Adaptive learning platforms powered by artificial intelligence analyze individual student data to tailor learning content to suit different learning styles and paces. This personalization ensures that students receive specific instruction that helps them understand topics more deeply. 2. Data-driven insights: AI provides teachers with valuable data-driven insights into student performance and learning patterns. This information helps them make informed decisions, improve instructional strategies, and identify areas that may require additional attention.

3. Global reach: Artificial intelligence is making online learning easier, allowing students to access educational resources and courses from anywhere in the world. This inclusivity expands educational opportunities, especially for students in remote areas.

4. Preparing for Future Skills: AI-powered learning tools, including virtual tutors and gamified learning platforms, help develop critical thinking, problem-solving, and digital literacy skills, preparing students for the evolving demands of the future workforce.

Digital technology and artificial intelligence (AI) are bringing about major changes in the education system. The following statistics highlight the key changes in the field:

1. Use of Artificial Intelligence: Approximately 47% of schools and universities around the world have begun using artificial intelligence technologies in their teaching and learning processes. These technologies are often used for personalized learning, automated assessments, and rapid analysis.

2. Access to learning materials: 65% of students in the US use online learning materials because it is faster and more convenient. Additionally, global access to educational resources is increasing through digital technologies.

3. Technology Spending: More than $16 billion was invested globally in the educational technology (EdTech) sector in 2021. SI is helping to further develop this sector and create new opportunities.

4. Improving experience and skills: It has been found that the effectiveness of learning with the help of artificial intelligence can increase by 20-30%, as this technology provides individual support to students.

5. Testing and assessment processes: Some educational platforms are saving teachers up to 40% of their time through automated testing and assessment systems.

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