THE ROLE OF ARTIFICIAL INTELLIGENCE TECHNOLOGIES IN THE EFFECTIVE ORGANIZATION OF THE EDUCATIONAL PROCESS

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Abstract: *This article analyzes the impact of artificial intelligence (AI) technologies on the educational process. SI is proving to be an effective tool for optimizing education, forming an individual approach, and improving students' knowledge. In the course of the study, the experiences of advanced countries such as China and the USA on the introduction of SI into the educational system are studied. The article describes ways to improve educational efficiency with the help of AI, personalized learning systems, robotic platforms and their capabilities.*

Keywords: *Artificial intelligence, educational process, digital technologies, personalized training, AI-platforms.*

Today, great attention is paid to the education sector in our country. The work being carried out to reform this system is helping to achieve significant results. In particular, efforts to introduce the possibilities of using modern technologies and adapt the education system to the requirements of the times form the basis of these ideas.

The development and implementation of artificial intelligence (AI) applications in secondary and higher education - facilitates the process of mastering subjects by students, makes it possible to make the teaching methods of teachers more effective. SI applications have the potential to provide students with a personalized learning experience and offer innovative solutions to educational challenges[14].

The ideal characteristic of artificial intelligence is the ability to evaluate and implement the most optimal actions to achieve a specific goal. Today, AI consists of algorithms and software systems designed to perform various functions, and it can successfully perform many tasks that can be performed by human consciousness[15].

The introduction of artificial intelligence and computer technologies into the field of education is becoming a requirement of the modernizing world. Digitization of the educational process is of great importance in the development of this field. Through this, the quality of education, efficiency and level of individual approach will increase significantly.

It is important to increase the number of qualified personnel for the introduction of artificial intelligence technologies into science. Specialists who are masters of their profession are one of the main factors in the deep penetration of SI technologies into all fields.

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To this end, practical efforts are being intensified to create a favorable ecosystem for the development of innovative business models, products and service delivery methods based on AI, as well as to quickly introduce them into identified priority areas. Because AI technologies are one of the fastest growing and most promising areas of digital technology.

Artificial intelligence, an integral part of digital technologies, can be effectively used n ot only in education, but also in all aspects of life. The introduction of artificial intelligence technologies will create the opportunity to ensure transparency, prevent fraud, conduct in-depth data analysis, and effectively work with large volumes of information.

Especially in the field of education, AI technologies play a significant role in creating a virtual learning environment, facilitating distance learning processes, and shaping an individual approach.

Times are changing rapidly, and time is passing very quickly. If 20 years ago, people walking on the street with a brick-like push-button phone attracted attention, today it has become a smartphone. Now, many things such as watching movies, shopping, following a child's school life, reading, and communicating have become commonplace. This clearly shows that digital technologies have deeply penetrated our daily lives.

In simple terms, artificial intelligence is the ability of computer systems to perform creative and intellectual tasks previously attributed only to humans. It combines complex and advanced areas of science such as neural networks, machine learning, natural language processing, cognitive computing, and computer vision.

Artificial intelligence has revolutionized the way we live through innovative technologies. It entered human life like a storm, deeply influenced almost all areas of society and caused incredible changes[16].

Today, artificial intelligence is actively taking its place in the field of education. AI plays an important role in creating information systems that have the ability to learn, analyse, transform and visualize data. These systems effectively help in performing tasks such as data recognition, search for specific purposes, analysis and presentation of results in the learning process.

Compared to human capabilities, artificial intelligence offers a number of advantages in education, including:

forming an individual approach;

creating educational plans adapted to the abilities of students;

reducing the workload of teachers;

automating the evaluation process.

Artificial intelligence has a significant impact on saving students' time and improving their academic performance. AI's capabilities are wide-ranging, and it can perform functions such as answering questions based on the user's interests, drawing on command, creating presentations on various topics, and writing abstracts and articles[17].

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[16] https://doi.org/10.5281/zenodo.13304251
[17] https://cyberleninka.ru/article/n/talim-sohasida-suniy-intellektdan-foydalanish/viewer

AI technology learning algorithms are adapted based on the individual characteristics and learning styles of students. This helps to form a unique educational path for each student, develop their abilities, and organize the learning process more effectively.

Artificial intelligence creates great conveniences not only for students, but also for teachers in the educational process. In particular, AI can effectively use various methods to develop intensive educational programs and make lessons more interesting and meaningful.

Also, teachers will have the opportunity to identify the interests of students, collect, analyze and explain information about them through SI technologies. This serves to more effectively master various fields such as genetics, robotics, visual learning, natural language learning.

It is important to remember that the success and effective use of artificial intelligence technologies directly depends on their optimization and prevention of misuse. This requires careful management, security, and the introduction of predictive mechanisms.

As science has made human life easier, it has also created new problems. Therefore, a philosophical approach to AI technologies is necessary, which will allow us to correctly assess their positive and negative aspects.

Thus, the future of humanity directly depends on how we use artificial intelligence tools. In this process, along with technological progress, it is important to deeply analyse ethical, legal and social issues.

Deep learning is the latest stage of machine learning and involves learning from large amounts of data using layered neural networks. This approach works by feeding large amounts of data into algorithms to perform complex tasks.

Today, AI applications have grown significantly, ranging from voice assistants to stock market prediction algorithms, natural language processing, and image recognition software.

An important requirement in the organization of modern education with the help of SI is to achieve high results in a short time without spending excessive mental and physical effort. SI enables the automation of key processes in education, including assessment. Today, academics have the ability to refine various test formats, including fill-in-the-blank and multiple-choice tests. Technologies for automatic assessment of student writing are also rapidly developing.

AI-based programs can provide useful feedback to students and teachers. It not only helps in creating individual courses, but also provides analytical data on the success of the entire course. In addition to supporting students, these systems also help professors identify areas where the teaching process needs to be improved.

While there will always be work for teachers in education, the development of AI and intelligent computing systems can significantly affect the tasks and content of this profession. Therefore, adapting to new technologies and using them effectively is becoming one of the important directions of the future education system. Artificial intelligence can take over tasks such as assessment, help students improve their learning, and even replace real tutoring.

According to estimates by the World Economic Forum, a large proportion of companies have the potential to adopt advanced technologies such as machine learning. This is

encouraging governments and education systems to pay special attention to each STEM field - that is, science, technology, engineering and mathematics.

At the same time, the modern job market requires not only technical skills, but also non-cognitive soft skills. These include communication, teamwork, problem-solving, adaptability, and critical thinking. Therefore, the education system must develop a comprehensive approach to fully meet existing needs.

A recent study by Microsoft found that by 2030, it will be crucial for students to learn how to work with new technologies and actively participate in solving collective problems. In particular, the effective use of disruptive technologies such as artificial intelligence, as well as the development of teamwork skills, will be essential for the next generation.

Preparing students for the AI-driven work environment of the future should start early. Because most young people are unfamiliar with digital technologies when they reach college age, building their skills to thrive and adapt in a digital environment should be a priority for the education system.

By integrating artificial intelligence into education, it is possible to raise a generation that is ready to face long-term challenges. It develops not only academic knowledge, but also real-life problem-solving skills.

China and the USA are the leading countries in the areas of scientific research and education in the field of artificial intelligence. These countries are home to world-renowned higher education institutions, and the mechanisms supporting innovative activities are fully regulated. As a result of the financial support provided by the state, China and the USA are attracting many educated professionals.

There are differing views among scientists about the future of artificial intelligence. While some experts worry that AI technologies could invade privacy or be weaponized, others are optimistic about its ability to calculate options that will bring the most benefit with the least harm.

In our country, important steps are being taken to introduce digital technologies in every field in order to develop science. In this regard, the President of our State, Shavkat Mirziyoyev, at a meeting held on June 30, 2025 - Youth Day, outlined important initiatives, in particular, 100 projects will be implemented to develop artificial intelligence in the areas of banking and finance, healthcare, agriculture and energy. The "One Million AI Leaders" program will be launched in partnership with the United Arab Emirates. Computer science curricula will be updated based on the Massachusetts Institute of Technology's AI education program. The "Digital Generation Girls" competition selected 120 start-up projects from 7 million students in areas such as education, artificial intelligence, the "green" economy, and climate change. This will help achieve tangible results in socio-economic areas.

In conclusion, it can be noted that the widespread introduction of digital technologies in the field of education and the adaptation of the education system to the digital environment are one of the most important tasks today. Information technologies play an important role in the formation of a well-rounded personality, independent choice of profession, professional self-development and improvement of skills.

Today, great attention is paid to the education system in our country. In particular, educational processes are being carried out on a wide scale through attracting young people to education, organizing their time in a meaningful way, conducting spiritual and educational events, round tables and other educational activities. Because the upbringing of modern youth has become a pressing issue not only for the family and school, but also for society as a whole.

Our youth live in a society where science and technology are developing and they strive to keep up with the times. However, in some cases, instead of spending their time meaningfully, they are absorbed in idle networks. This can negatively affect the educational process.

Therefore, it is necessary to adapt the educational system to modern requirements by actively involving young people in educational processes, directing their interests and widely introducing digital technologies into education. Including, the integration of artificial intelligence technologies into education ensures the improvement of the quality and efficiency of education..

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