

## Organizing Education Based on Artificial Intelligence Tools

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**Abstract:** The use of innovative technologies such as artificial intelligence allows significantly improving educational processes and increasing the quality of education. Analyzing the prospects for the introduction of artificial intelligence into education, we note that artificial intelligence is not an exact copy of the concept of human intelligence, but is a technology of modeled systems that includes many aspects of human intellectual activity, and how it can be used in the field of education. It is about effective use.

**Key words:** Education, Artificial intelligence tools, methodology, modern education, intelligence technologies, educational process assessment, psychology, informatics, neurophysiology, epistemology.

In accordance with the Strategy "Digital Uzbekistan - 2030" and the rapid introduction of artificial intelligence technologies and their widespread use in our country, providing access to digital data and their high quality, favorable conditions for training qualified personnel in this field. Within the framework of creating conditions, it is appropriate to use artificial intelligence in the field of education in our country, especially in the effective organization of the activities of pedagogues.

Improving the methodology of developing the professional qualities of pedagogues based on the tools of artificial intelligence is an important direction of the development of the modern education system. The use of innovative technologies such as artificial intelligence allows to significantly improve educational processes and increase the quality of education.

On the pages of Wikipedia, which is considered a virtual dictionary, artificial intelligence is defined as follows: "Artificial intelligence is the study of issues related to human mental activity, in particular, thinking, understanding the content of speech, summarizing information, etc. is a solution-oriented computer or robot capability."

Analyzing the prospects of introducing artificial intelligence into education, artificial intelligence is not an exact copy of the concept of human intelligence, but it means the technology of modeled systems that includes many aspects of human intellectual activity. The term "artificial intelligence" was first used and popularized by John McCarthy in 1956 at a conference at Dartmouth University. Artificial intelligence associations have been formed worldwide. These associations include regional branches. For example, the Petersburg branch of the Russian Association of Artificial Intelligence has been operating for several years. Until the 70s of the 20th century, research on artificial intelligence was carried out within the framework of cybernetics and informatics. Since the 80s and 90s of the 20th century, artificial intelligence has become the object of study of many sciences. In particular, such disciplines as neurolinguistics, psychology, informatics, neurophysiology, epistemology, cognitology, cognitive linguistics, computer linguistics also address the issue of artificial intelligence in their scope. There are several main ways in which artificial intelligence technologies can bring significant benefits directions should be noted.

First, the automation of adaptive learning. Using machine learning algorithms, artificial intelligence is able to analyze student data, determine their individual needs, knowledge and ability levels, and offer personalized educational programs and recommendations. This allows students to learn at a more comfortable pace and in the most effective way.

Secondly, improving the evaluation of the educational process. Systems based on artificial intelligence can analyze a large amount of information about the educational process, evaluate the effectiveness of the methods used, identify problematic areas and make recommendations for their improvement. This allows teachers and school administrators to make decisions based on objective data.

Currently, artificial intelligences such as Sage, ChatGPT, ChatGPT-3.5, GPT-4, Claude, Claude-instant, NeevaAI, Dragonfly are used in the world information system. Expert systems are one of the practical applications of artificial intelligence systems. An expert system is a computer program created as a combination of expertise or existing knowledge in a specific field. An expert system is a dictionary or a computer model of professional experts in which all the knowledge related to a particular field is gathered. Expert systems are different from conventional computer programs.

A typical computer program will only have a search engine, calculation and manipulation engine. In addition to these aspects, expert systems have the ability to reason based on evidence, just like humans. Expert systems have two main components: a database and a logic machine.

In addition, the use of artificial intelligence to ensure the safety of students in the digital space is an important aspect. Machine learning techniques can detect abnormal online behavior, prevent cyberattacks, and protect student privacy.

Finally, the integration of artificial intelligence into professional education can advance research programs in the field of learning and pedagogy. Analysis of large volumes of data about the learning process, modeling of learning situations, research in the field of learning algorithms - all this significantly expands the understanding of learning processes and, as a result, helps to improve teaching methods.

In order for artificial intelligence to correctly understand and interpret texts in Uzbek, it is necessary to perform many actions on the text in this language. The database in this language should be mastered. Just as a language is necessary for a person to communicate and speak, so for artificial intelligence, a linguistic consciousness based on a database is necessary. Therefore, improving the methodology of developing education of pedagogues based on artificial intelligence is an important and promising direction that allows to significantly increase the efficiency of the educational process and improve the quality of education.

Other languages show relatively limited operations. This situation was determined by the language in which the artificial intelligence learned the most information and in which language it performed the most logical operations.

Artificial intelligence and intellectual capabilities are of great importance in the creation of new educational methods and environments, among other areas that are being strengthened. To gain an understanding of this topic, let's take a look at this topic in several steps.

We provide insights into the interdependence of artificial intelligence and education. Artificial intelligence includes powerful algorithms and models for analyzing, analyzing, and recommending data. Education is the process of learning about knowledge and skills that are transferred to people and other industries.

We will talk about the integration of artificial intelligence and education, that is, the development and implementation of educational systems based on artificial intelligence. This includes providing simple, effective, and affordable learning through educational technologies, virtual learning spaces, products for educational systems, and other technical tools.

It is important to learn how artificial intelligence tools can be used to create new educational institutions and organize interactive learning models. Interactive and personalized learning plays a transformative

role in providing students with specific recommendations, logical debate on scientific issues, and personal development of students.

We need to understand how to use artificial intelligence tools in the field of pedagogy. Analyzing the relationship between students and teachers, identifying individual learning paths for students, and creating optimal lessons for teachers are important aspects of using artificial intelligence.

It is important to learn how artificial intelligence tools can be used to evaluate the learning process, assess the knowledge and skills of students, and create facilities for educational institutions. scientific approaches, experiments and game-interactive methods aimed at learning the organization of education based on artificial intelligence tools will be discussed.

Organization of education on the basis of artificial intelligence tools belongs to one of the fields in which the Uzbek language is becoming more promising, and this field is important for the study and development of innovative technologies. It provides facilities for artificial intelligence, data analysis, development of prohibitive concepts, distance learning, data analysis and many other technological fields. There are a number of important directions for studying the organization of education based on artificial intelligence:

**Data Analysis:** Artificial intelligence helps to analyze the data collected during the learning process, analyze the understanding of the students and help them to get new information.

**Adaptive Education Systems:** Artificial intelligence allows for the development of special educational programs for each student and adaptation of the educational process to his personal development.

**Interactive Educational Games:** Artificial intelligence is used to provide information to students through interactive educational games, analyze activities, and develop student understanding.

**Learning Process Automation:** Artificial intelligence tools are used to help teachers and administrators manage the learning process, control and manage classrooms, and monitor student progress.

**Data Analysis:** Artificial intelligence is used to analyze the test results of students, learn their mastery and ensure their mastery.

It allows to develop educational systems based on artificial intelligence, introduce students to modern technologies and prepare them for independent opinions and discussions. This is part of the technological development that is important in preparing the new generation with modern technologies in the best ways and in developing students' creativity and discussion skills.

There are many ways to organize education based on artificial intelligence tools. It is possible to organize education based on the tools of artificial intelligence in the following ways:

Online platforms can be used to teach artificial intelligence programs. These platforms provide teachers and students with interactive tutorials, quizzes, and hands-on activities.

Short videos and articles can be used to explain the content, functions and applications of artificial intelligence.

**Virtual Reality (VR) and Augmented Reality (AR):** By using virtual reality and augmented reality in AI-based education, students can learn their theoretical knowledge in a practical way.

Using artificial intelligence programs, it is possible to create special textbooks and prepare personal education plans.

It is possible to create suitable games and interesting programs for teaching artificial intelligence, which can attract the attention of students.

Through information systems and management systems for teachers, it is possible to monitor and analyze the results, actions and grades of students.

To provide education through artificial intelligence, to provide access to online opportunities. AI-powered education facilitates learning for teachers and students through modern and efficient technologies. These technologies help to improve students' understanding, identify individual learning paths, and customize the learning process.

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