THE ROLE OF ARTIFICIAL INTELLIGENCE IN EDUCATION

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ABSTRACT

One of the most pressing issues studied by modern researchers are issues related to the digitalization of the educational process. In this regard, much attention is paid to the possibilities of artificial intelligence.

The article describes the history of the development of artificial intelligence, its role in education. The possibilities of artificial intelligence in education and the risks of its use in the educational process are also shown.

Keywords: artificial intelligence, artificial intelligence in education, artificial intelligence programming language, individualization of education with the help of artificial intelligence.

Artificial intelligence is a technology that studies computer, robotic equipment, analytical system ways to teach intelligent thinking just like a person.

Since the mid-1950s, humanity has been fascinated by the ability of computers to perform several tasks at the same time. In the same period, the first technologies and research in the field of artificial intelligence begin to appear. Research in this area was based on the study of human intelligence, after which the results were applied to the activities of computers. Data for research in artificial intelligence are derived from various sources and disciplines such as mathematics, computer science, psychology, linguistics, biology, mechanical engineering, among others. Based on this information, using machine learning technologies, computers try to imitate human mental activity.[1]

Let's dwell on the history of the creation of artificial intelligence. In 1924, the famous writer and science fiction Karel Chapek staged a play called "Universal Robots" at the London theater, the play discouraged the audience, and the words "robot", "artificial intelligence" took a solid place in the everyday life of mankind. In 1956, the founder of programming, professor of Stanford University (USA), John McCarthy, demonstrated the prototype of the artificial intelligence program and received the Turing Award. Note that he is also the author of the term" artificial intelligence".

Research in the field of artificial intelligence (AI)did not stop, then the English mathematician and cryptographer Alan Turing began to study the creation of neural networks based on the analysis of an intellectual chess game, A.Turing published his research in a scientific publication. In 1958, Lisp, the first programming language for artificial intelligence, appeared. Over time, scientists have proven that computers can understand natural language at a good level. Academics at the time were A.I. Berg and G.S.Pospelov created the ALPEV LOMI program, the feature of which was the automatic proof of theorems. Russian researcher Turchin V.F. In 1968, he created a special REFAL symbolic language for data processing. Interest in artificial intelligence is growing every year, since the 2000s, the active introduction of AI into

the space industry and the domestic sphere has begun, but now there is a growing emphasis on the use of artificial intelligence in education.

According to the results of a study carried out by UNESCO experts on the possibilities of using artificial intelligence in education, it provides an analysis of the possibilities of using artificial intelligence to improve educational results, as well as information about the risks and consequences of using artificial intelligence in education around the world.

The positive aspects of the use of artificial intelligence in education are, first of all, the provision of inclusive access to education. Regardless of the existing intellectual, social, physical, linguistic and other characteristics, a person receives education in educational institutions. Through the introduction of AI into the educational environment and the use of AI, students with special needs in emergency situations will be able to attend classes from home or hospital. In this way, learning can be individualized in different ways, and AI technologies support inclusiveness and ubiquitous participation in education. It should be borne in mind that when introducing artificial intelligence into education, the following difficulties may arise: the preparation of high-quality data systems, the training of future teachers on the basis of artificial intelligence and the development of artificial intelligence to understand educational technologies.[2]

Doctor of psychological sciences, owner of Lynch Consulting Group LLC Matthew Lynch in his article "artificial intelligence in education: seven programs" defines 7 aspects of the effective use of artificial intelligence in education: adaptive education, individualized education, automatic assessment, interval learning, teacher assessment by students, smart capsules, examination process control.[3]

Artificial intelligence can be the basis for online education, which is widely spread in all countries of the world, especially between 2020 and 2021, after the emergence of the mutated covid-19 virus. For the intensive introduction of AI into education M.Lynch shows 3 main reasons: [3]

1.   AI adapts the learning process for the teacher and student to work more efficiently. Many foreign online schools are introducing AI technologies on their learning platforms. This makes it possible to achieve a positive result in education, since AI analyzes the learning process, the methods used by the teacher in the process, and changes the learning process depending on the results of the students

2.   Artificial intelligence enhances students ' interests by engaging the learning process in games. Elementary grades most educational platforms for school are built on the principle of online games (for example: Lingualeo is an online platform for learning foreign languages).

3.   AI allows you to automate the learning process to the maximum. Nowadays, many educational portals, platforms and resources work without human intervention, bots can answer frequently asked questions, conduct classes and trainings.

It should be noted that according to the "regulation on specialized boarding schools and specialized schools in the system of the agency of presidential educational institutions" adopted by the decision of the Cabinet of Ministers of the Republic of Uzbekistan No. 233 of May 5, 2022, additional courses on artificial intelligence, robotics, Agrotechnology, nanotechnology, biotechnology, IELTS, TOEFL and SAT are established in these schools.[8]

In 2021, the Ministry of Education of Russia began testing educational modules "artificial intelligence" in schools. By 2024, artificial intelligence classes will be taught in half of all schools within the framework of the usual curriculum.

Researchers V.A. Chulyukov and V.M. Dubov in the scientific article" Artificial Intelligence and the future of education " emphasizes that the possibilities of artificial intelligence in education are limited. The developers were able to teach the computer to independently perform very complex tasks. An algorithm based on self-study was created. The authors draw attention to the fact that artificial intelligence cannot replace specialists, but it can improve the learning process and improve the qualifications of teachers.

Based on the needs of students, modern educational interactive platforms are adapted, these programs help to identify shortcomings and difficulties in the teacher and offer him the necessary materials for advanced training. With the application of artificial intelligence in schools, colleges and universities, deep involvement in the learning process is also achieved, and artificial intelligence processes course, science or science materials and automatically creates the curriculum.[4]

Artificial intelligence is already capable of a lot, but its main task is to collect and analyze data, obtain and predict results. The latest developments of AI are used on the basis of flexible learning, since this type of teaching is based on interactive models that take into account the individual characteristics and needs of each student.[4]

Currently, in many educational institutions, AI systems are being developed and used in education. Various online courses, training videos, text materials and interactive modules are used. Such systems automatically assess the level of knowledge of students, identify weaknesses, provide further necessary recommendations and instructions for improving their qualifications.

Third Space Leaning is an artificial intelligence School, about 500 teachers conduct interactive classes on this platform, it is noteworthy that automated technologies are able to assess the quality of the lesson. For example, when a teacher speaks quickly and without emotion, students ' interest in the material being studied will fade. In such cases, such methodological recommendations of artificial intelligence will be displayed on the screen of the teacher's smartphone, and soon the shortcomings will be eliminated.[5]

Carnegie Learning is a software product that uses AI technologies along with cognitive research. The purpose of the system is to individualize education. The program is designed for schoolchildren and first-year students of universities.

Tinker Math is an application based on AI elements. The application is a product of understanding what it means to study mathematics and how it can be done to study it in a way that supports modern school structures and educational systems.

Netex Learning is a disinterested assistant to teachers, making it possible to make classes more interesting using interactive audio and video content. For teachers who do not yet have much experience, this Netex Learning will help you work on a variety of devices and digital applications and write original training programs.

Supercharge learning through personalization is an AI platform to create an individual learning path using learning technologies, neurophysiology, and processed data analysis.[6]

Thus, platforms use AI differently depending on the purpose and tasks of education, but the use of such programs and platforms helps to make the learning process interactive, interesting and, most importantly, effective.

The use of artificial intelligence in education provides an opportunity for:

1.   AI allows the student to independently choose the form of Education based on their needs, abilities and costs for the educational process;

2.   For a quick and high-quality examination of mastered knowledge, artificial intelligence is more effective, which simplifies the assessment process;

3.   The student will be able to gain independent knowledge with the help of artificial intelligence.

4.   Proctoring-AI allows the implementation of a system of student Control, Verification, write-off in Tests and exams.

We must not forget about the dangers of introducing artificial intelligence into the field of Education. At the present stage, a number of threats are known to include AI in the spheres of human activity. This is primarily due to the employment of the population. The use of artificial intelligence technologies in education requires relatively few people, and therefore the number of jobs is reduced. On the other hand, some experts (Stephen Hawking, Ilon Mask) argue that machines with artificial intelligence can later have intelligence and resist humanity if their programming is in a distorted state or misused.[7]

Thus, it can be concluded that, like all innovations in technology, artificial intelligence has its advantages and disadvantages, but it is assumed that the introduction of artificial intelligence into the learning process can be activated with the development of technologies. These technologies are improved based on the demand of society and are aimed at increasing the effectiveness of the educational process according to the "teacher-student" scheme. In modern reality, the introduction of artificial intelligence-based applications into the educational process is no longer a fantasy. Such an approach makes it possible to effectively organize the educational process and solve existing problems in ensuring the quality of Education.

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