"THE ROLE OF ARTIFICIAL INTELLIGENCE IN EDUCATION"

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Abstract

One of the most pressing issues studied by modern researchers are issues devoted to the topic of digitalization of the educational process. Much attention is paid to the possibilities of artificial intelligence in the educational process.

The article describes the history of the development of artificial intelligence, its role in education. It also presents the possibilities of artificial intelligence in education and the risks of its implementation in the educational process.

The article may be of interest to teachers, curators of the educational process, for understanding the importance of using artificial intelligence systems in education, since with the help of AI, data on the effectiveness of the educational process is collected and analyzed, and further forecasting of learning outcomes is made.

Keywords: History of artificial intelligence, artificial intelligence in education, artificial intelligence programming language, personalization of education using AI.
Artificial intelligence is a technology that studies ways to teach computers, robotics, and analytical systems to think intelligently, just like humans. [1].

Introduction

Since the mid-1950s, humanity has been amazed by the capabilities of computers that perform several tasks simultaneously. During this same period, the first technologies and research in the field of artificial intelligence began to emerge. Research in this area was conducted based on the study of human intelligence, after which the results obtained were applied to the activities of computers. Information for research on artificial intelligence is taken from various sources and disciplines such as mathematics, computer science, psychology, linguistics, biology, mechanical engineering, etc. Based on this data, with the help of machine learning technologies, computers try to imitate the operations of human mental actions. [1]

Let's delve into the history of the creation of artificial intelligence. Back in 1924, the famous writer and science fiction writer Karel Capek staged a play called "Universal Robots" in a London theater. The performance discouraged the audience, and the words "robot" and "artificial intelligence" firmly entered into the everyday life of mankind. In 1956, the founder of programming John McCarthy demonstrated a

prototype of a program based on artificial intelligence at Carnegie Mellon University and became a laureate of the Turing Award. It should be noted that he is also credited with the authorship of the term "artificial intelligence".

Research in the field of artificial intelligence did not stop, then the English mathematician, logician 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, the first programming language for artificial intelligence, Lisp, emerged. Over time, scientists have proven that computers are capable of understanding natural language at a good level. In the USSR, artificial intelligence was given extreme importance. At that time, academicians A. I. Berg and G. S. Pospelov created the program "ALPEV LOMI", the peculiarity of which was the automatic proving of theorems, after which the development of the "Kora" algorithm by Soviet scientists immediately appeared, this algorithm simulated the work of the human brain in the process of image processing. In 1968, researcher V. F. Turchin created a special symbolic language REFAL for data processing. Interest in artificial intelligence is growing every year, since the 2000s, there has been an active introduction of AI into the space industry and the everyday sphere, and now AI is proposed to be used in education. [1]

According to research on the possibilities of using artificial intelligence in the field of education, conducted by UNESCO experts, an analysis of data on the possibilities of using AI to improve learning outcomes is provided, and the risks and consequences of using AI in education around the world are considered. [2]

The positive aspects of using AI in education primarily include AI technology to ensure inclusive access to education. Regardless of existing intellectual, social, physical, linguistic and other features, a person is provided with education in educational institutions. With the introduction of AI in the educational environment and the use of AI, students with special needs, those in emergency situations can attend classes from home or from the hospital. In this way, learning can be personalized in various ways, AI technologies support inclusiveness and ubiquitous access to education. It is worth considering that when working with artificial intelligence in education, the following difficulties may arise: preparing high-quality data systems, training future teachers based on artificial intelligence, and developing AI to understand learning technologies. [2]

Doctor of Psychology, owner of Lynch Consulting Group, LLC Matthew Lynch in his article "Artificial Intelligence in Education: Seven Applications" highlights 7 aspects of the effective use of artificial intelligence in education: adaptive learning,

personalized learning, automatic assessment, spaced learning, teacher assessment by students, smart capsules, examination process monitoring.[3]

Artificial intelligence can become the basis for online education, which is becoming widespread in all countries of the world, especially in the period from 2020-2021, after the emergence of the mutating covid -19 virus.

AI allows you to automate business as much as possible. Nowadays, many educational portals, platforms and resources operate without human participation, bots can answer frequently asked questions, conduct lessons and trainings.

Researchers V.A. Chulyukov and V.M. Dubov in the scientific article " Artificial Intelligence and the Future of Education" note that artificial intelligence's capabilities in education turned out to be limited. The developers were able to teach the computer to independently perform quite complex tasks. An algorithm was created that was based on self-training. The authors draw attention to the fact that artificial intelligence will definitely not replace professionals, but it can improve the educational process and develop the skills of teachers.

In accordance with the requests of students, modern educational interactive platforms are adapted, which helps the program to identify gaps and difficulties in the student and offer him the necessary materials to improve the skill. With the help of artificial intelligence in schools, colleges and universities, there is deep involvement in the educational process, as well as artificial intelligence processes the materials of the course, subject or discipline and automatically creates the curriculum itself, which is a big plus for universities and teachers.

Artificial intelligence is already capable of many things, but its main task is to collect and analyze data, obtain results and forecast. The latest developments in AI are used on the basis of adaptive learning, since this type of learning is based on interactive models that take into account the individual characteristics and needs of each learner. Currently, many educational institutions are developing and using AI systems in education. Various online courses, educational videos, text materials, and interactive modules are used. Such systems automatically assess the level of students' knowledge, identify weaknesses, and provide feedback with further instructions on how to improve their skills.

Third Space Leaning is an artificial intelligence school, on this platform about 500 teachers conduct interactive lessons, it is noteworthy that automated technologies can evaluate the quality of the lessons. For example, it turns out that with a fast and unemotional speech of a teacher, students lose interest in the material being studied. Such methodological recommendations from artificial intelligence will be reflected on the screens of the teacher's smartphone and may soon become commonplace.

Carnegie Learning is a software product that uses AI technologies together with cognitive research. The goal of the system is to make education personalized. The program is aimed at schoolchildren and first-year students in universities.

Thinker Math is an application built on AI elements, Understanding the content and applications covers secondary school students. The application is a product of understanding what it means to learn mathematics and how learning can be done in a way that supports modern school structures and learning systems.

Netex Learning is an indispensable assistant for teachers, with the use of interactive audio and video content, lessons become more interesting. For beginning teachers who have no experience in creating technical products, this Netex Learning will help organize work and write original curricula for work on different devices and digital applications.

Supercharge learning through personalization is an AI platform that uses learning technologies, neurophysiology and analysis of processed data to build an individual learning path.

So, platforms use AI in different ways depending on the different goals and objectives set in the educational environment, but the use of such applications and platforms helps to make the learning process interactive, interesting, and most importantly effective.

The use of artificial intelligence in education provides benefits and prospects for development:

1. AI allows students to independently select the form of education based on their needs, abilities and costs of the educational process;

2. AI is more effective at quickly and efficiently checking acquired knowledge, which simplifies the assessment process;

3. The learner has the opportunity to educate himself with the help of AI, rather than through the transfer of knowledge from person to person.

4. Proctoring AI makes it possible to implement a system for tracking student cheating during tests, quizzes, tests and exams.

It is worth remembering the risks of introducing artificial intelligence into the field of education. Several threats of introducing AI into the spheres of human activity are already known at this stage. Firstly, this will concern employment. Fewer people are required to use AI technologies in education, and, consequently, the number of jobs will decrease. Thus, we can conclude that artificial intelligence, like all innovations in technology, has its advantages and disadvantages, but it is assumed that the introduction of AI into the learning process may become more active as technologies develop. These technologies are being improved in accordance with the demands of

society and are aimed at the effectiveness of the learning process according to the "teacher-students" scheme. It is difficult for one teacher to meet the needs of a class of a large number of modern students. In modern realities, the introduction of AI-based applications into the educational process is no longer a fantasy. This approach solves the problem of low quality of education, the problem of inaccessibility of education, and also minimizes the shortcomings of the existing education system as much as possible.

References

1. Artificial Intelligence [Electronic resource]// Access mode: https://www.calltouch.ru/glossary/iskusstvennyy-intellekt/ (Accessed 07/18/2021);

2. Artificial Intelligence in Education: Problems and Opportunities for Sustainable Development [Electronic resource]// Access mode: https://roscongress.org/materials/iskusstvennyy-intellekt-v-obrazovanii-problemy-i-vozmozhnosti-dlya-ustoychivogo-razvitiya/ (Accessed 18.07.2021);

3. Artificial Intelligence in Education: Seven Application Options [Electronic resource]// Access mode: https://the-accel.ru/iskusstvennyiy-intellekt-v-obrazovanii-sem-variantov-primeneniya/ (Accessed 18.07.2021);

4. Supercharge learning through personalization [Electronic resource]// Mode access : https://www.century.tech/ (Accessed 18.07.2021);

5. Advantages and risks of artificial intelligence [Electronic resource]// Access mode: https://msuee.ru/2020/02/26/preimushhestva-i-riski-iskusstvennogo-intellekta/#:~:text=Disadvantages of artificial intelligence 1. Reduction, fewer people are required to perform work (Accessed 07/18/2021).