

HOW AI IS TRANSFORMING TRADITIONAL EDUCATION

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Annotation: The article examines the impact of artificial intelligence (AI) integration on education. It discusses new opportunities that AI provides, such as personalized learning, process automation, and improved data analysis. At the same time, it addresses challenges related to data privacy, ethical aspects, and the need to ensure equal access to educational resources.

Keywords: artificial intelligence, education, personalized learning, automation of educational processes, data analysis in education, ethics of education, data privacy.

Introduction. Today, in the rapidly changing conditions of globalization, digitalization, development of new technologies, environmental problems that affect almost all spheres of life and activity and challenge humanity, education is not only a strategic condition for the development of each member of modern society, but also a condition for the survival of society as a whole. New circumstances require an answer to the question of what kind of education should be today in order to respond to the challenges of our time. The rapid development of science, the expansion of the volume of knowledge and information create a demand for the formation of a new educational paradigm focused on the personal and social needs of a person in the post-industrial era.

Unfolding digitalization, being one of the challenges to humanity, affects all levels of modern life, methods of work, changes the way the state interacts with citizens, transforms training and has literally revolutionized the gaming industry. The development of new technologies and their practical use are the key to increasing the competitiveness of any country.

Artificial intelligence (AI), as part of digitalization, can help solve the problem of labor shortages, increasing the inclusion of disadvantaged groups in the economy (the use of information and communication technologies supports, for example, the inclusion of students with disabilities), helps to increase efficiency and optimize costs, promotes the emergence of new areas of human activity and new professions.

Artificial intelligence is a very broad discipline, an area of computer science in which computers learn to simulate the process of thinking, learning and perception like humans. The term "artificial intelligence" has been used since 1956, but only in recent years has its actual application begun. There has been a significant shift in the study and implementation of artificial intelligence, known as Deep Learning, which is a discipline of machine learning.

Research in artificial intelligence and machine learning can also make a positive contribution to pedagogy and psychology by determining how people learn and how their thinking processes work. For example, AI algorithms can pinpoint which parts of a course are less clear to students

or where they make more mistakes. Ultimately, they can tailor learning to each student.

Online educational systems and entire digital platforms using AI are already helping teachers in English-speaking countries to grade student work, such as essays. Some studies have shown that algorithms grade more objectively than the best teachers. For example, they are free from the personal bias that a teacher may sometimes have. AI does not have to process the entire student's work, only its design, which is then continued by a human teacher. Currently, however, this means that the submitted work must be in electronic form, so these systems are used primarily in higher education. It is through human-machine collaboration with AI, rather than the replacement of the teacher by a machine, that many visionaries see the future of learning. From a pedagogical point of view, it seems more meaningful to use artificial intelligence to develop competencies that will enable people to overcome learning difficulties, so that artificial intelligence replaces the skills that are the basis of important cognitive abilities. Artificial intelligence can be thought of as the ability of computer programs to work in a similar way to the human brain, that is, without predetermined programming. Although artificial intelligence has not yet reached the level of the human brain, it can use almost unlimited capacity and rapid copying. Therefore, if artificial intelligence is trained to work as an individual teacher, such a teacher can be very quickly provided to each person and learning can be switched from the mass to the individual.

The development of artificial intelligence (AI) technologies opens new horizons for the transformation of the education sector. This article explores how the integration of AI into educational processes opens the door to innovation and what challenges it poses. Artificial intelligence allows for the creation of personalized educational programs taking into account the individual needs and learning styles of each student. Machine learning algorithms analyze learning data, providing students with materials and tasks that match their level of knowledge and abilities. The use of AI in education leads to the automation of many aspects of the educational process. This includes the creation of individual learning plans, automation of assignment grading, adaptive testing, and even support for teachers in the process of assessing and analyzing student performance. Artificial intelligence provides powerful tools for analyzing educational data. Tracking progress, identifying weaknesses, predicting student success - all this becomes more accurate and effective thanks to AI algorithms, which helps optimize educational strategies and resources.

Advanced AI technologies are already being applied in higher education, creating innovative teaching methods and helping to improve the educational process. An example of such use is the introduction of automated systems for assessing and analyzing student work. These systems, based on machine learning algorithms, are able to identify key aspects of work, evaluate the level of creativity and provide feedback to students. Along with the new capabilities of AI in education, ethical issues arise. It is necessary to balance innovation with ensuring data privacy and fair use of technology. It is important to develop educational ethics standards that ensure the fair and safe use of data in education. Forecasting supported by AI can significantly improve the planning of educational programs and resources. Data analysis algorithms can predict changes in student needs based on previous successes and difficulties, which allows educational institutions

to adapt more effectively to changing requirements. Artificial intelligence can play a key role in optimizing the management of educational resources, providing analytics on the effectiveness of the use of educational materials, teaching staff and financial resources. With the use of AI, it is possible to more accurately analyze labor market requirements and predict changes in the necessary competencies. This allows educational institutions to adapt their programs to current requirements, providing students with relevant and in-demand knowledge.

In conclusion, the integration of artificial intelligence into education opens the door to new opportunities, transforming traditional teaching methods and bringing with it a high potential for increasing the efficiency and personalization of the educational process. Modern technologies allow creating unique educational scenarios adapted to the individual needs of each student. However, along with the undeniable advantages, it is necessary to pay attention to the ethical and privacy aspects of the implementation of artificial intelligence in education. It is important to balance the desire for innovation with ensuring the protection of student data and maintaining ethical standards. Ensuring transparency in the use of algorithms, protecting privacy, and adhering to ethical standards are becoming an integral part of the responsible implementation of technologies in the educational environment. An important aspect is also the creation of equal opportunities for all students. The use of artificial intelligence should serve as a tool that helps ensure access to quality education for everyone, taking into account the diversity of needs and characteristics of each student. Only in this way will educational technologies contribute to inclusiveness and equity in education. Successful integration of artificial intelligence into education requires not only technical development, but also careful attention to ethical, social and legal aspects. Only in conditions of responsible use and taking into account the principles of ethics, educational institutions will be able to fully realize the potential of modern technologies in providing high-quality and accessible education for all.

List of used literature:

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