ADVANTAGES OF USING ARTIFICIAL INTELLIGENCE IN EDUCATION

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ABSTRACT. This scientific article provides an in-depth analysis of the advantages of using artificial intelligence in the educational process within the framework of modern pedagogy, digital transformation, and innovative educational concepts. In the context of globalization and digitalization, the education system is increasingly becoming one of the main drivers of societal development. Artificial intelligence technologies expand opportunities for personalized learning, enhance the quality and effectiveness of education, optimize pedagogical activities, and support scientifically grounded decision-making in educational management. The article presents the didactic, organizational, psychological, and social advantages of artificial intelligence in education in the form of a continuous academic narrative and substantiates its role in the modernization of the education system.

Keywords: artificial intelligence, digital education, innovative pedagogy, adaptive learning, quality of education, educational technologies.

INTRODUCTION

The development of modern society is based on knowledge and intellectual potential. In the twenty-first century, improving the quality of human capital has become a priority task for all countries. In this process, the education system occupies a central position. The rapid development of information and communication technologies, the expansion of the digital environment, and the emergence of artificial intelligence technologies have led to fundamental changes in the field of education. Traditional educational models often offer a uniform approach to all learners and therefore fail to fully address individual needs and abilities. Artificial intelligence, however, enables the organization of the educational process in a flexible, learner-centered, and efficient manner. For this reason, scientifically substantiating the advantages of using artificial intelligence in education is considered one of the most relevant research issues of the present time.

MAIN PART

The integration of artificial intelligence technologies into the education sector has had a significant impact on the content, forms, and methods of teaching and learning. First of all, artificial intelligence–based systems are capable of analyzing learners' levels of knowledge, learning pace, interests, and individual psychological characteristics. This makes it possible to effectively implement a learner-centered approach in the educational process. As a result, each learner receives educational content that corresponds to their abilities and needs, which leads to deeper and more sustainable knowledge acquisition.

Another important advantage of artificial intelligence is the automation of the educational process. The automation of time- and labor-intensive activities such as assessment, monitoring, and statistical analysis reduces the workload of teachers. Consequently, educators are able to focus more on methodological research, creative approaches, and educational and

воспитательный (tarbiyaviy) activities[1]. This contributes to an increase in the effectiveness of pedagogical work and has a positive impact on the overall quality of education. Artificial intelligence–based learning platforms and virtual assistants expand opportunities for independent learning. Such systems provide prompt responses to learners' questions, explain complex topics in simplified forms, and offer continuous feedback. This helps to develop learners' self-regulation, responsibility, and independent thinking skills. The importance of artificial intelligence technologies becomes even more pronounced in the context of distance and blended learning.

The ability to analyze large volumes of data in the educational process is also one of the key advantages of artificial intelligence. Through in-depth analysis of learners' engagement, academic performance, and interests, educational institutions can improve curricula and optimize pedagogical strategies. This creates a foundation for making scientifically grounded decisions in educational management. Artificial intelligence also plays a significant role in the development of inclusive education. Adapted technologies for learners with special educational needs, voice assistants, text-to-speech tools, and visual support systems ensure that the educational process is equitable and accessible to all. This, in turn, strengthens the principles of social justice and equality in education. In addition, artificial intelligence serves as an effective tool for enhancing learning motivation. Interactive and adaptive learning environments stimulate learners' interest and encourage active participation. Gamification elements and AI-based analytical mechanisms make the educational process more engaging and appealing[2].

Overall, artificial intelligence enables the educational process to become more flexible, efficient, and innovative. Through the use of these technologies, the process of knowledge delivery advances to a new level not only from a technical perspective but also from didactic and methodological standpoints.

DISCUSSION

In discussing the use of artificial intelligence in education, it becomes evident that not only the technical capabilities of these technologies but also their pedagogical, social, and ethical dimensions are of great importance. Scientific research and practical experience indicate that learning environments organized on the basis of artificial intelligence enhance learners' interest in knowledge acquisition and contribute to the development of their engagement and independent learning skills. However, viewing this process as entirely positive would represent a one-sided approach, as the use of artificial intelligence is also associated with certain challenges and limitations.

One of the most frequently discussed issues in this context is the changing role of the teacher. Artificial intelligence cannot fully replace educators; rather, it functions as a supportive tool that enhances their professional activities. Consequently, teachers' methodological expertise, educational influence, and human qualities continue to play a decisive role in the educational

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[1] Luckin, R., Holmes, W., Griffiths, M., & Forcier, L. (2016). *Intelligence Unleashed: An Argument for AI in Education*. London: Pearson Education.

[2] Holmes, W., Bialik, M., & Fadel, C. (2019). *Artificial Intelligence in Education: Promises and Implications for Teaching and Learning*. Boston: Center for Curriculum Redesign.

process[3]. Artificial intelligence serves as an auxiliary mechanism that helps optimize the technical and organizational aspects of teaching and learning. Furthermore, issues of data security and personal privacy are highly relevant in the discussion of artificial intelligence in education. Since AI systems process large volumes of data related to learners, there is a critical need to ensure the responsible and lawful use of such information. Otherwise, data security problems may negatively affect the educational process. From this perspective, strict adherence to legal, regulatory, and ethical standards is essential when implementing artificial intelligence technologies in education.

The discussion also demonstrates that the effective use of artificial intelligence is directly linked to teachers' digital competencies. If educators lack the skills required to work with these technologies, the full potential of artificial intelligence in education cannot be realized. Therefore, it is necessary to develop knowledge and skills related to artificial intelligence in the training and professional development of teaching staff. In general, the results of the discussion indicate that the use of artificial intelligence in education is a complex and multifaceted process that requires a systematic approach. Only when technological capabilities are aligned with pedagogical objectives can artificial intelligence make a tangible contribution to improving the quality and effectiveness of education.

CONCLUSION

In conclusion, the use of artificial intelligence in education represents a significant factor in the development of modern educational systems. A learner-centered approach, automation, analytical capabilities, inclusivity, and the enhancement of learning motivation emerge as the main advantages of artificial intelligence. At the same time, it is essential to adhere to pedagogical and ethical standards when implementing these technologies. Proper and rational application of artificial intelligence will undoubtedly elevate the education system to a new level of quality.

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