

## **OPPORTUNITIES AND RISKS OF ARTIFICIAL INTELLIGENCE IN EDUCATION**

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### **ABSTRACT**

This article analyzes the impact of artificial intelligence technologies on the educational process. It highlights opportunities such as personalized learning, adaptive courses, automated assessment systems, and real-time analysis of students' performance. At the same time, it discusses the risks of improper AI use, including data privacy concerns, the diminishing role of human educators, and the potential intellectual passivity of learners. The article provides suggestions for the effective and responsible integration of AI in education.

**Keywords:** Artificial intelligence, digital education, personalized learning, adaptive systems, educational technologies, security, AI risks.

### **INTRODUCTION**

Modern information and communication technologies have a profound impact on all aspects of human life. In particular, artificial intelligence (SI) technologies have changed the way we think, learn, deal and make decisions. Undoubtedly, it makes our lives easier, but it makes many think that behind it there are certain dangers, moral and social problems. Especially at a time when the role of SI in education is growing rapidly, there is a need to think deeply about its benefits and harms.

One of the main challenges facing the education system today is to provide quality, inclusive, and modern education through digital transformation. The application of SI technology in this process has changed the learning process significantly. Now the relationship between teacher and student, the grading system, the content and format of the lesson are radically renewed. However, along with these innovations, the issue of their wise management also remains relevant.

Today, thousands of schools and universities around the globe are implementing artificial intelligence-based tools in their education systems. Advanced systems such as ChatGPT, Sora, Khanmigo make it possible to answer the student's questions in real time, explain what they do not understand, and even create independent curricula [1]. This, in turn, is driving approaches based on personalization of education, adaptive learning, and independent learning [2].

First of all, the most important advantage of SI technologies is the possibility to form individual study areas. Taking into account a learner's age, level of knowledge, area of interest and learning style, SI offers assignments and materials that are suitable for the learner [3]. Through it, each student will have the opportunity to learn at his/her own pace. For example, on platforms such as Duolingo and Khan Academy, this mechanism is already working successfully [4].

Second, assessment systems based on artificial intelligence can automatically check traditional tests and tests, recommend working on errors [5]. This serves to free teachers from excessive bureaucratic duties and to focus their attention on methodology and personal approach. At the same time, it provides a complete, statistically based analysis of students' level of knowledge [6].

Third, SI technologies also offer great opportunities for inclusive education. For children with disabilities, students with hearing or vision problems, special interfaces, voice assistants, visualized materials can be developed using AI [7]. And this is in full compliance with the principle of "let no one be left behind".

However, against the background of the above positive aspects, there are also serious problems. Above all, overuse of SI tools leads to a weakening of students' skills for independent thinking, analysis, and problem-solving [8]. The reader gets used to getting quick answers to any question and gradually forgets to be creative, to reason [9].

The second problem is information security. Students and learners share their personal information when using SI systems. How this data is used, on what servers it is stored, and whether it is not used by third parties — these questions are still open [10]. Notably, the fact that global AI platforms (OpenAI, Google AI, Meta AI, etc.) have complete control over data can have dangerous consequences.

The third aspect is the possibility that artificial intelligence systems will provide incorrect or inaccurate information. Today's systems such as ChatGPT, Bard, Claude are still not completely fact-based, they respond based on assumptions [11]. This can be especially dangerous for young people, an audience who cannot distinguish fact from falsehood [12].

Fourth, there is the problem of the pedagogical and ethical responsibility of AI systems. For example, what social values does artificial intelligence promote in the classroom? How correctly does he understand the cultural context? These questions are pressing issues in the implementation of SI systems in education [13].

Therefore, in integrating SI into the education system, the following proposals are relevant:

- organization of systematic professional development courses on SI technology for teachers [14];
- development of codes of ethics for the use of AI tools at the national and school level [15];
- Creation of artificial intelligence assistants adapted to local language and culture;
- Instilling a culture of responsible use of AI tools in every student.

In conclusion, artificial intelligence is becoming an integral part of today's education. It can play a huge role in improving the quality of teaching, unlocking individual opportunities of students, and democratizing education. However, to make full and positive use of these opportunities, it requires an approach to SI not only as a technological tool but also as a pedagogical, social and cultural phenomenon.

Also, the state, educational institutions, teachers and technological developers should jointly contribute to the implementation of artificial intelligence in a responsible, equitable and safe manner. Only then can AI tools bring real positive results in education.

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