

ARTIFICIAL INTELLIGENCE IN HIGHER EDUCATION

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Abstract: This article examines the role and importance of digital technologies and artificial intelligence today, as well as the positive and negative consequences of using artificial intelligence in higher education. The article discusses the emergence, development, and potential of artificial intelligence systems in education, as well as ideas for improving the quality of education through their use in higher education.

Keywords: digital technology, intelligence, modern education, artificial intelligence, science, education.

INTRODUCTION

One of the most important achievements of technological progress in recent years has been the development of artificial intelligence (AI) technologies. This technology is widely used in various fields, including healthcare, industry, finance, and education. In particular, the use of artificial intelligence in the higher education system is gaining importance in automating the teaching process, enhancing individual approach, analyzing data, and taking scientific research to a new level.

With the help of artificial intelligence technologies, it is possible to improve the quality of education, reduce the workload of professors and teachers, create customized curricula for students, and even organize virtual learning environments. Therefore, higher education institutions are paying great attention to the effective use of the capabilities of artificial intelligence.

This article will extensively discuss the impact of artificial intelligence on the field of higher education, its advantages, existing problems, real-life applications, threats, and opportunities. In addition, recommendations are provided for implementing global best practices and the higher education system of Uzbekistan.

Our country is implementing comprehensive reforms across all sectors. These reforms directly impact the education system. In particular, recognizing the enormous importance and

potential of artificial intelligence technologies, special attention is being paid to their development. In the era of technological progress, artificial intelligence and digital technologies are becoming key factors influencing the development of various spheres of life. Therefore, to achieve greater efficiency in all areas of education, comprehensive reforms in this area, as well as the introduction of international experience and innovative technologies, are becoming increasingly important in the context of modern Uzbekistan.

The prospects for using digital technologies in the education system are currently being widely discussed worldwide. Digital technologies and artificial intelligence create significant opportunities for improving the educational process, enhancing the quality of education, developing students' scientific potential, and further democratizing education.

MATERIALS AND METHODS

Artificial intelligence is being used in higher education institutions in the following areas: Personalized Learning: Automatically selecting learning materials that match each student's learning speed and style; AI tutors: Explaining homework assignments to students using chatbots and AI assistants; Automated assessment systems: Tests, essays, and even code are automatically graded; Student monitoring: AI analyzes student activity and identifies those who are struggling; Academic fraud detection: AI algorithms are used to detect plagiarism and other violations.

These technologies can be used to monitor the quality of education, save professors' time, and optimize the educational process based on advanced technologies.

The most active use of AI in higher education is observed in developed countries.

USA: With the help of IBM Watson, Google AI and other platforms, universities are widely using artificial intelligence for data analysis, personalized teaching and assessment.

UK: Open University and other distance learning institutions are offering individualized learning paths using AI.

China: AI-labs, attendance control through facial recognition, real-time assessment and supervision are being implemented using AI.

These experiences can also be an important lesson for the higher education system of Uzbekistan.

Time moves rapidly. While 20 years ago, a person with a push-button phone attracted everyone's attention, today it has become commonplace for us to communicate with loved ones, even if they are far away, shop at home or at home, keep an eye on children at school, and much more. Our way of life, which has become so simple, is directly dependent on digital technology and artificial intelligence. In particular, artificial intelligence has completely transformed our

way of life through innovative technologies. Artificial intelligence has quickly become a part of everyone's lifestyle and has brought about incredible changes, impacting all areas of society. Today, artificial intelligence is actively taking hold in education. Artificial intelligence plays a vital role in creating information systems capable of learning, analyzing, transforming, and visualizing data. Overall, artificial intelligence brings numerous benefits not only to education but also to many other fields.

RESULTS AND DISCUSSION

Artificial intelligence has also significantly impacted student time savings and the successful development of education. The capabilities of artificial intelligence are vast: it can answer questions, draw pictures on command, create presentations on various topics, and even write essays and articles. Its educational algorithms adapt to individual characteristics and learning methods, expanding the possibilities for each student on their own educational journey. At the same time, the introduction of new technology-based learning tools, such as mobile devices, smart boards, tablets, laptops, and virtual labs, is positively impacting the quality of education in educational institutions. Today, instead of using paper and pencil to prepare for exams and conduct independent research, students can innovate the educational process by creating various presentations and projects. Instead of constantly lugging around heavy books, they can use e-books. This allows them to achieve greater convenience and gain a large amount of knowledge in a short time. The use of digital technologies in the education system has led to the introduction of AI-based tools that help students create lesson plans, monitor, and evaluate their performance. In conclusion, the use of digital technologies in the education system of Uzbekistan is essential for equipping the future generation with modern knowledge and skills. This process not only improves teaching methods but also enhances students' digital literacy and prepares them for the global labor market.

Digital technologies contribute to improving the quality of education, disseminating knowledge to a wider audience, and personalizing the educational process. The potential for digital technologies and artificial intelligence to be used in the education system will enable students to experience a more effective, convenient, and personalized learning experience. Digital tools will also enhance the quality of education, improve teacher performance, and equip students with the necessary skills for successful careers in the future.

The development of digital education in Uzbekistan also contributes to the global competitiveness of the education system. Digital technologies utilize electronic devices and programs to deliver educational services and integrate technology into the educational process. The traditional classroom is being transformed into a digital one thanks to computers and the

internet. Students can learn more effectively and track their progress using technology and sophisticated equipment. In the near future, these technologies will be successfully applied in education to improve the digital learning environment and enhance student performance. Modern technologies play a vital role in analyzing and managing complex data for long-term decision-making in areas such as climate change, air and water safety, biodiversity protection, disaster resilience, and others, as well as in social development.

While there are many positive aspects of using AI in higher education, there are also some threats and problematic aspects of this technology. These include:

1. Privacy and personal data security: AI systems collect and analyze large amounts of data about students. This poses a risk of misuse of personal data. If information security and data protection mechanisms are not strong, these systems can have negative consequences.

2. Inequality and injustice: If AI systems operate on the basis of inaccurate or incorrect data, this can lead to injustice among peers. For example, some students may be given the wrong grade or recommended the wrong study path.

3. Risk of teacher unemployment: Automated assessment and teaching tools can reduce the role of many teachers. This increases resistance and distrust towards AI.

4. Ethical issues: AI does not always base its decision-making on human values. It may not take into account the psychological state, culture or individuality of students.

5. Over-reliance on AI systems: If students become overly dependent on AI assistants, their ability to think independently and critically may be impaired.

Therefore, it is very important to maintain balance and take into account human factors when using AI.

AI is a powerful tool that can profoundly change the field of higher education. When used correctly, it increases the quality of education, strengthens the individual approach and allows for the effective use of educational resources. At the same time, the incorrect or uncontrolled use of AI can cause problems.

Artificial intelligence is an opportunity for advancement in higher education, but it must be used with caution. Technological progress requires educational institutions to adapt to modern changes. Teachers and students must acquire a culture of working with AI.

CONCLUSION

Artificial intelligence is becoming an integral part of modern higher education. It can help achieve high results in education, personalize the learning process, make efficient use of

time, and take science to a new level. However, using these opportunities wisely and responsibly is the responsibility of every educational participant.

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