

**THE ROLE OF ARTIFICIAL INTELLIGENCE TECHNOLOGIES IN THE SCHOOL EDUCATION SYSTEM**

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**Abstract**

Artificial intelligence (AI) technologies are rapidly transforming different sectors of society, including education. In recent years, AI has become an important tool in improving the quality of school education, supporting teachers, and enhancing students' learning experiences. This article examines the role of AI technologies in school education, their advantages, challenges, and future prospects. The study also highlights the importance of integrating AI into educational systems in order to meet the demands of the digital era.

**Keywords:** artificial intelligence, school education, digital learning, educational technologies, innovation, smart education, AI in education.

**Introduction**

The rapid development of information and communication technologies has significantly influenced modern education systems. In the digital era, traditional teaching methods are gradually being replaced by innovative educational technologies. Among these innovations, artificial intelligence has become one of the most important and promising technologies in education.

Artificial intelligence refers to computer systems capable of performing tasks that usually require human intelligence, such as learning, problem-solving, speech recognition, and decision-making. In school education, AI technologies help create personalized learning environments, automate administrative tasks, and improve communication between teachers and students.

Today, many developed countries are actively implementing AI-based educational platforms, intelligent tutoring systems, and automated assessment tools in schools. These technologies not only increase learning efficiency but also help students develop digital skills necessary for the future.

**The Importance of Artificial Intelligence in School Education**

Artificial intelligence plays a vital role in modernizing the educational process. One of the most significant advantages of AI is its ability to provide individualized education. Every student has different learning abilities, interests, and speeds of understanding. AI systems can analyze students' performance and provide educational materials suited to their specific needs.

For example, intelligent learning platforms can identify topics that students find difficult and recommend additional exercises or explanations. This personalized approach improves students' understanding and academic achievement.

AI technologies are also useful for teachers. Automated systems can check tests, evaluate assignments, and prepare reports, reducing teachers' workload and allowing them to focus more on teaching and student interaction.

Furthermore, AI supports distance learning and online education. Virtual classrooms, chatbots, and digital assistants help students access educational resources anytime and anywhere. This became

especially important during global situations such as the COVID-19 pandemic, when schools relied heavily on online learning systems.

### **Advantages of AI Technologies in Education**

The integration of AI technologies into school education offers numerous benefits.

#### **1. Personalized Learning**

AI systems adapt educational content according to students' individual abilities and learning styles. This helps students learn more effectively and comfortably.

#### **2. Increased Learning Efficiency**

Interactive AI-based lessons make education more engaging and interesting. Students become more motivated to participate actively in the learning process.

#### **3. Time-Saving for Teachers**

Automated grading and administrative systems reduce teachers' paperwork and save valuable time.

#### **4. Continuous Monitoring and Analysis**

AI technologies can analyze students' academic progress in real time and identify learning difficulties early.

#### **5. Accessibility of Education**

AI-based online platforms make education more accessible for students living in remote areas or for those with physical disabilities.

#### **6. Development of Digital Skills**

The use of AI technologies in schools helps students develop digital literacy and technological skills essential for future careers.

### **Challenges and Negative Aspects of AI in Education**

Despite its advantages, AI technologies also present several challenges.

One of the main problems is the lack of technical infrastructure in some schools. Many educational institutions may not have sufficient internet access, computers, or digital devices required for implementing AI systems effectively.

Another issue is data privacy and security. AI systems collect and analyze large amounts of student information, which raises concerns about protecting personal data.

In addition, excessive dependence on technology may negatively affect students' independent thinking and creativity. Some students may rely too much on automated systems instead of developing problem-solving skills on their own.

There are also ethical concerns related to academic honesty. Students may misuse AI tools to complete assignments dishonestly, which can reduce the quality of education.

Therefore, it is important to use AI technologies responsibly and under proper pedagogical supervision.

### **The Future of AI in Uzbekistan's Education System**

Uzbekistan is actively working on the development of digital education and the introduction of modern technologies into schools. Government reforms and national educational programs aim to improve the quality of education through digital transformation.

Electronic journals, online learning platforms, and smart educational systems are gradually being introduced into Uzbek schools. Universities and educational centers are also organizing courses related to programming, robotics, and artificial intelligence.

In the future, AI technologies are expected to become an integral part of Uzbekistan's educational system. Intelligent educational platforms may help identify students' talents, improve teaching quality, and create more effective learning environments.

### Conclusion

Artificial intelligence technologies are significantly changing the modern education system. AI provides opportunities for personalized learning, efficient teaching, automated assessment, and improved educational accessibility. Although there are certain challenges related to technology, ethics, and data security, the advantages of AI in education are undeniable.

The successful integration of AI technologies into school education requires proper infrastructure, teacher training, and responsible use of digital tools. If implemented effectively, artificial intelligence can greatly contribute to the development of a modern, innovative, and high-quality education system.

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