

Artificial Intelligence Impact on Education: Opportunities and Risks

Abstract. Artificial Intelligence (AI), comprising diverse technologies that simulate human intelligence, has become deeply embedded in modern education. It transforms teaching and learning by enabling personalized instruction, adaptive assessment, and improved student engagement. AI systems can analyze learner data to adjust content to individual needs, supporting more effective and inclusive education. However, its integration into education also raises important concerns. Issues such as data privacy, algorithmic bias, and unequal access to technology pose significant ethical and social challenges. Moreover, excessive reliance on AI may hinder students' critical thinking and understanding of core concepts, while potentially diminishing the role of educators and the value of human interaction. The chapter explores both the benefits and limitations of AI in education, emphasizing the importance of using AI as a supportive, rather than a substitutive, tool. A balanced approach—where AI enhances but does not replace human-led teaching—is essential to foster equitable and meaningful learning experiences.

Keywords: education, e-learning, artificial intelligence, digital transformation, personalized learning, generative AI, ChatGPT, intelligent tutoring systems, individualized learning experience, accessibility, ethical concerns.