Chaplygina Sofia Igorevna
student
Zagyrtdinova Elina Ilnurovna
student
Scientific adviser
Kukleva Anastasia Aleksandrovna
assistant of the department

MIREA – Russian Technological University
Moscow

ARTIFICIAL INTELLIGENCE (AI) IN EDUCATION: USING AI TOOLS FOR TEACHING AND LEARNING PROCESS

Abstract: *the article examines the application of artificial intelligence in education, particularly in the process of teaching and learning. AI is widely used across various platforms, including virtual tutors, voice assistants, intelligent content, presentation translators, global courses, automated assessment, personalized learning, educational games, and intelligent tutoring systems. It is noted that many routine tasks of teachers (grading, attendance tracking, testing, reporting) can be automated, allowing educators to focus on character building and the development of student qualities. It is emphasized that AI is a product of natural human intelligence; therefore, the two concepts will never be equal.*

Keywords: *artificial intelligence, education, automation, personalized learning.*

Чаплыгина Софья Игоревна
студентка
Загыртдинова Элина Илнуровна
студентка
Научный руководитель
Куклева Анастасия Александровна
ассистент кафедры

ФГБОУ ВО «МИРЭА – Российский технологический университет»

г. Москва

ИСКУССТВЕННЫЙ ИНТЕЛЛЕКТ (ИИ) В ОБРАЗОВАНИИ: ИСПОЛЬЗОВАНИЕ ИНСТРУМЕНТОВ ИИ В ПРОЦЕССЕ ОБУЧЕНИЯ

Аннотация: *в статье рассматривается применение искусственного интеллекта в образовании, в частности, в процессе преподавания и обучения. ИИ широко используется на различных платформах: виртуальные наставники, голосовые помощники, интеллектуальный контент, переводчики презентаций, глобальные курсы, автоматическая оценка, персонализированное обучение, образовательные игры и интеллектуальные системы обучения. Отмечается, что многие рутинные задачи учителей (оценивание, посещаемость, тесты, отчёты) могут быть автоматизированы, что позволит педагогам сосредоточиться на формировании характера и качеств учащихся. Подчёркивается, что ИИ – продукт естественного человеческого интеллекта, поэтому эти два понятия никогда не будут равны.*

Ключевые слова: *искусственный интеллект, образование, автоматизация, персонализированное обучение.*

Introduction.

Technology has changed how we live, work, and learn. One recent innovation is Artificial Intelligence (AI), which is now entering education. AI helps students learn with digital assistants and transforms thick textbooks into concise summaries and study guides. AI models human thinking so machines can act like humans. Many companies (Amazon, Facebook, Microsoft, Google) already use AI. AI combines data, iterative processing, and algorithms to learn from patterns.

In education, AI helps teachers understand student needs better and allows students to learn more easily. Although some fear AI will replace teachers, the authors argue that collaboration between teachers and AI is the way forward. The aim of this study is to explore AI in education, focusing on teaching and learning processes.

Method.

This is library research, relying on existing sources (books, journals, electronic documents). Data analysis involved compiling relevant information, content analysis, and drawing conclusions.

Findings and discussion.

AI is widely used in educational platforms as follows: virtual mentors provide feedback and recommendations, for example Blackboard which publishes notes, assignments, and quizzes while identifying reasons for misunderstanding and offering solutions, as well as an electronic mentorship system for new teachers using Blackboard and Skype; voice assistants such as Google Assistant, Siri, and Cortana allow students to search for materials by voice using natural language and cloud computing; smart content simplifies searching and organizing digital books with examples like Cram101 which breaks textbooks into summaries, tests, and cheat sheets, and Netex Learning which offers a cloud platform with virtual training, videos, and personalized recommendations; presentation translators provide real-time subtitles using speech recognition, helping overcome language barriers and aiding visually impaired learners; global courses including MOOCs, Udemy, Khan Academy, Coursera and others offer personalization features such as progress notifications, material recommendations, and adaptation to cultural background and language; automatic assessment enables automatic quiz creation and grading, for instance the Kejarcita platform where teachers choose subject, level, and number of questions, and the system scores responses, shows errors, and provides explanations, thus freeing up time for monitoring progress and improving teaching methods; personalized learning uses AI to analyze student data, adapt pace and content, and give recommendations and schedule reminders, but AI remains a tool while affective and moral aspects such as feelings and psychology belong to the teacher’s domain; educational games like Duolingo, Khan Academy Kids, Quick Brain, and Puzzle Kids use gamification and AI to dynamically adjust difficulty and maintain engagement, with studies showing that similarity heuristics achieve over 60% accuracy and immersive learning models are effective; and intelligent tutoring systems (ITS) adapt instruction to student level without human intervention, with examples including ITS for English grammar, for

Arabic reading rules, and for geometry with augmented reality, and users report high satisfaction.

Conclusion.

AI can provide knowledge, but it cannot develop character, inspire, motivate, or educate – that is the teacher's job. AI lacks feelings and emotions. Technology evolves rapidly; if we do not adapt, we risk being replaced. However, with proper human-AI collaboration, education becomes more effective while preserving its human essence.

Discussion.

Education is not just about knowledge; it develops social skills, empathy, sympathy. Machines cannot teach emotions. No matter how sophisticated AI becomes, it cannot replace teachers – it only helps and empowers them. With AI: creating media and materials becomes easier, assessment is automated including item analysis, learning becomes accessible anytime and anywhere, and students can connect with tutors from other countries.

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