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## **Artificial Intelligence in Education**

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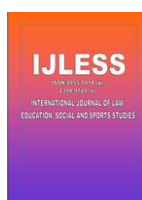
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### **ABSTRACT**

Over the past decade, teachers worldwide are increasingly adopting Open The aim of this research was to evaluate how artificial intelligence (AI) is affecting schooling. Based on a narrative and assessment framework for AI that were discovered during an initial analysis, the study's focus was restricted to the use of AI and its consequences in learning, teaching, and administration. In order to achieve the goal of the study, a qualitative research approach that made use of the literature review as a research design and approach was employed.

The study of artificial intelligence and the breakthroughs and advancements that followed have led to computers, machines, and other artifacts possessing intelligence similar to that of humans, as evidenced by their cognitive capacities, learning, adaptability, and decision-making abilities. According to the report, AI has been widely embraced and applied in education, especially by educational institutions, in a variety of ways. AI began with computers and computer-related technologies, then moved on to web-based and online intelligent education systems, and finally, with the use of embedded computer systems and other technologies, humanoid robots, and web-based chatbots to carry out the tasks and responsibilities of instructors either alone or in conjunction with other instructors. Instructors have been able to carry out many administrative tasks by using these platforms.

Keywords: Chatbots, Artificial Intelligence and Web-based.

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### **Introduction**

In the modern era, artificial intelligence (AI) is a part of our life and is developing effectively. Many people attribute the origins of artificial intelligence to the 1956 Dartmouth Summer Scientific Research on Computer Science. Today, artificial intelligence is used in police cancer investigations, aviation crash prevention, autonomous car development, and other fields. Robots with artificial intelligence (AI) have surpassed human surgeons in mending wounds, conducting search and rescue operations, caring for children, the elderly, and hospital patients, and helping credit card companies identify fraudulent

activity. In the last 20 years, artificial intelligence (AI) has been used in education. An inspiring test-bed for formalizing psychological feature theories and experimenting with their operationalization has been created by the Intelligent Tutoring Systems (ITS), which cover all of the main AI topics (e.g., data illustration, machine learning, tongue, planning, reasoning, and explanation). Because of the evolution of educational systems, artificial intelligence (AI) has been used in education in a variety of fields, including physics, programming, essay writing, and reading. Data visualization, intelligent tutoring, language processing, and autonomous agents are the most common uses of AI in academia. Over the years, AI in education has produced engaging interactive experiences and strong learning environments for college students.

### **AI in Education**

Artificial intelligence is transforming education by providing innovative technologies that improve instruction and learning. Here are 39 instances of how AI is revolutionizing contemporary education, ranging from streamlining administrative duties to personalizing experiences:

1. **Adaptive Learning:** AI-powered systems instantly evaluate students' proficiency levels and modify course material to suit each learner's requirements. These systems offer tailored pathways to assist students in mastering subjects at their own pace by dynamically modifying lectures in response to student reactions.
2. **Assistive Technology:** By translating spoken words into text and vice versa, tools like voice recognition software enable students with disabilities like dyslexia or hearing impairments to engage more fully in the classroom.
3. **Analytics for Data and Learning:** AI facilitates the analysis of data from online learning platforms, attendance records, and grades. This data gives teachers information about how well their students are performing, enabling them to see patterns and modify their lessons to close performance and comprehension gaps.
4. **Classroom management:** which platforms gamify through AI. AI keeps track of student involvement and conduct, rewarding good behavior with badges and points, and giving teachers information about classroom dynamics to help them control and inspire their pupils.
5. **Intelligent teaching systems:** AI-driven tutoring programs like Carnegie Learning offer individualized feedback and assistance, adjusting to each student's unique learning preferences and requirements to help them comprehend difficult ideas and enhance their academic achievement.
6. **Automated Grading and Assessment Tools:** Teacher time is saved, consistency is ensured, and the grading process is streamlined with the use of AI to assess assignments and offer thorough feedback. Additionally, by evaluating the content for consistency and relevance, AI may grade more abstract assessments, such as essays.
7. **Chatbots and Virtual Assistants:** AI-powered chatbots, like Mainstay, offer kids emergency help and support after school hours. In order to improve engagement and encourage self-directed learning, these chatbots respond to inquiries, remind students of due dates, and assist them with administrative procedures.
8. **Curriculum Planning:** By evaluating educational data to find patterns and gaps, AI assists teachers in creating curriculum. This makes recommendations for curriculum revisions based on the most recent standards and needs in education, ensuring that the curriculum stays thorough, current, and in line with learning goals.

9. **Learning and Interactive Games:** AI improves educational games by producing dynamic and captivating learning environments. By using artificial intelligence (AI), these games offer challenges and tasks that change based on the answers from students, encouraging engagement and comprehension of difficult material.
10. **Personalized Learning:** AI learning systems adjust to the many ways that pupils comprehend ideas to produce personalized learning experiences. This lessens cognitive burden and guarantees that every student receives teaching that is appropriate for their pace and learning type.

#### **Current Real-World Trends in Artificial Intelligence Applications.**

1. **AI in banking:** is a rapidly expanding field in which numerous banks use AI-driven methods to identify credit card fraud, identify irregularities, and offer customer service through electronic virtual assistants.
2. **Artificial Intelligence in Healthcare:** It employs sophisticated algorithms to identify and simulate complex human illnesses and provide medication ahead of time.
3. **AI in gaming:** to create intelligent and adaptive player behavior.
4. **AI in Space Exploration:** AI and ML are the best techniques for managing and analyzing data at this scale. This AI is used in NASA's next Mars 2020 mission.
5. **AI in Chat Bots:** Virtual assistants like Siri, Alexa, and Cortana are now commonly utilized in every home. It can be used to order food, schedule taxis, operate household appliances, and more.
6. **AI in Artificial Creativity:** Artificial Creativity on Facebook and other social media platforms. AI detects hate speech and negative content, designs feeds based on our interests, and employs machine learning and deep learning algorithm approaches for face detection and automatic tagging.

#### **Conclusion**

Artificial intelligence in education does have several drawbacks, though. A human teacher may be more effective than a robot. AI's drawback in education is that it could not always be an effective teaching tool. AI is emotionless. When they receive a lesson, ask a question, and do not receive a response from the AI, they do not believe that the AI is looking out for them. This is a new topic that is being researched at universities all over the world by academics who are trying to create AI technology that will make our lives better. Adaptive learning, which modifies the speed of education according to each student's performance, is another application of artificial intelligence. Conversely, some individuals are concerned about how AI will affect the decline of human interaction.

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