

## The Role of Artificial Intelligence (Ai) in Education

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**Abstract.** The article deals with the role of artificial intelligence (AI) in education. Here some questions as what tasks AI solves in education are discussed. And analyzed that artificial intelligence (AI) will play a key role in realizing the idea of personalized learning - tailoring learning, its content and pace to the specific needs of each student.

**Key words:** artificial intelligence, key role, realizing the ideas, personalized learning, tailoring learning, specific needs of student.

As the application of AI plays an important role in many sectors, the education sector has also received attention in recent years. IT technologies and their applications are considered one of the important directions in the development of education. Education welcomes AI technologies; its application related to learning and teaching is increasing day by day.

According to a Horizon report published in 2018, the number of AI applications will increase by 43% from 2018 to 2022. A report published by the same organization predicts that the growth in AI adoption will be even greater than previously noted.

The importance of AI in education cannot be denied, and its role in this field is linked to its future. Education somehow welcomed the emergence

AI, but many teachers do not know what it is [2, p. 8]. AI is inevitable in education and its applications exist to help educators in achieving goals. The question of how AI affects education remains open.

AI is a field of machine learning that consists of software that can recognize patterns, make predictions, and learn to create new patterns or make decisions on its own [1, p. 20]. In other words, he has the expertise to react according to a situation that was not in the program with their original intent. AI does this through its rational agents, which are responsible for purposeful behavior.

The term "rational agent" has previously been used in game theory, economics, decision theory, etc., has clear preferences and prefers to act in such a way as to get the best result among many alternatives. Researchers have shown that learning consists of social exercises involving cooperation and interaction.

The role of AI in education lies in its intelligent methods of teaching, communication, analysis, evaluation and assessment of the student or student in addition to supervision, process control and optimization. AI technology performs all the tasks required by the teacher and student. The technology

must be able to communicate in such a way that the language etc. on the part of the user is understandable and makes sense. The use of AI in education and training is of great importance. It equips the method of education and upbringing with new technologies and procedures. It engages researchers from different disciplines to explore a broader range of issues related to education. It is clear that AI and its role in education are interdisciplinary, and many problems that go beyond traditional education can be easily solved with the help of AI.

For example, students can access learning from a location where they do not have access to physical classrooms in a real environment, they just need the necessary artificial intelligence technology to teach or communicate in accordance with their teaching or learning goals.

In short, just like any other sector, education is also influenced by modern technologies and AI is one of their types. Many problems that cannot be solved in other ways can be solved with the help of AI in education. Access to classrooms, content, lack of an expert teacher, etc. are some of them. The closure of educational institutions during the COVID-19 pandemic is one of the clearest examples.

Artificial intelligence technology and its applications have helped this sector in many ways. The need for artificial intelligence is widely recognized and the technology has been found to be useful in response to the challenge.

We conclude the answers to the questions formulated as the objectives of this article as follows:

1. What is the role of AI in education?
2. Does AI provide a solution to educational challenges?
3. Does AI benefit education? What is the role of AI in education?

AI has played a huge role in education, which has been further enhanced by the COVID pandemic. Perhaps the intensity of acceptance and recognition of AI has potentially increased in the education sector. AI plays many roles in education, such as enabling access and improving communication between teachers and students. It has changed trends in education and learning by introducing personalization where someone's learning depends on the student's level of knowledge, his/her learning rate, and the goals to be achieved as a result of the learning or course. Unlike the traditional way, each student's learning history is constantly analyzed to assess weaknesses and suggest courses of interest and improvement.

Another important role of AI in education is teaching. Through its many applications and tools, AI provides learning, such as a Chabot or SR. He provides extra help to students outside of the classroom. AI has reduced the workload for many teachers who don't have much free time. In other words, he teaches inside and out to cover the students' weaknesses, if any, at any time and from any place. In addition, AI also solved the issue of timely response.

It can answer repetitive and frequently asked questions in seconds and overcome the frustration of long delays.

Questions of general interest and frequently asked questions are now answered by artificial intelligence tools, minimizing waiting times for students and information seekers, as well as being bombarded with such questions by faculty and departments. Getting an education with AIA reduces the interaction between students and teachers and does not give students the experience of a physical environment. This is the biggest weakness and requires further study.

Does AI provide a solution to education-related problems?

In education, there are two types of educational difficulties: academic and administrative difficulties. AIA not only assists the relevant personnel and department in completing these tasks, but

also provides automated solutions for most of them. Record keeping and front desks now use artificial intelligence tools to minimize the burden of tasks. Similarly, AI also assists academic staff by efficiently performing their tasks, such as checking assignments, grading exams, attendance, and records. Difficulties of both types have been addressed through task automation and intelligent learning. On the part of the student, the main difficulties are access to education and training in accordance with the level the student's intellect.

Does AI benefit education?

Answer: Yes. In addition to the role discussed in questions 1 and 2, AI benefits education in many other ways. For example, you cannot learn how to fly an airplane only from books and teachers. You need to gain hands-on experience of how it feels and works. AIA, through its virtual environment, provides the necessary situations and work experience, etc.

AI systems in various forms can conduct such experiments without the risk of human losses. Such experiments are common in chemistry and physics. In the field of medicine, various animations and virtual images are created using artificial intelligence systems that help students learn about the functions and anatomy of the human body and organs more easily than they can learn from books. The benefits that AI has shown during the recent COVID-19 pandemic are clear, and it may be that education and learning have remained intact thanks to AI.

### **Conclusions**

In conclusion, it should be noted that artificial intelligence has affected many industries, and one of them is education. It is a modern method of tutoring or teaching and learning that can solve many of the problems associated with learning. It can solve such problems like accessibility of content, lack of teachers, where the student can learn without stress and influencing others. The adoption and adoption of AI is inevitable in the education sector.

AI technologies are not limited to intelligent learning, learning systems, and social robots; there are many other smart technologies such as the virtual facilitator, online learning environments, learning management systems and learning analytics that are also making significant contributions to this sector.

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