



Effect of Artificial Intelligence on Education

Guide

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Introduction

Artificial Intelligence (AI) has the potential to tackle some of the biggest challenges in education today, innovate teaching and learning methods and ultimately accelerate progress towards education. However, this rapid technological development inevitably brings multiple risks and challenges, which are Policy debates and regulatory frameworks have gone a long way. The connection between AI and education involves three areas: learning with AI (e.g. using AI-powered tools in the classroom), learning about AI (its techniques and technologies), and preparing for AI (e.g. the potential impact on all citizens). enabling better understanding.AI on human life). The aim is to contribute to mainstreaming both the human and technical aspects of AI into training programs for school students. It begins with capacity building of curriculum developers and master trainers from selected national organizations to empower youth. AI brings 24/hour access to teachers and lessons anytime, anywhere. AI can be used as an educational tool that guides students towards their goals by providing personalized feedback on homework, quizzes, etc. based on AI algorithms.

Impact of Artificial Intelligence on Education

Artificial intelligence enabled solutions and tools in the education sector empower teachers and students with a wide range of learning and teaching opportunities in various formats. Technology helps organizations to make significant changes in their processes and create knowledge-based curriculum. Artificial intelligence can help students learn better and faster when combined with high-

quality learning materials and instruction. AI systems can also help students get back on track faster by alerting teachers to problems that the naked eye can't see. The use of AI in education has many advantages for both students and teachers: learning resources can be accessed from anywhere, at any time. Time-consuming, tedious tasks such as record keeping or grading multiple-choice tests can be accomplished through AI automation. To summarize it, Artificial Intelligence helps in areas such as voice command, 24/7 availability, improved user experience, reduced error, increased speed, dangerous tasks, medical diagnosis and prescriptions and many more.

Below are some more impacts of artificial intelligence on the education industry. They include:

- **Ability to provide quality content for students worldwide**

Education should be accessible to everyone irrespective of their geographical location. Learning through artificial intelligence has long been considered a critical factor in overcoming geographical boundaries by facilitating globally flexible learning environments.

- **Provision of personalized content**

The availability of smart content is a hotly debated topic, in which AI systems can be used to provide quality content that is similar to what students buy from the best research paper writers online.

- **Personalized information to meet your academic need**

AI learning environments can adapt to a student's skill level, course mastery, etc., thus identifying the challenges they face. Accordingly, they provide relevant content and activities to enhance your knowledge base in a particular subject.

- **Tailored learning environment**

You probably already realize that most streaming services offer a list of shows you might like, which is a great example of AI personalization of shows from your favourite genres. Different other systems can be used in education to meet the different needs of different students.

- **Take on the responsibility of various repetitive tasks**

Teachers spend most of their time on administrative duties such as marking exams, reading student assignments, planning timetables, etc. All of this can be accomplished through AI systems such as automated assignment processing and grading systems. Thus, teachers spend more time with their students.

- **Improved efficiency within the learning environment**

The use of AI, at least, reduces the chances of delays in certain processes in the learning environment due to human error. A classic example of AI being used in schools is through the collection of data from various sources and the creation of accurate predictions to effectively plan for the future.

Advantages of AI in Education

Nowadays youngsters spend a lot of time using their smartphones or tablets. This gives them an opportunity to study for ten to fifteen minutes in their free time using AI applications. AI helps us understand the mood or ease of a student during a lecture using gesture recognition technology. As AI becomes more sophisticated the machine reads the student's facial expressions or gestures and uses it to know if the student is having trouble understanding the lecture and change the lesson so the student can follow along easily.

Customization of educational curriculum can be done by AI powered machines. AI tools can make possible global classrooms that include people with visual or hearing impairments. This can also help students who cannot attend classes due to illness. In the normal education system, the teacher grades students on their homework and tests, which take a lot of time. Here AI will make quick work of these tasks when it steps in. It also helps suggest ways to bridge learning gaps.

AI provides many resources for people who speak different languages or have hearing or visual difficulties. Presentation Translator provides subtitles in real-time mode, an AI based system application. For example, students can read and listen in their national language with the help of Google Translator. Modern technologies like Virtual Reality (VR) and gamification are helpful for more interactive sessions.

There were already some setups where multiple-choice tests were graded by machines and now there are developments in the direction where written type answers like paragraphs, statements can be graded using machines. This makes the teacher's work easier and does not waste time and this saved time can be used to focus more on individual assessment of the student and their development.

Main advantages of AI in Education are as follow.

1. Benefits for students

- **Personalization**

Personalization is one of the biggest trends in education. With the use of AI, students now have a personalized approach to learning programs based on their own unique experiences and preferences. AI can adapt to each student's knowledge level, learning speed and desired goals so they can get the most out of their education. Also, AI-powered solutions can analyze students' previous learning history, identify weaknesses and offer best-suited courses for improvement, providing multiple opportunities for a personalized learning experience.

- **Tutoring**

While it is not uncommon for students to need extra help outside of the classroom, many teachers do not have free time for students after hours. AI tutors and chatbots are a perfect solution in these situations. While no chatbot can truly replace a teacher, AI tools can help students sharpen their skills and improve weak spots outside of the classroom. They provide a one-on-one learning experience without a teacher present to answer questions at all hours of the day. In fact, the AI-powered chatbot can answer student questions with a response rate of 2.7 seconds.

- **Quick responses**

There is nothing more frustrating than asking a question only to get an answer three days later. Teachers and educators are often bombarded with repetitive questions on a daily basis. AI can help students find answers to their most frequently asked questions in seconds through support automation and conversational intelligence. Not only does this free up a lot of time for teachers, but it also helps students spend less time searching for answers or waiting for their questions to be answered.

- **Universal 24/7 access to learning**

AI-powered tools make learning accessible to all students, anytime and anywhere. Each student learns at their own pace, and 24/7 access makes it easy for students to find

what works for them without waiting for a teacher. In addition, students from all over the world can have access to high quality education without having to travel and live.

2. Benefits for educators

- **Personalization**

Just as AI can personalize courses for students, so can it for teachers. By analyzing students' learning abilities and history, AI can give teachers a clear picture of which subjects and lessons need to be re-evaluated. This analysis allows teachers to create the best learning program for all students. By analyzing the specific needs of each student, teachers and professors can adjust their courses to address the most common knowledge gaps or areas of challenge before a student fall too far behind.

- **Answering questions**

With access to the school's entire knowledge base, AI-powered chatbots can answer a variety of common and repetitive questions that students typically ask without involving a faculty member. By bypassing the teacher, AI frees up more time for them to focus on lesson planning, curriculum research or improving student engagement.

- **Task automation**

The power of AI can automate the most mundane tasks, including administrative work, grading papers, assessing learning patterns, answering common questions, and more. According to a Telegraph survey, teachers spend 31% of their time planning lessons, grading tests and doing administrative work. However, with support automation tools, teachers can automate manual processes, leaving more time to focus on teaching core competencies.

Disadvantages of AI in Education

Despite the vast opportunities that AI offers, it may also come with some potential risks. AI has the potential to be the best or worst thing that can happen to humanity. AI can support teaching and learning but new ethical implications and risks emerge with the development of AI applications in higher education. One such example is that due to the ongoing corona virus pandemic and budget cuts, administrators may consider replacing education with profitable automated AI solutions. If the

use of AI in education increases, personal interactions will decrease and students will become addicted to technology and sometimes this is likely to harm rather than help students.

Faculty members, student counselors, teaching assistants, and administrative staff may fear that an intelligent tutor system, an application of AI, can replace them. AI systems require huge amounts of data, including student and staff information, which is confidential and leads to serious privacy issues. AI is very expensive compared to installation, maintenance and repair costs. Only heavily funded educational institutions can allow themselves to enjoy such high technology. When this technology is over-relied it can cause a lack of personal connection and harm users from this perspective. When something like natural disasters or accidents happen and the AI needs repairs, we never know how much data is lost.

Main disadvantages of AI in education are as follow.

- Human interaction decreases
- Unemployment of teachers
- Financial problems
- Lack of emotional intelligence
- Artificial intelligence addiction
- Artificial intelligence data problems
- Communication barrier
- Decreases the thinking power of the students
- Maintenance problems
- Laziness in students

Conclusion

AI is a revolutionary change in education. A report issued by the Center for Integrative Research in Computer and Learning Sciences states that next-level applications of AI in education are yet to be explored. So people working on AI applications should inform teachers and education policy makers about this in depth. Although there are many disadvantages of using AI in education, our future is AI so the educational system should start exposing their students with this kind of technology that started using AI a little bit. The impact of AI will be seen in the lowest education levels and will

gradually increase to higher education. Only time will tell the ultimate impact of AI in education. The main aim of AI is to facilitate the work of the teacher but not to replace it.

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