

A Role of Artificial EduTechnologies in Education

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Abstract: *Artificial Intelligence in Education is a popular issue since it is rapidly changing how we learn. So, what does this imply for kids? Is there a change in children's learning processes as a result of AI integration? For every youngster, artificial intelligence in education has the potential to be a game-changer. Many schools across the country are already implementing AI, and you should be aware of how AI might assist your child. Here I have tried to give a technical view of Education using AI-powered technologies, its challenges, advantages and disadvantages.*

Keywords: Education, Artificial intelligence, Technology, Chatbots, Virtual Reality

I. INTRODUCTION

Technology has always played an important role in education, but its use is now more widespread than ever due to the increased availability of smart devices and web-based curriculum. With the rise of Artificial Intelligence in education, there are numerous ways in which it is being used to assist students in learning. Following technologies explains how Artificial intelligence is making Education more impactful and effective.

II. AI-POWERED TECHNOLOGIES INFLUENCING EDUCATION

2.1 Chatbots

Chatbots are one example of AI educational apps that students may use in the near future. These are increasingly being used in classrooms, where students use iPads or laptops to communicate with bots designed to help them understand specific topics like math or reading comprehension. Chatbot tutors may be able to do more than just help students learn new things. Chatbots are the technological roots of the future. It shortens the number of tasks assigned to teachers. Chatbots used in classrooms could also replace email communication between teachers and parents while parents attend parent-teacher conferences.

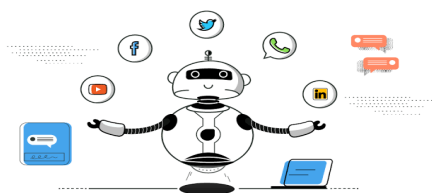


Figure 1: AI based Chatbots influencing Educational social Apps

2.2 Virtual Reality (VR)

Virtual reality is a recent educational innovation that is being used for everything from teaching history to assisting students with math skills. Virtual reality is a three-dimensional computer-generated environment in which users can explore and interact. VR educators are developing novel approaches to incorporating experiential learning into their classrooms, thereby shaping what it means to be a student. VR is an excellent tool for making students feel more connected to one another. They can communicate safely while still being separated by distance when they are in different classrooms but using the same virtual reality programme. Students can use Virtual Reality to explore things that they might never see or learn about in real life. The same is true for teachers. Teachers can devise far more engaging methods of instructing their students. Anyone who has tried virtual reality (VR) will agree that it is far more immersive than sitting

in front of a screen or being inside a computer-generated environment. Increased engagement and comprehension are just two of the advantages for students and teachers.

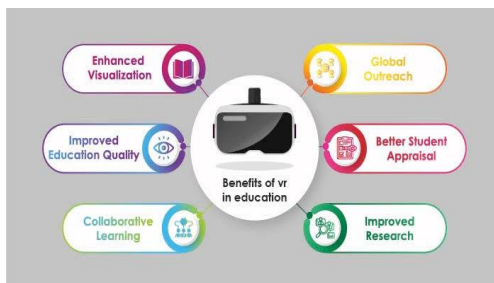


Fig 2: Benefit of VR in Education

2.3 The Learning Management System (LMS)

One of the most important things in this day and age is to keep up with educational advancements. The use of Learning Management Systems is one of these advancements. A learning management system (LMS) is a centralised, user-friendly system that manages all of a school's online activities. These tools can be used for a variety of tasks, but they are most commonly used to accomplish the following:

- Assign homework
- Maintain open lines of communication with students and parents.
- Monitor each student's progress.
- Produce reports on student performance.

These systems enable all aspects of a course, from lessons and assignments to assessments and grading, to be contained within a single space. Teachers can thus provide feedback on any assignment or assessment at any time. Students can access their grades immediately rather than waiting until the end of the semester. Using these LMSs with AI software, students can learn about a wide range of subjects. A learner can get assistance from an AI-powered intelligent digital tutor, who assists them with their problems and provides them with the correct solution. With Artificial Intelligence, one can even create a learning management system capable of understanding how students think and assisting them in learning more effectively. There are now LMS systems that can assist teachers in creating content, assist parents in tracking their child's progress in the system, and assess them using an AI engine. This has assisted teachers in decreasing classroom management time, assisting parents in better understanding their child's progress, and reducing teachers' workload. LMSs are a valuable resource for both teachers and students.

2.4 Robotics

In recent years, there has been an increase in the use of robotics and artificial intelligence in education. It is now used to assist both teachers and students in education, which has been shown to improve student engagement and safety. With the current state of AI development, robotics in education is unavoidable. Robots can be an excellent learning resource for both students and teachers, providing an opportunity to delve deeply into a subject without becoming bored.



Fig 3: Skills that children develop due to robotics

For teachers, this means that robots can help them spend more one-on-one time with students who require extra assistance. It also allows them to try out new teaching methods, which is important when trying to reach out to different types of learners. For students, it's an opportunity to learn something new without the pressure of being the only person in class or being judged by their peers. Robots can provide that space where they don't feel embarrassed if they don't get what they want right away. Robotics is important for students to learn because it teaches them that engineering is more than just solving problems on paper or drawing on a mat. They can see the results of their efforts as well as the end result. Teachers can also use robotics as a teaching tool to teach current events or math concepts such as fractions. As technology advances, it will undoubtedly play an increasingly important role in people's lives.

III. CHALLENGES

Learning how to use technology is a challenge for both students and teachers. The majority of the time, the issue is that teachers are not being trained on how to use new technology in their classrooms. As a result, they must figure it out for themselves or seek assistance from someone they already know. Teachers require assistance in understanding how to use these tools to provide students with an engaging learning experience.

IV. THE BENEFITS AND DRAWBACKS OF ARTIFICIAL INTELLIGENCE IN EDUCATION

However, the benefits and drawbacks of artificial intelligence in education are not so black and white. There are benefits to both sides, but there are also drawbacks to both sides. AI is increasingly replacing humans in a variety of fields, including education. It entails not only teaching but also grading papers, writing essays, and advising students on what they should study next. The question is whether it should be.

4.1 Advantages

Artificial intelligence in education is a hotly debated topic right now. People are divided about whether or not artificial intelligence (AI) should be used to educate students. Many people believe that artificial intelligence (AI) will replace teachers and eliminate the human element of education. However, there are numerous benefits to using AI in education. AI can grade papers and essays much more quickly than humans. This will allow teachers to spend more time working with students on critical thinking and critical analysis skills. Teachers would also be able to focus on individual students who would benefit from their guidance. AI can also help human teachers by providing information about student learning styles and providing hands-on feedback to students who need more practise with specific topics or skills. AI is not tired, does not experience mood swings, and does not have a life outside of education. However, there are some disadvantages to using artificial intelligence in education.

4.2 Disadvantages

A robot may not be as effective a teacher as a human. The disadvantage of AI in education is that technology may not always be effective in the classroom. AI does not have feelings. Students do not feel cared for by the AI when they are lectured to, when they have a question, and when they do not receive a response from the AI. This is a developing field that is being studied at universities around the world by professors who are working on developing AI technologies that will improve our lives. Artificial intelligence can also be used to provide students with adaptive learning, in which the pace of instruction is adjusted based on how well each student performs. On the other hand, some people are concerned about the impact of AI in areas where human interaction is declining.

V. CONCLUSION

Parents who are constantly concerned about their children's social lives will benefit from AI. AI technology enables them to keep a closer eye on their child's online activity than ever before. Schools use software that analyses data points such as how well different students comprehend material and then groups students based on what they require. AI enables 24/hr access to teachers and lessons from any location, at any time. Based on AI algorithms, AI can be used as an educational tool to guide students toward their goals by providing personalised feedback on homework, quizzes, and so on. Artificial intelligence has the potential to make everyone's life easier by automating menial tasks, so you don't have to waste time organising emails or searching for files. Education's future has arrived! AI is a critical change agent in

education. AI has numerous advantages. Every student, regardless of learning ability or disability, will have equal access; this makes a huge difference because not all children learn at the same pace or have similar skill sets. Students can brighten their future with the assistance of AI.

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