



# The Importance of AI in Education Sector

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## **Abstract:**

Global adoption of technology in education is transforming the way we teach and learn. Artificial Intelligence is one of the disruptive techniques to customize the experience of different learning groups, teachers, and tutors.

Artificial Intelligence is a branch of science producing and studying the machines aimed at the stimulation of human intelligence processes. The main objective of AI is to optimize the routine processes, improving their speed and efficiency (provided it has been implemented and supported properly). As a result, the number of companies adopting AI continues to grow worldwide. The importance of AI in education comes with AI tools such as educational apps, online tutoring systems, interactive games, and platforms that analyze data to improve educational outcomes. Essentially, the role of artificial intelligence in education is to make education more efficient, generate engaging content, and tailored to each student's needs. It also can analyze vast amounts of data and learn from interactions, allowing it to offer unique insights into each student's learning process, meeting the educational experience to their individual needs and preferences.

AI can bring many benefits to the education sector, transforming the way in which pupils learn and educators teach. Research by the Department for Education found that 42% of primary and secondary teachers had used generative artificial intelligence (GenAI) in their role (November 2023); meanwhile, 74% of online 16-24 year olds in the UK have used a GenAI tool. It is clear that AI is going to make its way into education, and so it is important that educators understand how to use it safely and effectively.

### **Importance of AI in Education for Teachers:**

The role of Artificial Intelligence in education is continuously becoming a game-changer for teachers along with transforming the traditional form of teaching methods. Here's a look at how the importance of AI in education is reshaping the role of teachers in education:

#### **1. Personalized Learning**

It can provide a personalized learning experience to every student along with analyzing the student's learning pattern, strengths, and weaknesses. Similarly, one of the uses of artificial intelligence in education can help teachers tailor the learning experience to meet the individual needs of each student.

#### **2. Engagement**

Moreover, AI-powered tools make the learning process more interactive for students, which can help keep students engaged. Different activities like games or simulations can be included to make the learning process more fun for your students.

#### **3. Customized Feedback**

Teachers can make use of AI in education to provide immediate and personalized feedback to students, helping them understand their mistakes and improve quickly.

AI can help teachers save their precious time by helping them with tasks that require manual efforts such as providing feedback, preparing lesson plans, classroom interactions, etc.

#### **4. Automated Grading System**

Teachers can make their task of grading their students an easy and smooth process. AI can grade assignments and exams quickly and consistently, allowing teachers more time to concentrate on lesson planning and individual student needs. This is one of the best uses of artificial intelligence in education.

#### **5. Task Automation**

Routine administrative tasks can be automated with AI, allowing teachers to dedicate more time to teaching and less to paperwork. AI in education can streamline



administrative tasks such as attendance, scheduling, and communication with parents, reducing the administrative burden on teachers.

## **6. Learning Gap Analysis**

With the help of AI tools, teachers can easily identify learning gaps among students. Teachers can get access to detailed reports and insights into each student's learning journey. By using these insights, educators can tailor their teaching strategies to meet the individual needs of their students, ensuring that no one is left behind.

AI's ability to process vast amounts of data quickly and accurately means that these gap analyses are more comprehensive and detailed than what would be feasible manually.

## **7. AI in Examinations**

The role of AI in examinations is multifaceted, offering benefits such as automated grading, plagiarism detection, and the generation of personalized feedback. Teachers can reduce their administrative workload, allowing them to dedicate more time to student engagement and instructional improvement.

## **8. Smart Content**

The involvement of AI is transforming education by making teaching materials more interactive and personalized. Digital textbooks and online modules can adjust to each student's learning pace, enhancing the importance of AI in education. Moreover, these materials are always up-to-date, keeping content relevant and aligned with new standards. This capability is crucial for the future of AI in education, as it helps teachers deliver a dynamic learning experience that meets the expectations of today's digital-native students.

## **9. Universal Access**

Teachers can utilize the importance of AI in education to reach a wider audience and create an inclusive learning environment where every student has the opportunity to succeed. Furthermore, it can facilitate remote learning, which has become increasingly important, ensuring that education continues uninterrupted under any circumstances.

## **10. Enhanced Teaching**



Teachers can analyze the effectiveness of teaching methods and offer suggestions for improvement, helping them to continually develop their skills.

By integrating these AI capabilities, teachers can enhance their teaching methods, provide better support to students, and manage their time more effectively.

### **Importance of AI in Education for Students**

**The importance of AI in education students is multifaceted and rapidly evolving. Here are some key points highlighting its impact:**

- Makes learning more accessible to students with special needs like voice-to-text transcribers, personalized learning interfaces, and software for adaptive learning.
- Additionally, helps in identifying the learning patterns and preferences of individual students.
- AI-powered language learning apps and tools can offer personalized language learning experiences for students.
- Furthermore, AI systems can help in the early detection of learning disabilities or difficulties by analyzing student interaction and performance data, enabling timely intervention.

### **What Does the Future of AI in Education Look Like?**

The future of AI in education looks like a fun and exciting adventure into a world of smart teaching and learning. AI tools will offer a helping hand, creating personalized learning experiences for every student.

Consequently, these tools could adapt to each student's learning style, making sure that everyone understands the lesson, no matter if they are fast learners or slow learners.

Along with students, teachers will also benefit from AI advancements. They will get tools to ease their time-consuming tasks like grading papers, preparing lesson plans, or helping students directly.

Indeed, the future of AI in education is all about making teaching and learning more accessible, efficient, and enjoyable for everyone involved.



### **Conclusion:**

The importance of AI in education cannot be understated. AI will be a transformative force that will reshape how we teach and learn. It will make education more accessible, efficient, and engaging for teachers as well as students. The journey of artificial intelligence in education is just beginning, and its potential to revolutionize the field is limitless.

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