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THE ROLE OF ARTIFICIAL INTELLIGENCE IN THE EDUCATIONAL PROCESS

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Abstract

Artificial intelligence (AI) is rapidly entering the educational system and becoming a dependable assistant for both students and teachers. It contributes significantly to the improvement of education standards and changing teaching methods. AI offers personalized learning materials for each student, creating the opportunity to take into account their level of understanding and individual needs. Applying AI correctly can lead to achieving quality education and preparing new generations for the challenges of the modern world. Artificial intelligence opens up new possibilities for enhancing the effectiveness of teaching, fostering students' passions, and tailoring each to their own requirements. When artificial intelligence is used properly, it can result in high-quality education and prepare the next generation for the difficulties of the modern world. Artificial intelligence (AI) is quickly entering the educational system and developing into a dependable tool for instructors and students alike. It makes a substantial contribution to raising educational standards and altering instructional strategies. Each learner receives individualized learning materials from artificial intelligence (AI), which makes it possible to consider their unique demands and comprehension ability. The impact of artificial intelligence (AI) on education is examined in this article, along with its advantages, disadvantages, and possibilities for the future. Additionally, instances of AI's successful use in education elsewhere are provided. Furthermore, the paper that follows offers suggestions about the

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potential of artificial intelligence and its potential future applications in this subject.

Keywords: Artificial intelligence (AI), educational system, learning materials, comprehension ability, ChatGPT, Duolingo, PrepAI, Smartest learning, MATHiaU.

Introduction

Can technology improve language teaching and learning?" If we concentrate on this question specifically, especially in terms of teaching English and language proficiency, we can't imagine living without technology these days. We even use it to order food. People only go outside when absolutely necessary; otherwise, they are expected to use the available technologies to complete their tasks and communicate with one another. Similarly, is it possible to conduct lessons in education without the use of technology? If we concentrate on this subject in particular, especially with regard to teaching language skills and English... We can't imagine living without technology these days. We even place meal orders using technology. People are expected to manage their activities and communicate with one another through existing technologies, and they only venture outside when absolutely necessary. Similarly, is it feasible to teach without the use of technology? The answer is probably no. We have reviewed research on the potential advantages of technology in language teaching and learning; it can fundamentally change language learning, enabling us to do things that were previously impossible, and it also helps improve both language teaching and learning. Many teachers now use technology extensively in their lessons, as well as in communication with their colleagues and students. Nowadays, a lot of educators heavily rely on technology for both teaching and communicating with their students and colleagues. We have examined studies on the possible advantages of using technology in language instruction. Technology has the

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potential to drastically alter language learning, enabling us to accomplish previously unattainable goals and enhancing language instruction.

One of the most talked-about topics in the modern world is artificial intelligence (AI), which is being actively imposed on a number of sectors, including education. AI can help students advance their knowledge and practice skills, greatly simplifying the educational process. AI is revolutionizing a number of sectors, including education, with its ability to analyze enormous amounts of data, provide personalized learning experiences, and automate administrative tasks. This article examines how AI-driven innovations are shaping the future of education. AI is currently being actively imposed on a number of industries, including education. Artificial intelligence can greatly streamline the educational process by helping students advance their knowledge and practice abilities. Education is one of the many industries that artificial intelligence (AI) is changing. AI is transforming how students learn and teachers educate because of its capacity to analyze enormous volumes of data, offer individualized learning experiences, and automate administrative work. The future of education is being shaped by AI-driven advances, as this essay examines.

Artificial intelligence can be used to create customized educational plans for every student. It analyzes their activities to determine their levels, accomplishments, and challenges. Based on this analysis, AI:

Recommends relevant academic materials and tasks, offers individual support and guidance, provides additional explanations about challenging subjects.

It analyzes pupils' activities to determine their levels, accomplishments, and challenges. According to this investigation, AI: Makes recommendations for relevant academic assignments and materials, offers personal help and advice, provides more explanations regarding challenging subjects.

With this approach, every student can obtain an efficient education while adjusting to their individual learning rate. Additionally, artificial intelligence is essential to evaluating pupils' understanding. It has the ability to: Verify tests and

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assignments, identify errors, and provide students with a quick reverse network. This enables professors to concentrate on in-depth analysis and unique techniques while saving time that would otherwise be spent on manual grading. One of the cutting-edge technologies that helps raise educational standards, efficiently structure the learning process, and deepen students' understanding is artificial intelligence.

Artificial intelligence (AI) is becoming more and more important in today's world, and it is being used in many different fields. One such field is education, where AI can be used to optimize the learning process and enhance its effectiveness. For instance, AI can help personalize the educational process according to each student's unique needs. It can also be used to develop new teaching methods, analyze and assess students' knowledge levels, and automate repetitive tasks like checking tests and assignments. AI has the potential to optimize and improve learning in a number of fields, including education. AI, for instance, can assist in tailoring the educational process to each student's unique needs. It can also be used to create new teaching strategies, evaluate and analyze students' knowledge levels, and automate tedious processes like reviewing assignments and assessments.

Professionals at Cambridge University believe that one of the major Ed-Tech trends in 2023 will be the active use of artificial intelligence (AI). According to certain forecasts, the market for AI technology in the education sector would expand by an average of 36.6% by 2030. According to certain forecasts, the market for AI technology in the education sector will expand by an average of 36.6% by 2030.

The following are the primary areas of artificial intelligence application in education:

Automating official tasks;

Customizing the educational process;

Producing instructional apps and academic material;

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Developing soft talents.

Students' essays and written assignments can be evaluated using a variety of neural network models. An algorithm-based neural network model is called LSTM (Long Short-Term Memory).

LSTM is a kind of recurrent neural network that can process data sequences. To do this, the neural network first tokenizes the text data—that is, it breaks it up into individual words and punctuation marks—before processing the text, extracting its salient features, and evaluating it according to predetermined standards¹. The neural network first tokenizes the text data—that is, it breaks it up into individual words and punctuation—as part of its operation. After that, the neural network processes the text, extracts its salient characteristics, and assesses it using predetermined standards.

Neural network models should be trained using a variety of large-scale text materials, such as both well-written and poorly written essay pieces. Neural networks can be used to grade students' essays after instruction.

Teachers can evaluate a large number of essays quickly and efficiently with this method, but it cannot totally replace the human element because it is not always able to thoroughly evaluate the text's inventiveness and content, both of which are essential for evaluating essays and compositions. However, the human element cannot be totally substituted because it is not always able to adequately evaluate the text's inventiveness and content, both of which are essential when analyzing essays and compositions.

One of the schools in Hangzhou, China, has an artificial intelligence-based video control system. Throughout the lesson, this system keeps track of which pupils are being sidetracked. Discipline can be partially automated since it evaluates how students' facial expressions change and notifies the teacher of this information.

Artificial intelligence aids in organizing educational procedures while taking into account each student's unique needs.

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Carnegie Learning - is an educational platform that provides programs for teaching mathematics to students in schools and universities. This platform takes into account the unique demands of every student and is based on adaptive academic ideas.

The MATHiaU method is one of Carnegie Learning's main features. This program generates individualized math courses for every student using machine learning and artificial intelligence technology.

Every student's knowledge level is ascertained by the MATHiaU algorithm, which then assigns problems and exercises that are tailored to each individual student. Students' mathematical abilities are developed through this procedure. The algorithm also provides pupils with a reverse network and assistance in answering questions.

PrepAI and Smartest Learning are two examples of specialized apps that use artificial intelligence to provide academic content. PrepAI is a sophisticated program that uses machine learning and artificial intelligence to create tests automatically. This tool makes it possible to create tests in a variety of formats, which is very helpful for both students preparing for exams and instructors making quizzes.

PrepAI's ability to adjust to the user's comprehension level is one of its key features. Artificial intelligence evaluates the user's past responses and uses a machine learning algorithm to create customized tests that help users improve their knowledge and get ready for tests in the best possible way. Artificial intelligence uses a machine learning algorithm to construct customized exams based on the user's past responses. In turn, this helps users improve their knowledge and get ready for tests in the best possible way.

Smartest Learning - is a comprehensive online learning platform that provides courses on a variety of topics. This platform's primary objective is to give

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professionals and students the chance to acquire high-quality education and advance their knowledge and abilities.

The Smartest Learning platform's courses vary in the following ways: Different levels of complexity, ranging from basic to advanced courses; a range of formats, including interactive tasks, quizzes, and video courses.

In educational applications, artificial intelligence is utilized not only to create personalized content and teach via chatbots, but also to improve the efficiency and interactivity of the learning process.

AI-powered language learning apps. (Duolingo) can identify and analyze students' speech. In order to provide the right answer while identifying errors, the algorithm looks at speech, grammar structure, and vocabulary resources.

Learning a language. Memory storage systems (like Memrise) employ AI technology to translate the names of actual objects. For example, if you want to know what "stol" means in English, you may point your smartphone's camera at the table and the app will translate it for you.

The system for material reminders. Artificial intelligence determines the best moment to review a specific subject and reminds you of it. These technologies increase the effectiveness, flexibility, and engagement of the learning process while giving each student the opportunity to learn in a method that best suits them.

The majority of people are concerned about some educational services, particularly artificial intelligence (AI), because it can complete student-owned jobs. Although words created by AI are now different from those written by humans, technology are advancing quickly, and concerns regarding the practical applications of such tools are becoming more pressing.

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The following justifications for artificial intelligence's possible advantages in education can be mentioned:

By using AI to create an essay draft and then rewrite it themselves, students can improve their text analysis abilities and gain a deeper comprehension of literary masterpieces. They will have a deeper comprehension of literary works and improve their text analysis abilities as a result.

Students can engage in discussions with AI, attempting to persuade it on a particular topic, which can help them strengthen their critical thinking and argumentation abilities. AI could be a unique opponent for debate. Students can participate in arguments with AI, attempting to convince it on a particular issue, which fosters the growth of their critical thinking and argumentation abilities. Students are able to examine the AI-generated responses and confirm their veracity. They will learn how to evaluate sources and thoroughly verify information as a result.

However, opinions on how these technologies affect schooling vary. Naomi S. Baron, a professor of linguistics, highlights that overuse of AI may have detrimental effects on critical thinking and creativity. "Excessive reliance on text editing and creation tools could lead to abandoning the opportunity of thinking and learning," according to her.

Some experts predict that artificial intelligence will be employed extensively in the future as a virtual helper for educators. This will consist of the following: AI would automatically produce visual material during lectures and class sessions. For instance, interactive visuals, infographics, and word explanations would be produced in real-time.

AI produces cutting-edge visual resources in place of conventional, antiquated textbook graphics. This enables every student to comprehend the course materials in accordance with their unique requirements. Students can use their own interface to handle the materials. For instance, customers will be able to hide, rotate, or magnify the visual data that is displayed.

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All artificial intelligence-generated resources are automatically archived during the lecture so that students can utilize them whenever they want.

Conclusion

Artificial intelligence has enormous potential for the educational process. It can greatly improve teaching quality, tailor the academic process to each student's needs, lessen the workload of teachers, and foster students' critical thinking and creative abilities. However, these technologies should be used appropriately and in moderation because it is not a good idea to completely trust artificial intelligence with the human mind and creative thinking. However, as it is not a good idea to completely trust artificial intelligence with the human intellect and creative thinking, these technologies should be used in a balanced and acceptable way. Artificial intelligence is revolutionizing education by making learning more personalized, efficient, and interactive. As AI technology develops, it has the potential to close educational gaps and create a more inclusive and productive learning environment. However, ethical considerations and responsible AI implementation remain essential to ensure its benefits reach all students globally. AI will better prepare students for the demands of the modern world, making education more flexible and accessible in the future. Artificial intelligence is transforming education by increasing the efficiency, personalization, and interactivity of learning. AI technology has the ability to bridge educational gaps and establish a more inclusive and productive learning environment as it develops further. To guarantee that AI's advantages are shared by all students worldwide, ethical issues and appropriate AI deployment are still crucial. AI will make education more adaptable and accessible in the future and better educate students for the needs of the modern world.

With its many advantages, including individualized instruction, administrative work automation, and more accessibility, artificial intelligence is changing the face of education. However, in order to guarantee the proper application of AI in

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education, issues pertaining to privacy, bias, and human interaction must be addressed. Effective use of AI by educators may make learning environments more inclusive, effective, and engaging for students all across the world.

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