
“Am I the Teacher or is A.I. the Teacher”: The Role of A.I. in Transforming Education

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Abstract:

These days, both teachers and students are interested in exploring the potential of artificial intelligence (AI)-enabled tools, which are becoming more and more prevalent in the field of education. Education and AI are becoming more and more intertwined, changing how we teach, learn, assess, and manage education systems. The majority of the conversations have centred on how using AI technologies may cause students to learn less, which could result in a superficial understanding of concepts rather than a deeper retention or comprehension. Key questions that require brainstorming include how pedagogy will change, how teachers' duties will change, and how they will adapt in the classroom.

The process of integrating technology into the classroom has proven to be a challenging process. The majority of the years needed to modernize education delivery were devoted to utilizing technology to increase the efficiency of various administrative tasks. On the other hand, educational media improved classroom instruction; yet, teachers were still essential to students' learning, and the two primary players in the teaching and learning process have always been the instructor and the student.

Considering the role of AI in education and that of conventional teachers, this paper intends to delve into the pivotal questions relating to the use of Artificial Intelligence in Education.

Keywords: Artificial Intelligence (AI), Education, Technology, Teaching, Learning.

The term "artificial intelligence" was first used in 1956. The term "artificial intelligence" was first used in that year at a crucial workshop led by John McCarthy, a professor at Dartmouth College, with the goal of building machines that could reason and speak like humans. Research interest in artificial intelligence (AI) waned for a few decades after a rapid start,

but improvements in machine learning and neural networks in the 1990s sparked a comeback. An important turning point was reached in 2022 with the public release of Chat GPT, which demonstrated previously unheard-of abilities in natural language synthesis and comprehension and fueled other AI developments. AI now has a big impact on a lot of industries, including manufacturing, transportation, healthcare, and finance. Many believe it has the potential to transform education as well.

Classrooms are communities, and learning is a social and emotional process. Discussions, teamwork, and mentoring are ways that students learn that AI can help with but cannot direct. While teachers are always adjusting to changing classroom dynamics, student behaviors, and societal shifts, AI lacks contextual judgment. AI is devoid of the moral reasoning and cultural awareness that educators use on a daily basis. Given AI's disruptive role in the education value chain, it is imperative to critically evaluate the underlying teacher-student interaction. It is important to realize that utilizing AI is not a threat, but rather a necessary ability for the transformative role that educators will play in the present artificial intelligence era. Even if no technology is a cure-all, AI gives teachers a powerful hand in making learning more efficient, personalized, and pleasurable, which will ultimately help learners thrive. The future of education will be paved by the integration of artificial and human intelligence, which will strengthen the bonds between educators and learners.

There are countless opportunities in the future of education to improve student results, increase engagement, and customize learning experiences. Success ultimately depends on the instruments we use and how well we apply them. In order to fully utilize these technical breakthroughs, careful and deliberate approaches are essential. The human element—the unshakable commitment, limitless inventiveness, and contagious passion of teachers who inspire and foster students' learning and development—remains crucial in education. Since AI solves many of the problems with contemporary learning systems and creates new possibilities for efficiency, access, and customisation, it is becoming more and more important in the field of education.

Teaching is a transcendental job, and the role of a teacher goes beyond information transfer and the impact of a teacher extends well beyond the classroom. Students often retain the words they hear, the support they get, or the ideas they are inspired to pursue throughout their lives. Teachers influence not just the current generation but also the generations to come. Teaching is more than just imparting knowledge. It's about developing morals, wisdom, and critical thinking skills. It converts information into knowledge, which in turn creates character. Emotional intelligence, human connection, ethics, empathy, and

encouragement are all components of great teaching. Teaching is about changing lives, not just making money or producing tangible goods like many other occupations do. Its success is determined by more than just grades or results; it also includes the development of confidence, a broader viewpoint, and the nurturing of dreams. Caste, gender, class, religion, and talent are all irrelevant to a true instructor. Teaching fosters an environment where all students are valued and everyone is treated with dignity. It is one of the rare instances in which giving benefits both the giver and the recipient. AI is unable to replace a teacher's sense of a student's motivation, attitude, and difficulties. That is why the role of a teacher remains indispensable.

Personalized Learning can be offered by adapting the approach, pace, and content to each student's needs and learning preferences, AI may personalize the educational process. This might entail educators making extensive use of intelligent tutoring programs, individualized recommendations, and adaptable learning platforms. AI Instruction can help teachers offer focused interventions and support by analysing student performance data to determine areas of strength and weakness. Teachers can tailor their instruction and concentrate on pupils who require more attention by using this data-driven method. Through the use of technology, "augmented teaching" improves and supports conventional teaching techniques, resulting in a more efficient, interesting, and customized learning environment. Instead of taking the position of the instructor, it enhances their abilities and makes it possible for them to communicate with pupils more successfully. It helps educators grade assignments, give immediate feedback, and suggest relevant learning resources. This makes it possible for teachers to spend more time engaging with students one-on-one and to modify their lessons for those who need more help. Although AI won't replace teachers, it will drastically alter their roles.

Integrating AI in education can lead to enhanced Personalized Learning. AI may modify lessons and content to accommodate different student demands, learning styles, and speeds. While advanced learners can be pushed with expanded material, struggling pupils can receive extra help. Based on responses, tools such as adaptive learning platforms (like Coursera and Khan Academy) modify the level of difficulty. AI systems modify the level of difficulty of questions based on an analysis of a learner's interactions. Additionally, they offer immediate feedback to address misconceptions early on and suggest various resources (articles, videos, and quizzes) based on a student's preferred method of learning. For students with disabilities, AI provides improved accessibility. AI provides tools that enable learning for students with varying abilities, such as speech-to-text and text-to-speech capabilities for students who are visually or motor-impaired. Additional examples include screen readers, voice-activated

navigation, adaptive testing for neurodiverse learners, closed captioning, sign language avatars, or visual aids for students with hearing impairments. Platforms with AI capabilities can assess student replies in real time. Students can fix errors while concepts are still new when they receive immediate feedback. To find misconceptions, teachers don't need to wait until the end of a subject. Not only this, AI makes it possible to assess higher-order skills. AI can evaluate essays and written responses thanks to natural language processing, or NLP. Additionally, it improves creativity, argument structuring, and critical thinking. AI is still developing, but it can offer comments and scoring based on rubrics in a matter of minutes. It's even more crucial to remember that AI removes human bias and inconsistent grading, and the rubrics are applied consistently to every submission. This holds special significance for extensive standardized assessments. Through the creation of timetables, reports, and performance analytics, the grading of objective tests and quizzes, the management of student records, and the tracking of progress, artificial intelligence (AI) enables teachers and administrators to execute administrative activities more efficiently and automate repetitive jobs. Teachers now have more time to devote to mentorship and instruction.

Although AI is praised for its capacity to customize educational experiences, it is also very effective at fostering uniformity and consistency in the way that content is delivered across institutions, geographical areas, and even nations. Depending on the instructor, school, or region, the caliber and breadth of the curriculum might differ significantly in traditional systems. By giving all students access to standardized, excellent resources, AI helps close this gap. Uniform content distribution is made possible by AI, which guarantees that all students, regardless of where or how they study, have access to the same excellent, curriculum-aligned resources. It encourages equity, reduces disparities in instructional standards, and advances national education objectives.

Conventional education is human-centred and structured, but AI-integrated teaching is constantly changing in its function. Conventional teaching is based on a teacher-led, classroom-based approach where a single teacher trains a group of pupils using standardized textbooks and curricula. Since the pace, content, and assessment methods are essentially the same for each student, there isn't much opportunity for customization. Even though traditional education promotes social learning, appreciates human intuition, and stresses direct connection, it frequently finds it difficult to accommodate the varied requirements of students in big, diverse classrooms. On the other hand, AI-driven education makes use of sophisticated algorithms to instantly assess student performance, behaviour, and learning trends. This makes it possible to give dynamic content according to the needs, learning style, and speed of the student. With this method, advanced learners are consistently pushed, and

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student is left behind. By accommodating students with academic differences, disabilities, or language obstacles, AI-driven instruction promotes inclusive education.

AI applications in education can help teachers and students create and curate information more easily and promote interactive collaboration. These resources assist educators in creating curriculum-aligned content, guaranteeing that learning resources successfully address the various needs of students. Students are engaged by interactive resources like instructional games and virtual labs, and peer learning is facilitated via collaborative platforms. By offering adaptive feedback and personalizing learning routes, teachers can improve the overall learning experience by utilizing these technologies and the data-driven insights they give. Nonetheless, reactions to AI's broad adoption in recent years have ranged from enthusiastic embrace to outright restriction. Teachers and educational administrators must confront a number of ethical issues about AI in education since the technologies will only advance and alter how we live in every aspect of our lives.

The changing role of the educator is arguably the biggest change. Teachers become mentors, facilitators, and designers of learning experiences in an AI-assisted classroom. They are enabled to concentrate on deeper learning, emotional support, and critical thinking after being released from tedious administrative duties. The field of education is changing significantly as a result of artificial intelligence (AI). Traditional teaching methods have always influenced classroom instruction, but AI-driven learning offers a new degree of personalization, efficiency, and innovation. Understanding the differences between the two approaches demonstrates how AI is rethinking education rather than replacing it.

The main obstacles to integrating AI in education include infrastructural requirements, high prices, and resistance to change. The same best practices that apply to integrating any educational technology also apply to incorporating artificial intelligence. To create a community that is knowledgeable and supportive, they include giving educators comprehensive training, guaranteeing fair access to AI tools, resolving ethical issues, and keeping lines of communication open with all parties involved.

Conclusion:

AI has the ability to improve teaching and learning methods, solve some of the most pressing issues facing education today, and hasten the achievement of SDG 4. On the other hand, the human connection, ethical foundation, and emotional depth of traditional education make it valuable even now. But efficiency, equality, and adaptability are brought to the forefront of education by AI-driven teaching. In the future, technology will be used to empower educators

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enhance each student's educational experience, not to replace one with the other. It is crucial to keep in mind that the best way to use AI in education is to have a human-centered approach, which respects human agency, autonomy, and dignity, designs AI around educational objectives rather than merely technical capabilities, and prioritizes inclusion, fairness, empathy, and collaboration while collaborating with educators rather than replacing them.

References

- Singh, H. (2025, June 2). *The Role Of AI In Shaping The Future Of Education*. Retrieved from <https://www.forbes.com/councils/forbesbusinesscouncil/2024/10/01/the-role-of-ai-in-shaping-the-future-of-education/> Forbes.com:
- Wayne Holmes, M. B. (2019). *Artificial Intelligence in Education*. Boston: The Center for Curriculum Design.