# Geoffrey Hinton predicts AI tutors will double learning speed but won’t replace teachers



Geoffrey Hinton, often referred to as the godfather of artificial intelligence, predicts a radical transformation in education within the next decade, as AI-driven tools promise to teach children at least twice as fast as traditional methods employed by teachers. In remarks made at Gitex Europe, Hinton stated, “AI will be much better at tutoring people,” highlighting its potential to adapt lessons based on individual students’ needs—a significant advantage stemming from the extensive data these systems can analyse.

The advent of personal AI tutors, such as 'Manda', developed by Meta, exemplifies this shift. Currently being trialled in UK secondary schools, Manda offers lessons tailored to pupils aged 11 to 16, based on the national curriculum. The chatbot utilises an impressive reservoir of knowledge, based on over 550,000 minutes of teaching material from more than 300 qualified educators. Such systems allow for a level of personalised education that may be difficult for human teachers to achieve, as they can continuously adapt to a student's understanding and intervene in real-time, enhancing engagement and effectiveness.

Despite the optimistic outlook, the integration of AI in educational settings is not without controversy. The British government has committed significant funding to AI educational initiatives, while simultaneously asserting that the technology will "absolutely not" replace teachers. This dual approach acknowledges the critical role educators play in the learning process, even as they face mounting pressures from large class sizes and administrative duties. AI is increasingly seen as a supplementary tool, capable of alleviating the burden on teachers by assisting with lesson planning and marking, but it cannot supplant the nuanced support and mentorship provided by human educators.

Various educational institutions are already exploring innovative ways to incorporate AI. For instance, a London private school recently pioneered a 'teacherless' GCSE class that blends AI with virtual reality technology, demonstrating a forward-thinking approach to education. John Dalton, co-principal at the school, describes the potential of AI to deliver personalised learning paths, claiming, “There are many excellent teachers out there but we're all fallible… it’s very difficult to achieve AI's level of precision and accuracy.”

The excitement surrounding AI’s capabilities must be tempered with caution. Critics argue that the promises of personalised education can lead to over-reliance on technology, potentially exacerbating educational inequities. Historical precedents, such as past failures of educational technology implementations, raise concerns about the long-term viability of AI in classrooms. As Kristen DiCerbo, Chief Learning Officer at Khan Academy, pointed out, while AI tools like 'Khanmigo' show promise in tailoring learning experiences, they also face challenges that require careful monitoring and adaptation of teaching methodologies.

Moreover, there are pressing concerns regarding data privacy, the potential for AI biases, and the need for ethical governance in the deployment of such technologies. Experts advocate for a balanced approach that harnesses AI’s strengths while ensuring that the traditional roles of teaching are preserved. As Hinton aptly warns, while AI can be transformative in fields such as healthcare and education, the risks associated with creating "alien beings" that may outstrip human intelligence must be approached with caution.

In conclusion, the integration of AI into education appears poised to usher in a new era of personalised learning. However, the dialogue surrounding its implementation raises essential questions about the role of human educators and the necessity for ethical frameworks to govern technology in the classroom. Balancing innovation with responsibility will be crucial as educational systems navigate these evolving dynamics.

### Reference Map

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## Bibliography

1. <https://www.dailymail.co.uk/sciencetech/article-14740695/Chatbots-teach-children-twice-fast-teachers-10-years-AI.html?ns_mchannel=rss&ns_campaign=1490&ito=1490> - Please view link - unable to able to access data
2. <https://www.ft.com/content/e9523570-5966-4d99-ac92-45d3966ae28e> - This article discusses the integration of AI into classrooms, highlighting examples like London private schools using AI-driven systems in 'teacherless' classrooms. It emphasizes that while AI is not expected to replace teachers, it can support and enhance their roles by handling tasks like lesson planning, marking, and offering individualized student support through AI-powered tutors. The piece also addresses challenges such as resistance to AI in education and the need for teachers to adapt their methods to ensure effective use of the technology.
3. <https://time.com/7012801/kristen-dicerbo/> - Kristen DiCerbo, Khan Academy’s Chief Learning Officer, discusses the potential of AI in education, focusing on their AI tool 'Khanmigo.' This tool functions as a tutor, providing personalized support to students across various subjects and aiding teachers with lesson planning and data analysis. Despite challenges in pilot programs, DiCerbo is optimistic about AI's potential to revolutionize education and has helped develop guidelines for AI and EdTech to ensure their safe and responsible use.
4. <https://www.axios.com/2024/10/28/school-tutors-ai-kids-personalized-learning> - The article explores the rapid integration of AI-powered tutors in K-12 education, highlighting both optimism and skepticism. Proponents envision personalized AI tutors providing customized instruction to each student, while critics express concerns about overpromises by startups and the potential for AI to perpetuate existing educational inequities. The piece underscores the importance of a balanced approach to integrating AI in education, emphasizing that even the best AI cannot replace human teachers.
5. <https://www.benzinga.com/news/25/04/45029643/three-or-four-times-better-ai-godfather-geoffrey-hinton-says-ai-tutors-could-soon-outperform-humans-and-make> - Geoffrey Hinton, a leading figure in AI, predicts that AI-powered tutors could soon outperform human educators by providing highly customized lessons that precisely identify and address individual misunderstandings. He suggests that these AI tutors will be 'three or four times better' than human tutors, potentially revolutionizing education by making it more accessible and efficient. The article also discusses the implications of this advancement for traditional educational institutions and the future of learning.
6. <https://www.axios.com/newsletters/axios-ai-plus-a8cc44b0-9492-11ef-b253-f943c4bfa123> - This newsletter delves into the debate surrounding AI's role in education, focusing on AI tutors like Khan Academy's 'Khanmigo.' While advocates envision AI transforming education through personalized tutoring, skepticism remains due to past mixed results in educational technology. The piece highlights the rapid integration of AI tutors in classrooms, the potential benefits of personalized instruction, and concerns about equity and regulatory issues, emphasizing the need for a balanced approach to AI in education.
7. <https://www.ft.com/content/dd777c4e-31da-47bc-8241-91d39fe8020c> - The article examines the transformative potential of AI in education, highlighting both benefits and challenges. AI tools can enhance learning by providing personalized tutoring that adapts to students' needs, which can be especially beneficial for underprivileged and struggling students. Technologies like Khanmigo from Khan Academy offer accessible, individualized educational support. However, challenges include the possibility of AI inaccuracies, biases, and risks to the learning process. Ensuring data privacy and preventing over-reliance on AI are also concerns, necessitating balanced integration of AI into education.