

AI Report

AI in Education: What Teachers, Students, Parents, and Tech Developers Need to Know

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Education



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Hareth Alhashmi is the Director of Strategy Success at the Abu Dhabi Early Childhood Authority (ECA). His diverse career background began with Mubadala Investment Company, where he worked on Group Taxation.

Following that, he worked in the Office of Strategic Affairs at the Crown Prince Court of Abu Dhabi, focusing on socio-economic policy and special projects, including work on the initial team responsible for Abu Dhabi's winning bid to host the Special Olympics World Games in 2019.

He later joined the Dubai Future Foundation as a project manager, leading efforts in Foresight and Imagination and in Thought Leadership, as well as managing the Dubai Future Councils and acting as an active member of the Dubai Future Council on Education.

Prior to joining the ECA, Alhashmi worked on Strategic Relations at ADNOC within the Executive Office. He holds a Bachelor of Science in Economics and Management from Purdue University and is a graduate of the Mohammed bin Rashed Program for Leadership Development.

The education industry is learning fast when it comes to artificial intelligence (AI). Universities and schools are realizing that this [new technology means they can no longer approach teaching in the ways they've become used to](#).

The United Nations says [generative AI is opening up new horizons for education](#), while the World Economic Forum says [AI is likely to be adopted by 81% of companies by 2027](#). This means schools and universities not only need to learn how to use AI, but also how to teach AI skills.

Most critically, the way students want to learn is also changing. Around **92% of students**—as well as **77% of parents**—say they are [interested in AI tools that could improve learning outcomes](#), according to one recent survey. If educational institutions don't keep pace with these trends, they will be overtaken by their peers—and may drop out of the race altogether.

Numerous AI tools are already gaining a foothold in the sector. The [Knewton platform](#) uses AI and computer algorithms to power “adaptive learning technology” that creates personalized educational content. Knewton started out as a disruptive tech startup, but has since been acquired by multinational academic publisher Wiley and is now in use at a number of universities. Another tool, [Gradescope](#), helps teachers by offering AI-assisted grading tools. It is already being used by over **2,500 universities**.

Education is always evolving

In the past, education was largely teacher-centered, with students passively receiving information. However, as a number of factors speed up the transformation of the world, the need for more reactive, more personalized educational experiences is rising.

The digital transformation of jobs is creating the [need for more regular reskilling, upskilling, and training](#), according to the World Economic Forum. Other developments in the Fourth Industrial Revolution and the global shift toward sustainability are also creating a need not just for lifelong learning, but for [user-centric learning that takes into account the different ages and vocational experiences of learners](#), professional services company Accenture says.

AI use cases in education

Some of the most promising applications for AI in education include:



Personalized learning: AI can be used to personalize learning for each student, allowing them to learn at their own pace and focus on the topics that they need the most help with. [Cognii](#) uses AI to offer personalized tutoring via chatbots. It can also read students' answers

to questions and offer feedback. It [has received US government grants](#) and a number of awards, including a [Reimagine Education Award](#) from the Wharton School at the University of Pennsylvania.



Enhanced student assessment: Providing real-time feedback to students is one way AI could revolutionize the classroom experience. This feedback could help students to identify their strengths and weaknesses and track their progress. The [Automated Feedback tool](#) from educational technology company FeedbackFruits provides advice on the structural elements of students' work, such as essay structure, citation style, and grammatical points. It says this frees up teachers to focus on more complex areas, such as building critical arguments in written work. Other tools, such as [AI Coach](#), suggest ways students could improve their answers, but do not provide the answers for them.



Enhanced accessibility: AI can make education more accessible to students with visual or hearing impairments as it can offer text-to-speech or sign language translation. [Echo360's automatic closed-captioning service](#) helps hearing-impaired students, but services like this can also [aid students with learning difficulties such as dyslexia](#). AI-powered [image recognition tools](#) are widespread and can help partially sighted students, while chatbot tutors such as Cognii could [extend educational access to people in remote areas](#). However, this can only be achieved if [up-to-date digital technologies are available in these communities](#).

Risks around AI adoption in education

There are a number of potential challenges associated with AI in education. This includes concerns about the potential for AI to [widen the gap between rich and poor](#) students or even to replace teachers. Teachers do not just relay educational information to students—they play a wider, and critically important, role in students' lives. They provide emotional support, help students to develop critical thinking skills, create a positive learning environment, and instill a love of learning.

Data privacy and security will also need close monitoring as AI-powered tools collect vast amounts of data. While this data can be used to track students' progress, it can also be stolen, sold to third parties, or used to discriminate against students. Bias is one major risk surrounding AI—[algorithms can be biased](#), and if they are being used to make decisions about students, such as who gets into a certain college, this could have significant implications.

How to make AI an A-grade addition to the education system

Regulations around AI are being developed quickly, but many of the details are still under discussion. In the education sector, a number of strategies are being considered to overcome the potential challenges associated with AI adoption:



Collaboration between educators and AI developers:

Educators and AI developers need to work together to ensure that AI-powered tools are used in a safe and ethical way. Educators can provide AI developers with insights into the needs of students and the educational system, while AI developers can help educators to understand how AI can be used to improve learning outcomes.



Educating stakeholders about AI: Stakeholders—parents, students, teachers, administrators—need to be educated about AI so that they can understand the potential benefits and risks. This is the clearest way to build trust and support for the use of AI in education.



Ensuring transparency and accountability: People are far more likely to trust AI algorithms if the way these algorithms work is transparent and accountable. This will allow people not just to understand how AI algorithms work—it will empower them to hold AI developers accountable for the decisions AI algorithms make.

The UAE's Minister of Education, H.E. Dr. Ahmad Belhoul Al Falasi, has stated that [generative AI and large language models are transformative technologies](#) that mean academics need to rethink their teaching methods. The [UAE is already rethinking its approach, including by exploring the introduction of AI-generated tutors into school classrooms](#)—not to replace teachers, but to offer them assistance in order to improve standards of education.

The UAE's [Strategy for Artificial Intelligence](#) says that AI can be used to boost interest in education. Teaching students how to use AI is part of this strategy, and [several public and private universities in the UAE already offer majors at various levels in AI, including the establishment of the world's first AI University in 2019](#). This is critical to helping the UAE achieve its goal of being a world leader in the AI sector by 2031.

The UAE Council for Artificial Intelligence continues to drive these advances forward. Its efforts alongside the Ministry of Education ensure schools and universities have access to the latest AI technologies in order to provide the best possible level of learning for students, as well as the kind of learning experiences students want to have. Early adoption of AI within education ensures the UAE's future talent can drive and lead advanced research and applications of AI. Public-private partnerships will also be critical to ensure educational institutions are giving students the skills needed to build their future. Surrounding all of this with a proactive regulatory and ethical framework will ensure AI does not just drive change, but allows humanity to utilize it as a tool for positive change.