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Living with AI Education

Yes, AI could profoundly disrupt education. But maybe that's not a bad thing
Rose Luckin

Humans need to excel at things AI can't do – and that means more creativity and critical thinking and less memorisation

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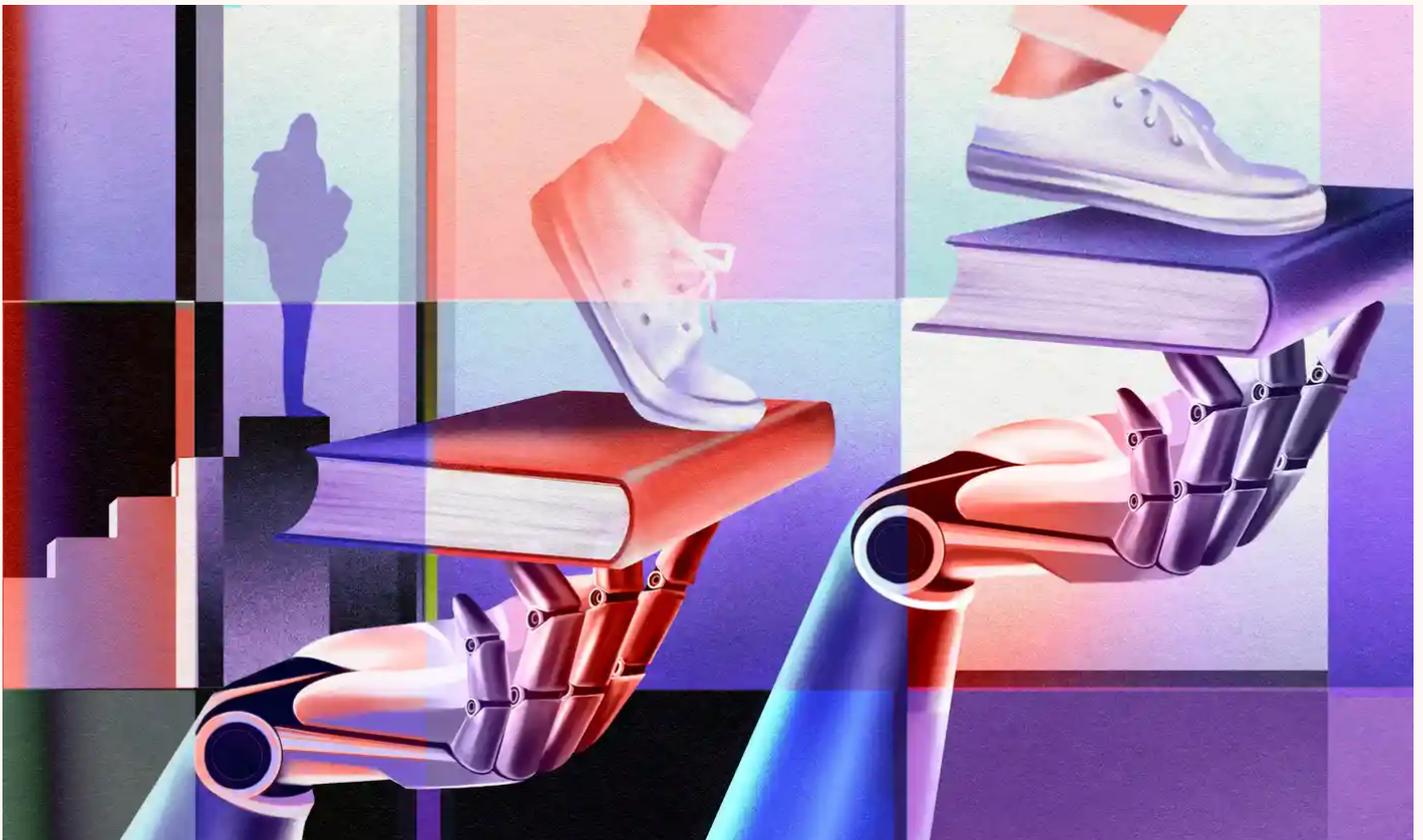
Illustration: Deena So Oteh/The Guardian

Education strikes at the heart of what makes us human. It drives the intellectual capacity and prosperity of nations. It has developed the minds that took us to the moon and eradicated previously incurable diseases. And the special status of education is why generative AI tools such as ChatGPT are likely to profoundly disrupt this sector. This isn't a reflection of their intelligence, but of our failure to build education systems that nurture and value our unique human intelligence.

We are being duped into believing these AI tools are far more intelligent than they really are. A tool like ChatGPT has no understanding or knowledge. It merely collates bits of words together based on statistical probabilities to produce useful texts. It is an incredibly helpful assistant.

But it is not knowledgable, or wise. It has no concept of how any of the words it produces relate to the real world. The fact that it can pass so many forms of assessment merely reflects that those assessments were not designed to test knowledge and understanding but rather to test whether people had collected and memorised information.

AI could be a force for tremendous good within education. It could release teachers from administrative tasks, giving them more opportunities to spend time with students. However, we are woefully equipped to benefit from the AI that is flooding the market. It does not have to be like this. There is still time to prepare, but we must act quickly and wisely.

AI has been used in education for more than a decade. AI-powered systems, such as Carnegie Learning or Aleks, can analyse student responses to questions and adapt learning materials to meet their individual needs. AI tools such as TeachFX and Edthena can also enhance teacher training and support. To reap the benefits of these technologies, we must design effective ways to roll out AI across the education system, and regulate this properly.

Staying ahead of AI will mean radically rethinking what education is for, and what success means. Human intelligence is far more impressive than any AI system we see today. We possess a rich and diverse

intelligence, much of which is unrecognised by our current education system.

We are capable of sophisticated, high-level thinking, yet the school curriculum, particularly in England, takes a rigid approach to learning, prioritising the memorising of facts, rather than creative thinking. Students are rewarded for rote learning rather than critical thought. Take the English syllabus, for instance, which requires students to learn quotations and the rules of grammar. This time-consuming work encourages students to marshal facts, rather than interpret texts or think critically about language.

Our education system should recognise the unique aspects of human intelligence. At school, this would mean a focus on teaching high-level thinking capabilities and designing a system to supercharge our intelligence. Literacy and numeracy remain fundamental, but now we must add AI literacy. Traditional subject areas, such as history, science and geography, should become the context through which critical thinking, increased creativity and knowledge mastery are taught. Rather than teaching students only how to collate and memorise information, we should prize their ability to interpret facts and weigh up the evidence to make an original argument.

Failure to change isn't an option. Now these technologies are here, we need humans to excel at what AI *cannot* do, so any workplace automation complements and enriches our lives and our intelligence.

This should be an amazing opportunity to use AI to become much smarter, but we must ensure that AI serves us, not the other way round. This will mean confronting the profit-driven imperatives of big tech companies and the illusionist tricks played by Silicon Valley. It will also mean carefully considering what types of tasks we're willing to offload to AI.

Some aspects of our intellectual activity may be dispensable, but many are not. While Silicon Valley conjures up its next magic trick, we must prepare ourselves to protect what we hold dear – for ourselves and for future generations.

- Rose Luckin is professor of learner-centred design at the UCL Knowledge Lab in London

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