

# Editor's note

## Beyond Utilitarianism

In the 1920s, the Czech author Karel Čapek began to explore the potential of AI and its relation to what it means to be human. Incorporating both politics and philosophy, his *R.U.R.* was one of the first works to envision a future with Artificial Intelligence. This play offered the now-common cautionary tale of AI rebellion, where the worst of all scenarios happens: the intelligent entities created by humanity become self-aware, reject human authority and attempt to destroy mankind.

Fast forward almost 100 years and we find ourselves actually living in the era of AI, rather than simply imagining it. The quest to create intelligent machines that can do all the mundane tasks that humans want to do has finally become a reality and is being embedded in our society in many ways that we may not even notice. In the field of education, these are exciting times.

Artificial Intelligence is breaking down boundaries, giving students who have disabilities or who come from areas without good access to education the tools to learn and develop, levelling the playing field more than ever before. It is reducing marking load for teachers, moving beyond simply marking multiple choice tests—machines now have the capability to score essay writing and provide students with real feedback about how they can improve.

More importantly, educational AI companies have developed intelligent tutoring systems that help understand how to adapt material for individual students, depending on whether they are showing signs of being bored or confused, and even guiding them toward learning patterns and strategies that correspond to particular learning disabilities, improving their access and, in some cases, helping their particular disabilities get diagnosed. There is now strong evidence that this type of personalised learning is improving outcomes for students and is reducing pressure on teachers. But there are downsides!

The history of the introduction of new technology in the UK is that it has been liberating for the more educated that can get aboard the complexities of its control and management, but deskilling and demobilising for those—perhaps the majority—who don't have these high-level skills. The second great implication is that it has been designed to be labour saving, especially in eras of financial retrenchment.

What does this mean for education? Teaching Assistants, one of the few real routes for social mobility in the UK for the working classes to move up into the professions, will be seriously at risk. Class sizes are likely to grow as a result of the technology, as teachers will have more information and students will have more developmental support. More importantly, teaching will

become subject to the way the software is set up by management or even software developers. Most of the time teachers won't even be aware of how their discretion has become delimited by forces beyond themselves.

The real skills of teaching, feedback and mediation of complex ideas—and the links that bind ideas together outside of strict logical progression could also weaken.

In this kind of intellectual environment, teaching focuses on test content and results and teachers become automatons, emphasising memorisation and fear of failure. Automated learning technologies could easily enhance this type of narrow, utilitarian notion of programmatic education.

As we move forward, for AI to be a positive force, we need to change the context in which it is taught. We need to help people learn complex content that challenges and develops their thinking capacity. Schools need to teach students exactly the things that cannot be automated—the human attributes that will help them to be creative, informed and emotionally engaged citizens of the world.

Jory Debenham

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## ■ In the next issue of Digital Learning:

**Teaching With Technology:** How can you get coding to appeal to students and generate interest in GCSE and A level Computer Science? Try a Hackathon. Adrian Porter will show us how.

**Innovation and Future:** A new programme, The VR Schools Project has been launched, giving students the opportunity create their own VR material through filming and editing their experience with new technology.

**Online Safety:** The digital sphere is increasing the intensity and impact of bullying. We look at how to prevent and counter harmful behaviours on the popular teen app Snapchat.

**Tech Tools:** Wonder Robot workshops are giving young people hands-on experience of coding and programming with their series of clever robots for students in KS1–3.

**Additionally,** we will have our regular highlights of *Blogs of Note* and *New on the Scene*, offering the latest in edtech products, and much more.