



THE FUTURE OF LEARNING 2070



The Open
University

50
YEARS



Since its inception in 1969, **The Open University** has radically changed the face of education. Dreamt up as the “University of the Air” by Prime Minister Harold Wilson, The Open University is now the largest educational institute in the UK, and has empowered over two million students in 157 countries across the world to transform their lives through education.



With a pedigree of innovation, some of the brightest minds at the university have predicted what the future of education might look like 50 years from now. The musings come from leading experts in the fields of science, technology, and international development, and while they can't know for sure what the future holds, the progress they envisage is truly ground-breaking.





The AI coach

Beyond 10 to 20 years I believe that the concept of 'self-hacking' will emerge. As outlined by the Israeli historian Yuval Harari, at some point it is entirely feasible that AI algorithms will know us better than we know ourselves. With the masses of ingested and analysed data, AI systems will have an understanding of how we are motivated and triggers for changes in our emotional state.

It will be possible to have an AI learning coach which sends you triggers, snippets and rewards to get you in the mood to study. This might include subliminal adverts within a social feed or online TV guide that you have a pending assignment or praise or even a gift after a particular hard bout of study. In the same way that automated systems have been shown to influence recent elections across the world in the future it will be technically possible for AI systems to influence your study behaviour, and if you wish, for this to happen without you even being conscious.

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Professor John Domingue
*Director, Knowledge Media Institute
The Open University*



Brain-to-brain communication

‘Brain Computer Interfaces’ or BCIs are devices that can be worn externally over the skull or embedded directly within the brain, to receive input from or control computers through thought alone. There have been successful experiments with humans and rats communicating by thought alone as they collaborate.

The 50-year possibilities for this technology are radical to say the least. Early on in this time frame it may be possible to have the direct transfer of knowledge associated with controlling simple devices and simple motor skills. Later complex motor-skill abilities such as skiing, dancing and horse-riding may become directly transferrable. Within 50-years it maybe that highly complex and abstract concepts are communicable via brain to brain communication.

For example, the ability to understand a new language, to play a musical instrument or diagnose a disease from patient symptoms. This may lead to a new profession of Brain Tutor – teaching online through direct brain-to-brain connections.



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Full-sensory virtual learning

The role of online technologies in learning and teaching will be blended in with books and face-to-face delivery in physical and virtual spaces. Even in online educational environments designed for individual learning, the role of face-to-face interactions in the physical world and in virtual spaces with educators, peers, mentors and with subject experts nationally and internationally will be important for socialisation, for sharing of knowledge and ideas, and for collaborative knowledge construction.

The face-to-face interactions will be seamless between physical and virtual learning spaces: students and educators will dip in and out of these spaces as avatars, or as their real world selves. Further, virtual reality environments will be increasingly used for individual and collaborative learning: such as training via simulations, in procedural learning, and for practising risky scenarios that are difficult or sometimes impossible to construct or simulate in real-life, for virtual travels, and for meetings and conferences.



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Shailey Minocha
*Professor in the Faculty of STEM
The Open University*



Human Interaction

Technology is not ethically or politically neutral. This has become increasingly evident through the use of social media for political purposes, the misuse of data by Cambridge Analytica and the manner in which AI algorithms reinforce the gender or racial bias in much of society.

The prediction here then is that awareness of this will continue to grow, with educators and learners viewing technology use in education as a political choice (whether to partake in data capitalism for instance) as an educational one.

“ Technology
is not ethically or
politically neutral. ”



Martin Weller
*Professor of Educational Technology
The Open University*



Virtual Reality 2.0

To me, the most important part of learning is doing; you can give students notes, recommend books to read, essays to write, or mathematical exercises to complete – but none of these is a satisfactory substitution for actually doing an experiment. They are important, complementary activities, but for the complete, full-on, exciting and inspirational learning experience, a student has to be doing something themselves. How will we manage that in 50 years' time? Well, we are not going to be herding students together into a single physical space, but instead will rely more on future technology.

I believe virtual reality is the way forward, but as a much more immersive experience than it is at the moment. Our future students will need to feel the weight of the metal ball and the feather that they are going to drop, hear the hiss and crackle of an electric discharge and smell the chemicals that fix a developing X-ray plate. It will not be sufficient to look at images or videos – that is too passive an experience.

We will develop methods where learning from touch and taste and smell are as important as sight and sound. Our horizons will expand – beyond the boundaries of the Earth – so that we can take advantage of the zero gravity environment of low Earth orbit and the reduced gravity of the Moon as additional laboratories. The next 50 years offer us a wonderful opportunity to become, perhaps not “the University of the Air”, or even “the University of the Earth”, but “the University of Space”.



“ We will develop methods where learning from touch and taste and smell are as important as sight and sound. ”

Monica Grady
*Professor of Planetary and Space Science
The Open University*





Redefining the role of a teacher in Africa

For learners, while traditions of respect for authority are strong, traditions of communal learning and peer mentoring are also strong, and learners are increasingly blending social and formal learning in imaginative ways.

Equally for teachers, the role and position of teachers in society is beginning to change. It has been seen as a highly controlled profession in Africa, with teachers having relatively little autonomy. But this is changing. Through the combination of appropriate technologies and openly accessed materials the definition of teaching and the role of the teacher is widening, as those teaching develop agency and ownership as well as understanding of what it is to teach.

We predict that technology will be used for teaching and learning in imaginative ways, like open-air classrooms, on the move with pastoralist communities, and differentiated teaching for language-specific diaspora, and community-based education to focus on sustaining local communities. We believe that educators will develop autonomy with respect to what and how they teach.

Africa will start to find its own solutions to its unique challenges and opportunities, and we will be learning from their innovation and practice.

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Jane Cullen & Kris Stutchbury
Academic Directors of TESSA
(Teacher Education in Sub-Saharan Africa) The Open University



What is astounding is the variety of predictions from professors across our institution. It demonstrates how different the nature of learning is across disciplines, environments, and even countries.

We are incredibly proud to support so many students in so many different circumstances to learn and achieve – which is only possible because of our innovative approach to education. The Open University will continue to be inclusive and innovative for the next 50 years and beyond – wherever that takes us. ”

Mary Kellett



Mary Kellett
*Vice-Chancellor
The Open University*