
Artificial intelligence in FE and HE

John Preston, *Professor of Sociology at the University of Essex, started his career teaching in FE. In this article he provides a summary of some of the arguments in his new book Artificial Intelligence in the Capitalist University. Academic Labour, Commodification and Value (Routledge, 2021). The book is free to download and read (1).*

Invisible AI

Artificial Intelligence (AI) is often considered to be part of high-technology industries and not relevant to everyday work in FE and HE. We work with students, rather than sophisticated technology and for many of us our use of computers is solely for e-mails and word processing. However, even if we have no plans to use AI, through the actions of our employers and 'Edutech' (education technology) companies that seek to profit from learning, it has plans for us.

In practice, AI is not a cyborg, super-intelligence (Artificial General Intelligence) although creating such an entity, or a virtual universe monitored by AI ('Metaverse') is a very real fantasy of capitalist billionaires. Rather AI is often manifested as Machine Learning (ML) that enables the recognition of patterns and, through sophisticated algorithms, to optimise activities in organisations. AI is a machine, but a machine that learns and maximises for its owners. This means that it can be used to enable educational providers to maximise profits and reduce costs. Consultancy firms use data analytics to predict student numbers and market share with consequences for staff redundancies. Edutech companies, including large corporations such as Apple and Microsoft, can treat FE and HE like 'Lego', seeking to see where business functions can be replaced by AI applications.

Working for the algorithms

The idea that education operates in a similar way to a production line was first posited by Karl Marx who considered that it functioned as a 'sausage factory' where student learning was the product. In contemporary HE and FE, the 'sausage' is frequently a funding formula. The FE or HE provider is paid according to the formula which may involve quantities and qualities of teaching, research or other educational

outputs. We are familiar with the idea that capitalism pushes FE and HE to maximise profits (or surpluses) but the concept of funding formulas means that there is an insidious role for AI. AI (particularly ML) is currently being used to monitor and maximise performance in education and other industries. Marx's 'sausage' analogy is not exactly right for contemporary education. Rather lecturers (and administrators) are producing, through their labour, a 'data sausage' which is exchanged for money.

Indirectly, then, we are working for an algorithm that acts in the interests of the FE or HE senior managers who are in turn beholden to the imperatives of a marketised sector. Through AI-enabled technology, the working day is extended with e-mails and home working being possible from any time or place. The intensity of our work is constantly increased as technology enables us to teach a greater number of students or to produce more research outputs. The fear that AI, or technological change, might drive us into unemployment compels us to work harder for reduced real wages.

'Pixarfication'

Pixar is a company renowned for producing animations where inanimate objects have a voice and can take actions in the real world. In the film *Cars*, for example, the world is inhabited solely by talking cars that have taken the role of humans. In these animations, commodities, built by human labour, are portrayed as the only sentient creatures on earth. In FE and HE we too are seemingly ruled by sentient animations whenever we are presented with graphs and charts displaying our performance in institutional reports or PowerPoint presentations. AI and ML have enabled sophisticated analysis of performance indicators and league table positions. These projections and displays are 'animated' through graphics and 'characterised'

as having a life of their own. In these 'Pixarified' displays we forget that what we are seeing in these charts is a result of our own work. They become the objects of management, compelling us to work harder or faster.

Zoom fatigue and virtuality

We have all seen skips full of computers and technology outside of FE and HE colleges. It is sometimes the case that educational providers will sell their old technology to staff at a discount. The accelerating pace of technology, including AI and ML, occurs because as soon as a technology is generalised (and every college uses it) it no longer enables a competitive advantage. At this point FE and HE providers look for the next technological advantage almost as if the original change had never happened.

The pandemic has accelerated existing moves towards virtual technologies, remote learning and the 'Metaverse'. This fleetingly increases the productivity of lecturers as they can increase the number of students they teach at a reduced cost. Lecturers are sometimes teaching face-to-face and virtually at the same time. Platform learning is based on AI, and AI enables the editing, remixing and reuse of lectures. At Concordia University, a course was taught using the recorded lectures of a dead professor (2)! As these technologies accelerate productivity and work, lecturers become increasingly exhausted. 'Zoom fatigue' is not just a symptom of technology, but a result of increased productivity and work rates. This will continue as technological progress accelerates.

Conclusion: Luddites or optimists?

Like other sectors of the economy, capitalism accelerates technological change in the search for increased profits. FE and HE are no exception to this. Some people consider that eventually this will mean that technology (particularly AI) abolishes the need for human work completely and that this may lead to an accelerated utopia jokingly referred to as 'Fully Automated Luxury Communism' (3). This may sound fantastic, but a real future society depends on us all as workers determining the direction of progress. Technology has most often been used to subjugate, rather than to liberate, workers. In FE and HE we have had the technologies to provide learning across the world for virtually nothing (such as MOOCs: Massive Open Online Courses) for decades, but this has not led to the 'Fully Automated Luxury Communist University'. Critical, local, educational initiatives (such as radical community education) develop best with a face-to-face approach, where relationships of trust, altruism and reciprocity can develop. The answer is

not either to be a Luddite or a 'fully-automated optimist' but to understand that we, as workers in FE and HE, are, ironically, the real 'Artificial Intelligence'. Our collective labour, solidarity and creativity are more powerful than any AI created, or even that could be reasonably created in the next hundred years. We can resist the imposition of capitalist technologies and marketisation in education and build our own alternatives for the future.

1. <https://www.taylorfrancis.com/books/oa-mono/10.4324/9781003081654/artificial-intelligence-capitalist-university-john-preston>

2. <https://www.thestar.com/news/canada/2021/01/28/concordia-university-says-lectures-from-dead-professor-were-teaching-tool.html>

3. <http://luxurycommunism.com/>

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