

## **Critical approaches to the ‘digital transformation’ of higher education**

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The idea of a ‘digital transformation’ of higher education seems to surround us at the moment. It seems to be the inevitable and imperative future for innovative education in the ‘post-pandemic university’. But I want to spend a few minutes cautioning about these current demands.

The point of bringing a critical approach to this is not to demolish the idea, but to consider as well the potential risks and challenges before charging ahead, and to kickstart discussions on possible alternatives.

As an idea, digital transformation designates a future vision of digitally-connected, hybrid on-campus and online universities—as depicted in the UK strategy report ‘Digital at the Core’ as a kind of floating, flexible university connected by networks, interfaces and code—a cloud campus if you like.

Of course, there are many potential benefits of increasing universities’ digital capabilities. And of course universities always have evolved in relation to wider social and technical contexts.

But my simple point today is that higher education in Europe needs a research-informed and purpose-driven approach to digital transformation—and I want to briefly present three reasons that I hope this group might address in much more detail in its work ahead.

### **1 Industry-led digital transformation**

The first reason to take caution with digital transformation is that it is not entirely sector-led. Its push is from international organizations and multinational consultancies, plus business and technology media.

Arguments about long-overdue revolution in higher education are nothing new of course, and probably wildly overblown. But Covid-19 is being treated quite explicitly as a ‘catalytic opportunity’ for transformation of the post-pandemic university.

That view is explicit in the educational technology industry, helped along by investment and financial organizations, which see digital transformation as a major market opportunity with short- and long-term financial returns.

So, for example, the education market intelligence agency HolonIQ has forecast huge growth in the value of digital technologies in the ‘Global Higher Education Market’, especially multibillion dollar growth from online learning.

Digital transformation is projected to be a major source of value generation—with over 8 billion dollars of venture capital invested in edtech companies this year alone. Europe is now a hotbed of edtech development too, with fast growth and large investments.

There’s nothing inherently wrong with private industry involvement in higher education. But it does raise some significant issues about private power and influence to drive changes in ways that reflect specific assumptions about what higher education is for.

One assumption is that the core purpose of HE is employability. Graduate employability is important, but HE also ideally pursues *other* purposes than those that lubricate the ‘learning to earning’ pipeline.

Some industry actors want to disrupt, out-compete and perhaps even replace universities on this. According to the Foundation for Economic Education, Google’s new ‘career certificates’ program is exactly the ‘disruption’ the ‘higher education market needs’. What Google has done is design courses specific to roles in the company, delivered in 6 months on the online learning platform Coursera, which it counts as equivalent to a four-year degree.

This is hyperspecialized job-relevant credentialing with immediate return on investment for students, with none of the deeper disciplinary knowledge or criticality of a university education. These workforce development programs and online vocational schools are predicted to be big market winners in coming years.

So, in these ways, digital transformation could displace universities as authoritative sites of learning, and make accelerated, quick-win employability programs a core aim of higher education. Universities must catch up and compete, or lose out.

## **2 Digital transformation as technological solutionism**

The second challenge is that digital transformation assumes technology will solve all the sector’s problems.

Now, when the pandemic hit, the emergency ‘relief’ of technology indeed solved major immediate problems. But that emergency relief has now become a template for long-term technological reforms to solve all kinds of longstanding problems—

access and equality, enrolments, finances, improving teaching and the learning experience.

As Justin Reich put it in the *Chronicle of Higher Education*, ‘edtech mania is back’—but the utopian ‘tech gurus’ probably won’t solve all of the academy’s problems. They might even create new ones.

One problem with tech solutionism is represented by the Higher Education Digital Capability Framework, again from HolonIQ.

Such frameworks chop up higher education into atomized ‘market segments’ that can be ‘unbundled’ to an array of tech providers. So ‘learning design’ gets chopped up into ‘digital content creation’, ‘learner analytics’, ‘personalised and adaptive learning’ and so on.

The framework implies all universities have shared digital capability problems, and it points to outsourced suppliers with proprietary solutions.

The risk is that technological solutionism defines atomized problems with isolated, quick-win technical fixes, rather than engaging with the complex and context-specific issues that universities really grapple with.

It also leads to the kind of scenarios reported in a *New York* magazine article on so-called ‘cyborg universities’ based on partnerships with the Big Tech corporations. The physical infrastructure of the campus blends with the digital infrastructure of Google, Microsoft, Amazon, Apple or Salesforce. Tech saves the campus from obsolescence.

A more immediate problem is that much edtech may reproduce or entrench inferior modes of teaching, learning and assessment. Tests, quizzes, video recorded lectures, time-bound assessments, and assignments that can be parsed by learning algorithms are all popular in edtech applications.

Yes, edtech can productively augment pedagogic practices, but maybe not in educationally transformative ways.

### **3 Datafication, personalization and surveillance**

One particular technology has become the most problematic of all: exam proctoring. Proctoring is based on malware originally designed to enable someone to take over someone else’s computer, observe their screen, see through their webcam, listen through their microphone, and trace their web use. Now those malware techniques are used to monitor students taking distance exams as a way of ensuring ‘academic integrity’.

The problems with proctoring are well reported: it's invasive, induces student anxiety, disproportionately flags diverse students as 'suspicious', and maintains mistrust between staff and students.

More mundanely, it entrenches the individual examination as the ultimate test of a student. One proctoring company boss claims degrees awarded *without* being proctored are 'corona diplomas' with little value in labour markets. Proctoring itself is the certification of a valuable degree.

Earlier this week a fundraiser event was held to crowdfund legal fees for a Canadian learning technologist currently being sued by a leading proctoring company. Proctoring companies don't like academic criticism, and are prepared to pay legal fees to silence it—big problem for academic freedom.

The 'Teach-in Against Surveillance' event represented a backlash to many forms of tech in universities—not just proctoring, but other forms of data and learning analytics, engagement monitoring on learning management systems, reading list relevancy algorithms, smart campus location tracking, web use monitoring, adaptive personalized learning technologies, and more.

Despite rising criticisms by staff, students, and the media of data-driven decision-making, surveillance and performance monitoring in the sector, digital transformation may amplify them.

A strategy document in the UK proposes personalized learning in 'data-empowered universities' is the only viable future. It promotes further development of digital infrastructure, data interoperability, and 'intelligent information networks', inspired by the ways big tech companies 'apply data-driven decisions and provide dynamic experiences based on an individual consumer's information'.

That vision of data-driven digital transformation is exactly the same as sales pitches from Amazon, Salesforce, Microsoft—all also pushing hard into higher education as suppliers of the infrastructure to realize it. Digital transformation, from this view, depends on universities being connected to global cloud, data and analytics infrastructure, emulating the design principles of automated consumer data-mining, algorithmic prediction and personalization.

European universities should aim to get ahead of the controversies that are coming now. As a recent *Wired* article on learning analytics in the UK indicates, universities are perceived to be deploying surveillance technologies on their students. It's not great coverage for sectoral reputation.

I'm sure you all heard about the controversy over school exams in the UK this summer, when algorithms were used to downgrade teacher-predicted scores. The story ran for weeks in the media, led to student protests, independent inquiries,

legal action, and governmental U-turns. At its core was a sense of public outrage that professional educational judgment over young people's futures had been delegated to an algorithmic process.

Algorithmic assessment of learning in universities, enabled by tech companies, is a story journalists may dig deep to report. 'What are the *other* algorithms determining young people's futures?' as one journalist asked me recently.

There is a real risk of reputational harm to the sector here, and perhaps even legal cases to answer, unless universities work hard, together, to ensure the sector has watertight frameworks and processes in place to prevent such controversies in the first place.

But finally, I'd hope the conversations following this event will be about more than protecting institutions from reputational damage, media attention, or potential legal action.

Two books just out offer 'manifestoes' for such bigger conversations: *The Manifesto for Teaching Online* by Sian Bayne and colleagues, and *Transforming HE: A Manifesto* by Paul Ashwin..

They highlight context-specific progression and research-informed evolution, in contrast to rapid transformation. They call for involvement of relevant sector experts in restating the social, public, and economic value and purposes of higher education in different regional contexts.

And they also highlight the genuine potential of well-designed innovative, digital education that starts from sound pedagogical principles, curriculum aims, ethical frames, and sector-based visions of the future of higher education—a digital evolution *led* by the sector, that *calls on* and *learns from* the education and technology industries, but rigorously *resists* current demands for rapid digital transformation as the only or inevitable future of post-pandemic universities.