

Electronic Technologies in Higher Education: A Driver of Change?

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I should state at the outset that I am a skeptic both about the usefulness of overarching narratives about technologies and the possibility of radical change in higher education, which is after all one of the most deeply conservative industries in the world.

There are a number of ways in which institutional investments in electronic technologies have changed the higher education experience for students and for faculty. Certainly, where research is concerned, the range of projects that can now be completed, the ease with which data or information can be stored or transferred, or the nature and number of the inter-institutional collaborations that can be maintained has vastly expanded, and for the better. The nature of the student experience has changed as well in a variety of ways.

But is it for the better? Has quality improved? And has it changed higher education as a whole in ways which are particularly disruptive of the status quo? I would argue the progress here has been very slight, particularly compared to some of the hype that was prevalent around the time that MOOCs were introduced seven years ago.

There were two key promises made about electronic resources in education. The first had to do with access and cost: that education could be made available to more people around the world, in more convenient ways, in way that was cheaper and more efficient than traditional education (an important concept for cash-strapped governments and students!)

In some limited respects this has come true. It is certainly true that in some areas which are quite remote from good universities the availability of high-quality education has changes substantially. And over the past 20-30 years, institutions that have invested heavily in technological delivery have improved substantially in the way they deliver professional mainly short-course educational programs. But the delivery of research doctorates, particularly in the sciences, and of undergraduate education has really not changed very much at all, and that is largely because the parts of the educational experience which are most susceptible to digitization are perhaps the most trivial ones.

To see why this is, it is to think about what students actually believe they are buying when they “purchase” an education. The American consultant Michael Stanton did everyone a service by in 2011 by designing a useful little schematic to visualize the “unbundling” of different educational services. Starting from the top left quadrant, and moving clockwise to the bottom left, we move from services which are both more highly commoditable and more susceptible to electronic delivery, to those which are least so. What one quickly realizes and one goes down this list is that in fact the kinds of educational services that were being promised through MOOCs were only the most superficial parts of the educational process. And even these are mostly only really available to motivated learners – as the famous MOOC experiment at San Jose State showed, for learners with remedial needs, electronic-only delivery is simply an inferior product. The deeper

and more important parts of the process simply cannot be easily automated in most fields of study. As a result, the institutions which are seen to deliver more in terms of access to opportunities and personal transformations – the Oxfords, Sorbonnes and Tokyos – can keep their place in the status hierarchy pretty much regardless of how well they do at delivering the rest of their product.



The second big promised upheaval was that changes in the delivery of education would lead to new players or at least upend the demand and supply of credentials. There were a number of variations on this. One was content unbundling – they idea that students could pick and choose courses from different institutions to “build their own degree”. This was always naïve because it assumed institutions would give up their monopoly and that regulators would agree to degrees being awarded essentially without central oversight. There was the idea that new type of degree (certificates, mini-degrees, nano-degrees) would flourish. Again, this betrayed a major understanding of how the labour market works and how slow the labour market is to assign value to innovative credentials. And the electronic revolution has as of yet done very little to alter the structure of credentials in higher education: they remain long in duration and difficult to obtain. There are a few innovations here and there: the micro-Master’s from MIT, for instance, or the MOOC Master’s at Georgia Tech (in conjunction with AT&T). But there is not yet much sign that these are leading to a broader shake-up in credentials. In a sense, a revolution in credentials

is probably a pre-condition for changes in electronic delivery to have the kind of impact its promoters hoped.

Finally, there was the idea that new providers would flourish, again without considering that for the most part what students look for in a degree-provider is prestige and by definition this is one thing new institutions have trouble providing, which creates very high barriers to entry.

(Some people predicted the opposite – that the world would shift to only having 50 big brand-name universities. This totally misunderstood the nature of prestige in higher education. Top universities do not aspire to be big, they aspire to be small and exclusive. Institutions want to be the equivalent of Gucci one wants, not Kopeika or Walmart).

It is not so much that electronic education has not changed the higher education landscape. It is rather

- a) That other, concomitant legal and regulatory changes needed to happen or societal norms needed to change in order for electronic higher education to really shake up the system or
- b) That there are not many ways that electronic education gives new players or “outsiders” much of a disruptive advantage that they can leverage. There are no Amazons in education: to the extent the use of electronic resources make a difference in education, it tends to do so in proportion to the amount of resources one can throw at it. So big players tend to get bigger.

Perhaps the question that has not been addressed enough with respect to electronic education is quality. We have talked a lot about using electronic resources to make education cheaper, to “bend the cost curve” as Americans say. And we have done so in some fairly rudimentary ways: filing lectures and putting them online, for instance. But we have not really had a sustained attempt to use electronic resources to make education better. That is, to make the acquisition of subject-matter skills faster or more effective, or to focus on using it to help develop skills of critical thinking or collaboration – that is, exactly the kinds of skills the labour market is looking for.

I would argue that there is a lot of promise for use of electronic resources this way, but that to do this effectively requires a commitment both to collaboration (developing these kinds of programs is expensive, few institutions will be able to do this on their own) and experimentation (that is a rigorous commitment to testing for outcomes in skill acquisition, be those skills “hard” or “soft”). Neither of these traits come naturally to higher education institutions in most countries. So while there is a path to a different and better higher education system, there is a lot of inertia to be overcome first.

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