BlyInvitation

Whither higher education?

Earlier this month, the National University of Singapore announced that in place of a three- or four-year programme leading to a degree, it would commit itself to a two-decade relationship with students. Is it time to rethink the role of higher education?

Simon Chesterman
For The Straits Times

For centuries, universities have operated on the assumption that three or four years of study sufficiently prepare most graduates for a lifetime of employment. The origins of that model lie in medieval Europe, although it became widely available to women only less than 100 years ago. In the 21st century, two factors have called into question whether the traditional degree-based system of tertiary education remains fit for purpose.

The first is that our lives are now much longer. Since 1900, average human life expectancy has more than doubled. Yet our education, work, and retirement patterns remain essentially the same. Most of that additional time has gone into our retirement years, as that age is pushed back and our working lives are extended. Philosophers John Rawls and John Haaland, among others, have argued that we should spend a larger proportion of our life getting better educated.

The second is the transformation of employment. When workers stayed with a single company for decades, the job training might reasonably be expected to keep them up to date in their field. This becomes a problem when, as a study by LinkedIn shows, people are changing jobs twice as often as they did even 20 years ago. And, as the consulting firm McKinsey recently found, about one-third of the new jobs being created today simply did not exist that long ago. These trends come at a time when there is more competition in the tertiary space than ever before. Why pay for a degree, for example, when you can do the Massachusetts Institute of Technology’s version of the same course through your company for free? The first wave of massive open online courses (MOOCs) emerged in 2012 and most major universities (including the National University of Singapore) are experimenting with them. Though the so-called Coursera has failed to scale up university, their financial model is being challenged as never before.

That’s fine. Good schooling should be able to claim a monopoly on knowledge. But this competition is happening at the same time as a more troubling trend creeps into question the very notion of expertise.

BETTER QUESTIONS, BETTER ANSWERS

Many people now worry about Shakespeare’s suggestion that they should put to death, educators will use MOOCs and online tools to help with their education. Therefore, for example, a good part of the first year is spent dabling any myth that learning is now memorizing a set of rules. Knowing that the law is almost helps a client, knowing how to apply X to a client’s unique circumstances is much harder. In law, as in many other disciplines, the skills lie not in knowing facts, but having the critical and analytical tools to understand and evaluate new facts or formulate new theories.

Casting a scholarly environment – running a university – means encouraging such a culture that continually asks new questions and questions old answers. It’s not just something that can be done through artificial intelligence and is precisely the opposite of crowdsourcing.

PROFESSOR ROBOT

So what does this mean for universities? In essence, that it will be harder to maintain good universities, but more important to maintain good teachers. The massification of education through MOOCs and other online tools is already making tertiary education available to tens of millions of new students. Even if only 10 percent of them actually complete such modules, that is still millions giving an education that they might otherwise have been denied.

Traditional universities will continue to struggle. MOOCs and other forms of technology-enhanced learning. Professor Ashok Goel recently held such an experiment at the Georgia Institute of Technology. He added a teaching assistant for one of his online courses, but omitted to tell students that “she” was actually an application based on IBM’s Watson AI system. In five months, some of the students noticed.

Interacting with “Jill” online – who communicated via e-mail, but had the programme with a delay so that she would not reply to questions instantly – some thought she was a little world, but not appreciably wider than other academics. Professor Goel has since run the class again with a mix of AI and human assistants. At the end of the semester, students gauged which was which and did slightly better than chance. Jill was more of a chatbot than a replacement professor – on the notorioues website Ashley Madison, similar technology for millions of married men with “sympathies” about having an affair – but she’s a happier of things to come.

Initially, at least, such tools will increase productivity. Jill, for example, answered far too many questions and was an assistant in the way that GPS navigation systems assist in driving a car.

Moving forward, will we see the next step: the professional equivalent of autonomous vehicles? Not for some time, I would guess. But students will likely spend less time in lecture theatres listening to professors who occasionally signs for a question. In places, one can imagine the imparting of information and training in basic skills moving to an AI platform that can test itself to respond to individual student needs.