THE CONVERSATION

How to future proof university graduates

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Facing an uncertain future. Tom Wang/www.shutterstock.com

If you were thinking that a librarian's life was the one for you, you might want to think again. Secretaries and personal assistants, I'd look over your shoulder too. The robots are coming for your job. According to a recent report from consultancy firm Deloitte, these are among a number of occupations categorised as being at high risk of automation.

According to an estimate in the Deloitte report, such jobs – which also include manufacturing – are on a collision course with obsolescence. In the UK, 10.8m jobs – or a third of the adult workforce – are potentially at risk from automation.

That's the bad news. The good news is that the same forecast tells us that each job created

in low-risk occupations – education and care among others – pays £10,000 more than the high-risk jobs which are being replaced. In total this equates to a £140 billion contribution to the UK economy.

Angus Knowles-Cutler, vice-chairman of Deloitte, argues that new graduates will need "more digital know-how, new management and leadership skills, creativity, entrepreneurship and the ability to solve complex problems".

His conclusions resonate with my own research exploring the rise of social entrepreneurship among university students. The act of blending social missions with innovative business practice, social entrepreneurship has grown rapidly across UK higher education. We've found that for many students it plugs a skills gap that they're aware they need to fill before going out into the world of work. They believe social entrepreneurship confers unique advantages in a fiercely competitive graduate labour market.

Borderless leadership

My colleagues and I call these the skills of the borderless leader: the capacity to transcend disciplinary, operational and geographical boundaries to solve complex problems.

The borderless leader must learn to work across sectors: in the future people are likely to have multiple jobs – not just employers. The borderless leader must also be primed for a hyper-globalised world, beset by multi-sided and "wicked" problems which defy disciplinary or national borders. Everything from access to banking to climate change to female empowerment – issues which span government, charity and business sectors – demands a new kind of leader. They must be able to work in collaboration so as to design solutions which are simultaneously locally rooted and globally scaleable.

Borderless leadership involves the possession of a very specific set of intersecting skills. These include being operationally agile, comfortable with digital technologies, literate in a broad range of disciplines and good at mobilising and sustaining personal networks. Entrepreneurship underpins this skill set, because such skills are only truly ignited in the moment of entrepreneurship, where innovation and creativity are essential.

Unsurprisingly, borderless skills are at a premium. According to the Omidyar Network's Sal Giambanco, professionals who possess such attributes "will significantly outpace supply over the next ten to 15 years."

What universities should do

Universities have a responsibility to grow the pool of borderless leaders, and shrink the number of graduates skilled only for jobs which may soon no longer exist.

I'd argue that the best way for universities to foster borderless skills is by embedding opportunities for entrepreneurship into a student's experience of higher education. To do so, university curricula will need to evolve to fuse disciplinary knowledge with applications outside the classroom, fostering an appetite for continuous learning where skills are constantly reconfigured to match the size and shape of new problems.

We're already seeing some examples of how universities are responding to the call for borderless skills both within and outside the curriculum.

At Southampton, our curriculum innovation programme has enabled project-based learning through cross-university modules such as social enterprise. This module is an immersive 12-

week process which takes students – whether they are geographers, medics, physicists or historians – through the design of a social enterprise. This year, for example, one of our project teams is working with a PhD student on a food waste enterprise called The Biggest Tree which dehydrates waste fruit and sells it as healthy snacks.

The Biggest Tree project that is growing at Southampton.

Elsewhere – in Australia – Monash University has launched a BA degree in Global Challenges, which blends intensive entrepreneurship, leadership and social network training with projects aimed at finding solutions to global issues. In the US, Stanford is committed to redrawing its programmes around "missions" not majors. Students are to be offered the opportunity to construct their university experience based on motivation, combining classroom learning with practice in impact labs designed to fix global challenges.

But there are barriers to these kinds of curricula. Under the current tuition fee regime in the UK, universities are attracted to curriculum models which are easy to scale up. Project-based modules are expensive and difficult to scale up because they require purpose-built spaces and patient attention: you can't cram 100 students into a lecture theatre or expect them to design solutions without mentoring and support.

Then there's the question of assessment: entrepreneurial learning outcomes such as creativity and degrees of empathy resist traditional marking criteria – but still need to be valued in some way.

Given the magnitude of the challenge posed by automation and the urgent need to ignite our global innovation economy, such barriers should not paralyse us from retooling our curricula. Unless universities are willing and able to adapt accordingly, their students will struggle to get work when they graduate.

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