

AI's challenge to universities: What happens when EQ trumps IQ?



Equipping our students with the tools to survive and thrive will still require knowledge and skills - including those needed to master new tools such as generative AI. However, we must also be more intentional about cultivating what it is that makes us truly human, say the writers. ST FILE PHOTO

Artificial intelligence will soon surpass knowledge workers in most tasks for which they are trained. Should universities switch from educating the mind to educating the heart?

Simon Chesterman and Loy Hui Chieh

Nov 30 marks the second anniversary of the release of ChatGPT - though few models will be celebrating.

As the large language model raced towards a hundred million users back in 2022, academic social media was abuzz with gloomy speculation about how this transformative technology that simulated human reasoning and communication might be used by our students to cheat in their papers.

There was hand-wringing and head-scratching over ChatGPT's ability to produce in seconds what had once taken days or weeks. Some academics exhibited the classic five stages of grief - denial, anger, bargaining, depression, acceptance - regarding the impact of this new software on their life's work.

As the months now stretch to years, it has become clearer that there is a lot of hope about the impact of artificial intelligence (AI) on the economy and society. This has long been part of the history of AI, with the term "AI winter" coined to reflect the mismatch between expectations and reality.

Yet generative AI is already changing our relationship to information, from how we seek it (chatting with AI rather than searching with Google) to how we produce it (from writing to prompting).

It also offers new ways of engaging with material. Google's NotebookLM, for example, can ingest articles or whole books and create an engaging podcast between two speakers.

This is all very exciting. But, to the extent that the functions of a university are to cultivate knowledge and educate the citizenry, these changes herald a seismic shift in what universities

do, as well as what they are. In particular, after centuries of attention to training of the mind, a more holistic view of education may mean refocusing on the heart.

FROM FIREFIGHTING TO FIREPROOFING

Understandably, most university-level responses have tended to target more immediate issues: updating rules on plagiarism, writing policies on proper use (or not) of generative AI by students and faculty, reviewing curricula on design and pedagogy for the inclusion of AI - occasionally going to extremes, such as suggesting that degrees should now be offered in "prompt engineering".

For the most part, the responses have been reactive - reviewing curricula and pedagogy for the inclusion of AI - occasionally going to extremes, such as suggesting that degrees should now be offered in "prompt engineering".

We need to take a longer perspective. Given the seismic scale of the changes under way, the value proposition of a university education - and of universities themselves - is going to change.

That change will be most acute in undergraduate education, where longstanding tensions may become contradictions or fault lines. For what is the function of university education: Is it to offer a pipeline of workers, especially knowledge workers, to service the economy? Or is it to provide opportunities for young adults to explore and find themselves? Put bluntly, are students our products - or are they our customers?

Most universities try to embrace both roles, with more vocational institutions leaning towards the former and more "elite" institutions often signalling that they embrace the latter. AI, however, are judged on the employability of their graduates.

This is a particular concern in Singapore, where parents and Government pay attention to the annual Graduate Employment Survey as evidence of whether we are doing our job as educators.

THOSE WHO CAN'T DO, TEACH?
It was not always so. For centuries, many universities and colleges prided themselves on cultivating disinterested learning. That ethos is exemplified in the liberal arts model of education, which long championed the

nurturing of citizens and generalists rather than workers and specialists.

From at least the mid-20th century, however, employability of university graduates became one of the measures of success for a university. By the 21st, such key performance indicators had been formalised through the growing influence of university rankings.

For those that depend on state funding for a substantial part of their budget, sensitivity to the market for graduates is a regulatory as well as economic concern. AI appears set to exacerbate the contradictions between universities' vocational and aspirational functions by commoditising one of our key outputs: knowledge workers. If disinterested learning was displaced by the rise of the university as a kind of "knowledge worker factory", might it return when the throughline between graduation and employability becomes less certain?

If it does, will a similar number of students (or their families) be willing to pay for such an education? And will states such as Singapore be willing to subsidise it?

THE MARKET FOR TALENT

The voluminous literature about automation and digitalisation can be loosely divided into the transformationalists, who see a revolution in process, and the sceptics, who argue that such claims are wildly exaggerated.

Though there is already evidence of retrenchments in call centres and financial organisations, this will likely play out differently across various sectors of the economy. A frequent optimistic refrain harkens back to previous industrial revolutions and the emergence of new jobs that replaced old ones. There are some differences in the current situation, however. The speed with which digital technologies can now be rolled out is of a different order compared to the spread of the steam engine, electricity, and the early spread of computers.

Moreover, the nature of the change is not that jobs will necessarily be replaced in their entirety by AI, as the horse was eventually - by the automobile. Rather, it is that those jobs will be broken down into tasks, some of which will be automated. As the

proportion of such "jobs" diminishes, it is possible that the number of full-time employees in many organisations will also decline, with others being broken down into their constituent components, some of which will be automated and some of which will be outsourced to humans.

As jobs become tasks, careers may be reduced to gigs. Another glass-half-full analysis is that humans (and those that educate them, such as universities) should focus on creativity and innovation, training the superstars and the "above average". Upskilling should focus on higher-order skills, such as conceptual thinking, abstraction and communication - areas in which machines may face hard limits in their capacities.

The harsh mathematics, of course, point to the limits of this approach: Half of humanity is, by definition, of below average ability; superstars are defined by their scarcity. Indeed, some of those who were initially bullish about human-machine partnerships later concluded that reliance on data and algorithms alone typically leads to better decisions and forecasts than the judgment of even experienced and "expert" humans.

A similar evolution has been seen in games like chess, where a brief period of enthusiasm about "centaur chess", in which humans were paired with AI, gave way to the concession that silicon players had advanced to the point that they no longer benefited from their flesh and blood partners.

FROM IQ TO EQ?

One area in which technology is likely to lag behind humans is both due to its complexity but also due to human preferences - empathy.

This is likely to manifest in two ways. First, there are jobs in which there will be a strong public sentiment for humans to remain the dominant front-player actors. In healthcare and education, for example - early childhood education, at least - it seems probable that AI will at best support rather than supplant doctors, nurses and teachers. This may also be the case in some high-end service sectors, such as luxury hospitality and tourism.

Secondly, as the "thinking" aspects of other jobs are outsourced to machines, the "feeling" aspects may become more highly valued. Front runners may be leadership and managerial

positions, as well as some customer-facing roles, but there is already evidence that a "feeling economy" is emerging, with interpersonal and emotional skills being recognised as important.

Indeed, as more critical and analytical tasks are undertaken by machines, the ability to lead may depend on one's ability to connect with other humans rather than demonstrating greater knowledge or insights.

For universities, this could affect the types of courses we select as well as how students are selected and assessed. In some ways, it would be an extension of two trends that we already see at top universities.

One is the long tradition of valuing the humanities, a broad field of study that examines the human experience. Though periodic eulogies are penned for the death of such majors, few leading universities abandoned philosophy or history completely.

Even those at the cutting edge of technology have made the case for embracing humanistic approaches. Microsoft president Brad Smith, for example, has argued that "as computers behave more like humans, the social sciences, ethics, philosophy, psychology and human development courses can teach critical, philosophical and ethics-based skills that will be instrumental in the development and management of AI solutions".

Another trend is more recent, emphasising the student life side of a university education. If students are facing a world of uncertain economic prospects, in which educational tools are available at costs trending towards zero, the value proposition of universities might come to focus less on what happens in the classroom or the library and more on what happens elsewhere on campus.

The Covid-19 pandemic revealed that it was possible to conduct university education without being physically present, but much was still lost in terms of educational achievement. On top of that, many came to realise the important social aspects of being in a university environment. Among other things, this was evident in the lawsuits by which students in the United States sought heavy discounts on tuition paid for a holistic experience that they had been denied.

In the wake of the pandemic, many tertiary institutions rethought their approach to student life. At the National University of Singapore, NUSOne is an example of an effort to support the transition to university life as well as ensure that the experience goes beyond acquisition of a degree. Investment in academic programmes with a residential component, like NUS College, is further recognition of how time at university can and should be transformative personally as well as educationally.

The vision of a university as a "lifestyle" experience may raise eyebrows among some academics, though it is merely an extension of a trend that is already evident in many elite universities, particularly private universities in the US.

That points to a reason for wariness in embracing such a vision of universities: the cost. Steps in that direction could increase inequality if they are limited to those who can afford such luxuries - particularly if government subsidies could not be justified by the economic contribution those students might make after graduation.

Regardless of the size of that market, there will almost certainly be some demand for credentialed professionals in areas where humans are valued for their empathy as well as their intellect.

HAPPY BIRTHDAY?
So, while we won't be singing happy birthday to ChatGPT, it is timely to rethink what we do at university and why.

Equipping our students with the tools to survive and thrive will still require knowledge and skills - including those needed to master new tools such as generative AI. Even as we learn more about its astounding capabilities, however, we must also be more intentional about cultivating what it is that makes us truly human.

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