

EDUCATION IN THE AGE OF AI

As work and learning evolve, what's the role of universities?

These institutions back the case for schooling based on knowledge, judgment and the ability to keep learning

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AS STUDENTS devote more of their time at university to gaining work-place experience, the emphasis on internships is raising a more fundamental question: What is a university education for?

The rapid development of artificial intelligence, which is changing both the way students learn and the work they will eventually do, is bringing that question into greater focus.

Much of the knowledge students acquire during their university days can increasingly be accessed, processed and applied by AI, said Professor Chee Yeow Meng, provost and chief academic and innovation officer at the Singapore University of Technology and Design.

This means the "purpose of a university education can no longer be simply to teach students everything they need to know for their careers", he said.

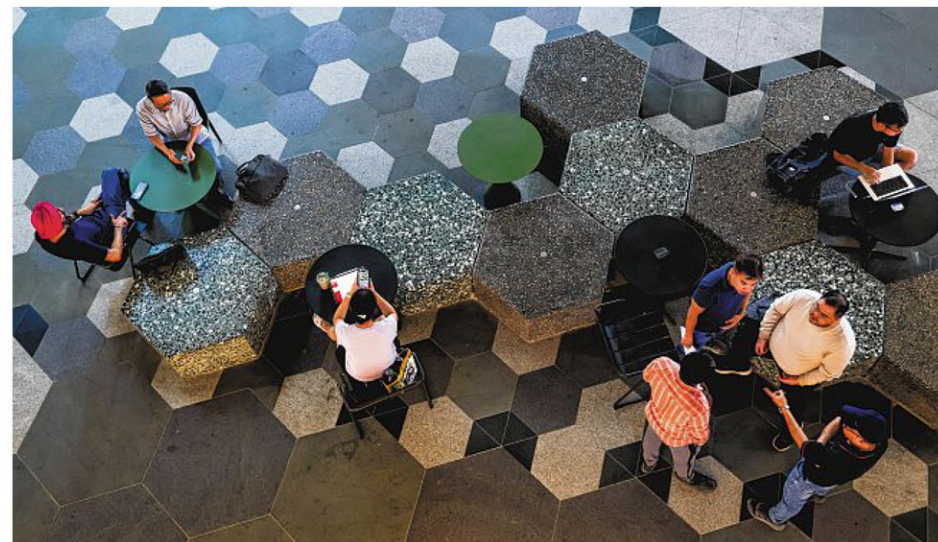
Instead, universities need to also place greater emphasis on teaching students to use the knowledge gained to solve problems and create real-world value.

"This does not mean disregarding knowledge altogether," said Prof Chee.

Indeed, Singapore's universities still view domain knowledge as being an important requirement and foundation, even as AI changes how this knowledge is acquired and applied.

More broadly, universities envision their role as equipping students with a foundation that can sustain them beyond their first job – with skills including critical thinking, judgment and the ability to keep learning as technology and jobs evolve.

At the same time, these institutions continue to defend a wider



Universities see their role in equipping students with a foundation that can sustain them beyond their first job.
PHOTO: CMG

purpose beyond employability, including intellectual exploration, exposure to different perspectives and personal development outside the classroom.

What is university for?

Associate Professor Walter Theseira, a labour economist at the Singapore University of Social Sciences, said education serves two purposes: developing skills and capabilities, and signalling a graduate's quality to prospective employers.

Internships and other work experience can provide employers with evidence of a graduate's capabilities.

But for young people who have yet to accumulate much relevant experience, a "high-quality degree remains a credible way of opening doors", he said.

But Prof Theseira cautioned against viewing university education through solely the lens of employability.

"Even universities that exist for a particular purpose, such as military academies, do far more than just teach their students how to fight in a war," he said.

"The role of university education goes beyond just work preparation, but also includes self-discovery, preparation for lifelong learning, and intellectual exploration."

Judgment in the age of AI

With the proliferation of AI, such broad education "becomes more valuable, not less", said Phanish Puranam, professor of strategy and the Roland Berger chaired professor of strategy and organisation design at Insead.

"As AI generates fluent output at near-zero cost, the scarce complement is the judgment required to evaluate that output," he added.

"Evaluation draws on exactly the faculties a broad education develops: reasoning, domain knowledge and an understanding of people and institutions."

While universities acknowledge that curricula cannot chase every shift in the labour market, they broadly agree that students need to learn how to work effectively with AI.

Professor Susanna Leong, deputy president for academics and

provost at the Singapore Institute of Technology (SIT), said AI literacy should be universal, but its application must be grounded in disciplinary expertise.

"Students should understand what AI can and cannot do, how to use it responsibly, how to evaluate its outputs and how to manage risks involving accuracy, privacy, security and ethics."

They also need a deep understanding of their own fields to recognise when AI-generated responses are unreliable, incomplete or inappropriate, she said.

However, developing these capabilities requires more than a generic AI module.

Prof Leong said AI competencies should instead be woven progressively through the curriculum, from foundational literacy to discipline-specific applications.

SIT describes this combination of domain expertise and AI capabilities as developing "AI bilinguals".

At the same time, the judgment required in an AI-driven world is not the preserve of any one discipline, said Professor Aaron Thean, deputy president of academic af-

fairs and provost at the National University of Singapore.

Different disciplines bring different perspectives to AI, he added.

Law, for example, asks whether AI can be trusted, what safeguards are needed and who remains accountable, while business examines where it creates genuine value and how work should change around it.

The humanities and social sciences, meanwhile, gauge what AI means for people and society, including its effects on behaviour, well-being, culture, values and inclusion.

"A comprehensive university education can therefore ask not only what AI can do, but how it should be used, for whom and with what consequences," said Prof Thean.

Ultimately, the purpose of university education is not merely to equip students with a fixed set of skills for their first job, said Professor Alan Chan, provost of Singapore Management University (SMU).

"It is to give them the disciplinary foundations and interdisciplinary reach that enable them to make connections across different knowledge domains, together with the judgment and human capabilities to navigate change, contribute responsibly and adapt throughout their careers."

Similarly, SMU chairman Piyush Gupta told *The Business Times* in an interview earlier this year that domain knowledge is still needed, as "you need to know enough to be able to connect the dots".

However, he added: "How do you engage with people with empathy as well? So, that's a very different education."

His view was that majors should be disbanded, with students focusing on doing "10 minors" for example.

"Ten minors means you know enough about 10 disciplines. Quintessential education is about training the mind. And so... education is going to be about training the mind and training the context."

Learning to keep learning

An ability to keep learning may be what distinguishes a university graduate from someone who has

acquired specific job skills through shorter courses or workplace training, said Insead's Prof Puranam.

Such programmes can deliver specific, current skills efficiently and are sufficient for many roles, he said. A university education, in contrast, can develop what he described as the "second-order capacities" needed to acquire new skills repeatedly throughout a career.

"In a stable environment, specific skills win on cost and speed," he said. "In an environment where tools turn over every few years, the ability to reason, learn and integrate across domains compounds in value."

For universities, this means their value increasingly lies in developing these enduring capabilities, rather than simply teaching skills for the jobs of today.

"If they deliver only specific skills, a short course does the same thing faster and cheaper, and the degree loses its rationale," said Prof Puranam.

The graduates who remain distinctive, he added, will be those who can frame unfamiliar problems, evaluate machine output and retrain faster than technology changes – capabilities that are "very hard to build in six weeks".

Developing these capabilities is also changing how universities teach and assess students.

At SMU, for example, schools are reducing their reliance on take-home essays that AI can produce in seconds, while increasing the use of oral defences, live builds and staged submissions that require students to show their reasoning.

"This isn't about removing content – it's about ensuring what we assess actually reflects learning, not output," said SMU's Prof Chan.

SIT is taking a similar approach.

Where AI can readily produce written or technical output, students may instead be required to explain their reasoning, defend their decisions and demonstrate mastery of the underlying subject.

"Technology will keep changing," said Prof Chan. "What won't change is our responsibility to make sure graduates can think clearly, adapt and defend their own judgment, regardless of what technology can do."