

Ready for the unknown in a changing world

In a world of rapid change, a worker's ability to respond well and quickly to disruption will be an asset.

"Technological disruptions are coming at us very rapidly and what we learn today may be obsolete three to five years down the road," warns Singapore Institute of Technology provost Loh Han Tong.

That means schools are up against a big challenge. They need to prepare students "for jobs that have not yet been created, to use technologies that have not yet been invented and to solve social problems that we don't yet know will arise", says Organisation for Economic Cooperation and Development education chief Andreas Schleicher.

To do so, Singapore is taking bold steps to make the transition between study and work as seamless as possible. These include sending students on extended work stints, getting more of them to learn directly from practitioners in class as well as fostering closer partnerships between institutions and industries.

The Duke-NUS Medical School is different from most others because most of its faculty are doctors and nurses involved in daily medical work. Dr Sandy Cook, interim vice-dean at the school's office of education, says practitioners mentor by sharing their best practices and wisdom. "They learn from one another. The young people come in with new information, approaches and energy," she says. "Not only is it good for the learner but also the practitioner."

Students in other degree programmes, such as engineering and science, are seeing the value of learning from industry, through projects or internships, says Dr Cook. "You can't just come from a theoretical base, you have to see the real problems someone faces and whether the skills learnt enable you to solve those problems," she adds.

This method has been in use at the polytechnics and Institute of Technical Education (ITE).

The Earn and Learn scheme, a SkillsFuture initiative introduced in phases since last year, incentivises fresh polytechnic and ITE graduates to work and gain qualifications at the same time. Under this programme, participants get job training, work on projects or even go on overseas attachments for 12 to 18 months. They may work for four days a week and devote a day to studies. At the end of the programme, an ITE graduate gets a diploma while a polytechnic graduate receives an advanced or specialist diploma.

Mr Albert Toh, Republic Polytechnic's director of the Academy for Continuing Education@RP, says such

programmes provide "currency, relevance and quick response to industry needs". He adds: "The industry will benefit from a skilled workforce that is responsive to the changing global economic circumstances."

For younger students, the strategy is to encourage them to explore their interests from an early age, with the help of education and career guidance counsellors. These counsellors or teachers are deployed throughout the education system – from primary schools to universities.

This is a departure from the past, when the Government sought to project the number of jobs to be created in each sector and train workers to fill those jobs. Today, it has become more difficult to predict what jobs there will be in five to 10 years' time. The focus has thus shifted to helping young people find where their talents and passions lie, and encourage them to excel and thereby create economic value, rather than wait around for a government job or one at a multinational corporation.

Secondary schools will specialise in niche areas such as aerospace or robotics and aim to nurture their students' interests beyond books. By next year, all secondary schools will have an Applied Learning Programme (ALP) and a Learning for Life Programme. The first helps students see the relevance of what they learn, for instance, in science and technology or business and entrepreneurship. The other helps develop character and skills such as teamwork through sports or the arts.

Thanks to the ALP at Yuying Secondary School, Secondary 4 student Meredith Poon, 16, says she has learnt basic financial skills and how to write business proposals. She also pitches her projects for competitions and attends engagement sessions with entrepreneurs. "I am now more confident when speaking," she says. "I've also learnt the importance of teamwork."

At the other end of the age spectrum, SkillsFuture caters to those who are already working. The SkillsFuture Credit gives every Singaporean aged 25 and older \$500 credit to pay for skills courses as a way to spur more to pick up the learning habit.

More than 18,000 people tapped these subsidies in the first three months of this year, using about \$5.2 million. About 51.5 per cent of those who have used their credits are aged 40 and older.

The credits do not expire and will be topped up periodically, so they can be accumulated for more expensive courses.

There are now about 15,000 courses, some 5,000 more than in January. They range from baking to computer literacy.

Calvin Yang

ON THE FUTURE OF EDUCATION



ABILITY OVER AGE

As information becomes ubiquitous, criterion of admission to a specific course will be ability, not chronology, so the range of student ages will widen, with younger and older students joining the hitherto standard university-going age group. Younger students, whose self-directed learning has prepared them sufficiently for a university course, need not wait till the requisite age, while older workers who have spent their earlier years on other pursuits may now sit in the same course.



SINGAPORE MANAGEMENT UNIVERSITY
PROVOST LILY KONG

TEACHERS PLAY CRUCIAL ROLE

Given the vast volumes of information readily available today, teachers play an important role in helping students to develop the academic scaffolding and skills that will enable them to curate, make sense of and use data effectively. Personal qualities, such as initiative and resilience, and interpersonal skills, such as teamwork and communication, will become even more important.



NATIONAL UNIVERSITY OF SINGAPORE
PRESIDENT TAN CHORH CHUAN

DEGREES MAY HAVE EXPIRY DATES

Degrees may likely not be completed in one continuous stint, but may be completed after a student has gone to work. Degrees will have a time limit of validity, and degree top-ups may be done several times over the working life of a graduate, for knowledge refreshing, new skills and knowledge acquisition, and change of jobs.



SIM UNIVERSITY PRESIDENT
CHEONG HEE KIAT

RESIDENTIAL EDUCATION IS EXCITING

Some people see a world without residential universities. They see students sitting alone at their computers learning from their homes or their workplaces as a dream. I see this as a nightmare. I believe that residential education is an exciting human and social experience which is here to stay.



SINGAPORE UNIVERSITY OF TECHNOLOGY
AND DESIGN PRESIDENT THOMAS
MAGNANTI

Fast forward series

Next week, read the final instalment on disruption and its promise to make the world better.