

Three Cs for Singapore's universities to thrive in a post-Covid-19 world

This is an edited excerpt from Education Minister Chan Chun Sing's speech at The Straits Times Education Forum at the Singapore Management University on Feb 10.

Instead of waiting for a return to the past or waiting for change to normalise, our best approach to thrive amid the short-term uncertainties and long-term global trends is to combine the best practices of the pre-Covid-19 world and the Covid-19 world, starting now.

Over the past two years, the resourcefulness and resilience of our students, educators, schools, and institutes of higher learning (IHLs), have allowed the education system to progress, largely uninterrupted.

In rising to the challenges of Covid-19, we have gained new insights into the future of education. It has reinforced our belief that we must hasten the transformation of our education system, shaped by long-term trends that have been accelerated by the disruption of Covid-19.

Three major forces shape our long-term vision for education:

First, the half-life of technology is shrinking, and skills and knowledge will become obsolete faster than before.

Second, a more connected world creates more opportunities for all, but also greater inequality of opportunities and outcomes. To distinguish ourselves as a cohesive nation, where outcomes depend more on one's capabilities, commitment and contributions, rather than inherited privileges, we must continually lean against the forces that tend towards inequality and immobility, to ensure that opportunities remain open regardless of one's starting point in life.

Third, as the world becomes more interconnected and interdependent, it risks becoming more fragmented and polarised – geopolitically, ideologically, culturally, and even technologically.

Today, I will just focus on our universities – as one part of our wider education system – as platforms to achieve the three Cs:

- Continual learning.
- Connections and collaboration for value creation; and
- Confidence building.

Our education system, especially our universities, must evolve – not just to respond and react; but to anticipate, adapt and advance.

CONTINUAL LEARNING – LEARNING FOR LIFE; LEARNING THROUGH LIFE

Let me start with the first C – continual learning. If the half-life of skills and knowledge has shrunk, then it must follow that the pace of acquiring skills and new knowledge must intensify.

It used to be said that we may use almost 20 years to prepare for our first job, and maybe the only job for life. That's our parents' generation.

But what if we need to do 10 different jobs for life, changing every five years on average? That's our generation.

If we need to top up the knowledge and skills of our people as they take on new jobs every four to five years, that means upgrading 20 to 25 per cent of our roughly three million local workforce each year; or about half a million adult workers every year.

Hence, the definition of success for our education system cannot be just how well we produce a cohort of 30,000 to 40,000 students each year for the job market. It should be how well we do that plus retraining and upgrading about half a million adult learners each year.

Therefore, instead of focusing on the challenges of falling cohort sizes, we should actively seize the opportunity arising from an increasing number of workers who need retraining and upskilling.

In addition, the time taken for us to prepare a course, train the



Education Minister Chan Chun Sing speaking at The Straits Times Education Forum at SMU's Yong Pung How School of Law last Thursday. Instead of focusing on the challenges of falling cohort sizes, we should actively seize the opportunity arising from an increasing number of workers who need retraining and upskilling, said Mr Chan. ST PHOTO: GAVIN FOO

trainers and graduate the students – typically taking a few years – can also mean that the material may be obsolete by the time our students graduate from the course.

How should we then respond, anticipate, and adapt?

First, we need to jettison the concept that we can ever be done with learning. Learning for life must not mean there is a body of knowledge that once acquired, will prepare us for the rest of our life. Instead, learning for life must mean learning for the rest of our lives and learning throughout life. No amount of education frontloading can prepare us for life. Only continual learning can help us remain current and relevant for the rest of our lives.

Second, there is no predefined pathway to success. Success is never static. It matters less how many of our students in a particular cohort go to universities and polytechnics or Institute of Technical Education (ITE) at a particular point in their lives. It matters more, much more, how many of our students can acquire the appropriate degrees, diplomas, graduate diplomas and even stackable modules and micro-credentials throughout and at relevant points in their lives, to meet their ever-evolving life-cycle needs.

Instead of a "cohort participation rate", a "lifetime participation rate" in training and education is a more appropriate description of what we want to achieve at large. It means a "lifelong participation rate" in training and education at the individual level. Where we never graduate from our institutions, if graduation means we stop learning and connecting with our alma mater.

Third, success can be achieved regularly only with the relevant skills and knowledge modules, being combined and recombined, to create new value propositions for the evolving market. The skills to learn, learn fast, unlearn, and relearn, become more important than getting a particular grade at a particular point in life. The skills to collaborate across different disciplines, cultures, and perspectives to create something new become more important than ever before. To this end, flexible modules across multi-disciplines that allow our students to pivot and flex across the evolving sectors have become even more important.

In this vein, I am happy to hear that the Singapore Management University (SMU) is planning to give some students the flexibility to design their own curriculum and build their own degree courses.

Fourth, we need to significantly speed up our learning loops to shorten the time-to-market for skills and knowledge – from frontier research, leading industrial technologies, and breakthrough market practices, to academia and back to the market. This defines our competitiveness as a people and system. To this end, we need to sharpen our approach to internships, academia, and industrial collaborations, as well as alumni engagement.

CONNECTIONS AND COLLABORATION FOR VALUE CREATION

Our educational institutions, including our universities, are not simply transmitters of knowledge and skills. If transmission of knowledge was our only objective, then many online learning platforms can already do that.

Instead, we must leverage technology to transmit baseline foundational knowledge and skills through self-paced and adaptive learning, and by using accumulated and real-time data to focus our teaching efforts. This will free up time, energy, and bandwidth to develop in our students the higher-order skills to connect, collaborate and create.

The second C is about being connectors to collaborate and create value. In a world that is becoming more fast-paced, more divided, and yet more interconnected, we will need a strong network of connections to keep us current, keep us together, and keep us open.

To this end, we must deepen our connections in three dimensions: with the world, with industry and with our community.

As the world threatens to fragment along geopolitical, ideological, cultural, and technological lines, Singapore – our institutions and people – can distinguish ourselves as a platform for people to connect, collaborate and create to transcend those lines.

This is why we need to renew our push to have our young people grow up understanding and interacting with the world. Therefore, I strongly encourage our universities to connect and reconnect with the world through their exchange and internship programmes, even as Covid-19 wears on. Send our students abroad to learn. Welcome foreign students to add diversity to our campuses and help our students enhance their understanding of the world. Build a uniquely Singapore brand of being a trusted

and principled partner that others can rely on and want to work with.

We value-add to the world through our ability to not just appreciate and celebrate diversity, but to bridge divergence, and create new convergence.

The second dimension of connection that we need to tighten is the connection between academia and industry. This applies to our students and faculty.

As our students go through our universities, polytechnics and ITE, they must have access to quality internships. The National University of Singapore's (NUS) recent initiative – Internships as a Service – is a powerful concept. Students can intern with industry without being constrained by time and subject of study. Students in future should even be able to complete such programmes at their own time, if they have the desire and opportunity to intersperse their internship and studies.

The Singapore Institute of Technology (SIT) has also done well in building this connection. It is a pioneer of the applied learning model, which brings the university into the workplace, and allows students to learn by working with real-life tools to solve real-life industry problems. Faculty is critical for this relationship between industry and universities.

Universities must create more opportunities for faculty to keep pace with the latest industry innovations, and create free-flowing exchanges of ideas and personnel between industry and universities.

The autonomous universities, including SMU, already have a range of educators and researchers, from full-time faculty to those that straddle industry and academia, to adjunct lecturers. We must step up efforts to grow this diversity, including tapping more industry experts to serve as adjuncts and practice-track faculty.

As the universities rebalance their pre-employment training, or PET, and focus on continuing education and training (CET), they will accordingly review their staffing composition. This is necessary to better cater to the more diverse learner profiles and needs, including tailoring pedagogy, and especially andragogy, for our adult learners each year. PET methods cannot be applied to CET learners without appreciating the different opportunities and challenges of adult learners.

The Singapore University of Social Sciences (SUSS) has done well in tailoring its curriculum to

suit the needs of adult learners, with a "learn today, apply tomorrow" orientation. It is a pioneer in recognising and awarding credit for the relevant skills and knowledge, which adult learners have picked up as part of their prior work experience. And it adopts a blended mode of learning, with many online and mobile tools catering to work-study needs.

Faculty will need the necessary skills to help adult learners connect, collaborate, and create. For instance, lessons can take place both inside and outside the classroom, including in industry settings. Lessons can be two-way, with faculty and adult learners sharing knowledge and perspectives. Lessons need not be about solving yesterday's problems with yesterday's or today's solutions only.

Instead, lessons will be more about bringing out the knowledge from all – faculties and learners together – to solve tomorrow's challenges with new ideas and approaches.

For industry, instead of worrying that our students may graduate with outdated or obsolete skills, why not reimagine industry going into academia, working with academia to ensure that the students are ready for the future?

Imagine a system where frontier industries and trade associations have "corporate labs" or other active collaborations with all our IHLs, co-creating the curricula of tomorrow, solving the challenges of tomorrow, and producing new products and services for tomorrow's markets. That will help make our industry and student-workers future-ready concurrently, overcoming the risk of industry and worker transformation being out-of-sync.

The third dimension of connection to up our game is with our community. Our universities can be more deeply integrated into our wider industry, business, and social ecosystem. We have a responsibility to lead to help connect, collaborate and create. This will help the universities better understand the challenges of our community, industry, and the world, for us to apply our knowledge, ideas and skills to create better solutions for Singapore and the world.

Therefore, I encourage the Nanyang Technological University in Jurong. But to aspire to have the NTU DNA of innovation and enterprise in every industry and company in Jurong. That NTU is the nervous system and catalyst of Jurong's transformation.

I encourage SMU not to see itself as a university in the city centre. But instead to aspire to have the city in the SMU, where SMU inspires and leads the transformation of the city and businesses.

Similarly, the Singapore University of Technology and Design (SUTD) must distinguish itself as the frontier for technological designs, using the east of Singapore with its focus on digital and design as its springboard to the world.

With the universities being "in the community, with the community, for the community", we will be better able to attract the world's talent to put our hands, hearts and heads together to create the exciting future of tomorrow.

Finally, to better connect with the world, the industry and our community, the universities must do more to collaborate with one another and better build on one another's strengths.

I have an aspiration where our six autonomous universities operate as one team, leveraging on one another's strengths – from research to teaching and industrial collaboration. An aspiration where students can take modules across different universities, like the Boston system. An aspiration where our universities share more resources and combine faculty strengths to win projects to develop solutions for the world, the industries, and the community.

I am seeing promising signs in this direction. I will work with my team and all of you to make this happen faster, better, and tighter.

CONFIDENCE IN OURSELVES AND OUR CONTRIBUTIONS

Let me now turn to the final C – confidence. Confidence in

ourselves as individuals, confidence in ourselves as a people, confidence of our contributions to our society and the world.

Confidence in ourselves as individuals starts from understanding our strengths, weaknesses, and interests. This is as important as literacy and numeracy in our foundational years.

On the international stage, Singaporeans are often admired for our values and competencies. However, many have also commented that we can better help our students express themselves so that their talents are better appreciated. And help our students to better understand and appreciate the diversity of the world.

We will continue to increase opportunities for our people to be exposed to such skills and perspectives, beyond formal education or the university system. This will be our lifelong pursuit.

The second aspect is confidence in ourselves as a people. In a world of contesting ideas, ideology and values, we must have the confidence to chart our own destiny based on a pragmatic and disciplined search for what works best for our people in context, rather than be prisoners of ideology; and define our way of life based on our own set of values.

While we learn from the world, we must never relegate ourselves to just copying other people's ideas without context. We learn from others' successes. We also learn from others' failures. But ultimately, we must have the confidence to develop our own solutions to our own unique challenges – be it in the economic or social spheres.

On the other hand, we must remain humble and recognise that we cannot stop learning and improving – as an individual and as a country. Our universities have a responsibility to nurture such values in our people – young and old.

The final source of confidence comes from understanding one's contribution to society.

An individual's fulfilment can never be just about how much we obtain from society or how well we do for ourselves alone. Instead, our fulfilment, going forward, must be a sense of contribution to our society, the world, and our Singaporean cause to defy the odds of history.

Ultimately, I hope this will also be the distinguishing identity of Singapore – where our people will not define success just by how well we do for ourselves alone; but by how well we enable the next generation to do better than us.

Universities, having taken in the cream of the academically inclined crop, must certainly be expected to deliver students who can succeed in life. But that's not sufficient.

Universities must also continue to inculcate the mindset that students must define success beyond themselves. That having had the opportunities they had, they should and must strive to enable success for the wider community, for Singapore and for future generations.

To all our students looking forward to the commencement of your university education, I will conclude today's speech by sharing three reflections from my university journey.

This is also what I would like to tell my younger self if I were to walk the journey all over again.

Reflection 1: University is neither the pinnacle nor end of learning. If we were to attend one, university is but one part of our lifelong pursuit of learning, wisdom, and contributions. What matters more than the grades that we obtain in university, is the foundation we will establish to learn for life, and to learn throughout life.

Reflection 2: Learning is no longer simply the acquisition of knowledge and skills. Teaching is no longer just the transmission of knowledge and skills. Foundational learning will increasingly be self-paced, and adaptive. Time spent in class and with fellow learners and educators will increasingly be for connection, collaboration, and creation of new solutions for tomorrow's challenges, rather than just solving known challenges with known solutions.

Reflection 3: For Singapore to defy the odds of history, we will need the confidence to chart our own destiny and develop solutions for our unique challenges in context. Our universities and graduates have the responsibility to define success beyond oneself: To lead with conviction, to excel with confidence, to overcome with tenacity and in unity.