

# **NUS at Technology, Faculty Engagement and Student Learning: Expanding Mindsets and Changing Culture in Higher Education**

Welcome Remarks by Prof Tan Eng Chye,  
Dy President & Provost

21 Nov 2017, 9 am  
Auditorium 2, Stephen Riady Centre

A very good morning to one and all. On behalf of NUS, I would like to welcome all speakers and delegates to our campus for this national conference on technology-enhanced learning. To our guests from overseas, welcome to Singapore, and I hope you will find time to experience the sights, sounds and tastes of Singapore.

The theme of the conference is a timely one, on Technology, Faculty Engagement and Student Learning: Expanding Mindsets and Changing Culture in Higher Education. Why do we need to discuss mindsets and culture, alongside technology and learning?

Institutes of Higher Learning, such as Universities, are knowledge creators; we play a critical role in helping society to develop skills, competencies and expertise, to fulfil intellectual aspirations, and also, to serve the economy's manpower needs. Institutes of Higher Learning do not operate in a vacuum; we operate in a society and world that is changing rapidly. The world is changing faster than ever. And we are going to have to adapt faster than ever too, just to keep up. Smartphones are so much part of our lives today but in case we may not have realised, just ten years ago, neither the iPhone nor Uber existed.

While the world is changing, there is sometimes a perception that higher education is change resistant, though let me say upfront that I beg to differ. You may have heard terms like 'ivory towers', and the stereotype of the entrenched academic who clings to his role as sage on the stage. There may be some aspects of University work that may seem slow. For example, scientific research is long and hard work; results do not come immediately and it may take many years of iterative experiments and analyses to reach breakthroughs.

But this does not mean that Institutes of Higher Learning are stuck in the past. Quite the contrary, many of the world's leading universities are drivers of innovation, enterprise and

entrepreneurship; Universities are where ideas are developed and test-bedded, where start-ups are spawned, and where research is conducted, patented and commercialised.

The university is a dynamic enterprise. I hold the bias view that as researchers and educators, we are intrinsically wired albeit to different extents, to push the boundaries, whether it be of knowledge, innovation, or practices. We want to reflect, discover and learn. It is what we teach, preach and do.

This morning, we are here to discuss Technology, which is said to be a disruptive innovation in higher education, and one that we must respond and adapt to. Technology is a fact of life in modern society. Most of us probably spend more face time on our devices than talking to our friends and family. Technology is now driving the way we live, behave, work, access information, and above all the way we learn.

The question for us in higher education is, how can we embrace technology and its pervasiveness, to improve student experience, learning effectiveness and outcomes in a tech-driven world?

Because of the vast changes that technology is bringing about, it is important for us to recognise that it is no longer enough to teach students deep expertise in or across disciplines—though such expertise of course will remain crucially important. It is no longer just about double degrees, or double or triple majors or multiple minors. The rapid changes require that we as educators prepare students for an increasingly uncertain future brought about by technological change. To face this future, we need to help students to develop the core **life skills, values and attitudes** needed for a time of constant change and lifelong learning.

We also need to recognise that technology can have downsides for learning, and that it presents us with challenges in the context of higher education. For example, we need to counter some of the technological distractions faced by our students in a world of constant connectivity.

Learners today are comfortable with accessing information online. How can we make use of this abundance of information-- and students' access to it--to enrich learning environments? The use of technology in education cannot be about simply bolting it onto existing curricula; it requires thoughtful integration, bearing in mind not only student learning outcomes, but also

what we know about the process of learning itself. The right technology can help us to enhance the student learning experience, whether it is to promote project collaboration through online tools such as Google docs, or more active and interactive learning enabled by a good classroom response system or adaptive tutorials. Whatever we do, **integration** of technology should be thoughtful, selective and targeted, and must help to yield holistic learning outcomes and an enriched learning experience for students.

Effecting **integration** doesn't apply only to integration of technology with learning. We must also integrate our own teaching and research enterprise, so that our teaching is research-informed, and beneficial to society. This would entail investigating impactful teaching practices and identifying relevant research questions; helping students to connect and integrate generic skills to what they are learning in their discipline on the one hand, and applying what they learn on the other.

A final point I wish to make is about **creating impact**. To verify that we create impact (and hopefully not damage), we need to measure educational effectiveness and efficacy. This is one area in which data analytics can help us – the vast amount of data available means that we can make better and quicker sense of trends over time. NUS hopes to contribute towards the scholarship of teaching and learning, through the Institute for Application of Learning Sciences and Educational Technology or ALSET. ALSET seeks to advance teaching and learning practice, especially for tertiary and adult students in Asia through engaging in rigorous research and its practical application. ALSET will offer resources and strategies for promoting and assessing student academic success.

In sum, technology and education can be mutually reinforcing. How we teach learn and work need not just be seen as a function of **tech disruption**, but can instead be thought of as **tech-enabled**, if we embrace technology in the right ways.

It is very tempting for me to go on a long spiel on the many interesting technology enhanced learning experiments at NUS; gadgets and gizmos can be quite fun! Alas, my job here today is to deliver a welcome address, and not to give a lecture. We can look forward to hearing from distinguished education experts in our midst, who will share substantively and chair panel discussions on technology and learning.

On this note, I wish everyone an insightful and enjoyable conference. Thank you.