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University of the Future

Transforming Asia's higher education in the new normal and beyond

Introduction

For many higher education institutions in Singapore, the Philippines and India, the pressing need for digital transformation predated the pandemic.

The factors pushing them towards technology have been manifold: Industry 4.0 has transformed the landscape of work, expanding what employers look for in prospective candidates beyond the traditional degrees and certifications, all while the evolving skills landscape has required mid-career workers to return to the educational system for reskilling and upskilling. Student preferences and learning habits are changing as increasingly digitally savvy generations enter university. Furthermore, the advancement of education technology itself has enabled more innovative applications of digital pedagogy that enhance the student experience, augment lecturers' ability to teach, and streamline administerial work.

Many of these universities had a roadmap ahead of them to chart the course of their digital transformation. COVID-19 forced them to accelerate these plans. Whether they were ready or not, higher education institutions in these regions had to adapt to fully online modalities amidst countrywide lockdowns. With face-to-face education impossible even as a fallback, this has been a mass trial by fire for educational institutions and has forced us to rethink how we can and should learn. The face of higher education has changed irrevocably from this moment on.

In this eBook, we've put together the opinions of leaders in education, from universities in India, the Philippines and Singapore, to share their visions on the path ahead for higher education. From the mature, highly-respected and highly-funded universities in Singapore, who must navigate falling birthrates and stagnating student population, to universities in the large and developing economies of the Philippines[1] and India[2], who must deal with rising rates of enrollment, and how to deliver quality education to rapidly-growing student populations — each institution in each country faces its own unique challenges, atop of the global hurdles that institutions worldwide share, such as the pandemic, and the impending digital revolution.

This study hopes to spark conversation on what form the changes in higher education might take, in the face of these many pressures.

Education technology and the disruptions caused by COVID-19

As we've already briefly explored, the concept of programmatic learning has been around for a long time; in fact, learning programmes often formed a very large part of many learning propositions. However, as technology has improved and learner demands have increased, so has the emphasis on learning programmes been lost. Which is a real shame, because technology supercharges learning programmes. But let us continue.

For a while, there was a clear reason why our focus shifted. Our learners were (and still are) commanding more from their workplace training experiences; there is a clear mandate to treat our people more like consumers.

So we doubled down on new technology and more modern content. We evolved away from formulaic, prescriptive learning environments and opened our doors to content libraries, on-demand learning and self-driven propositions which empowered and enabled our employees to own their learning experience.

In terms of engaging employees and shifting learning cultures, these have had a notable positive impact. They have. But where they are successfully meeting the needs of the learner, so they are struggling to satiate some of the bigger business challenges. And really, don't we need learning to do both?

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As such, Dr Gopalakrishna Prabhu, Hon'ble President (Vice-Chancellor) of MUJ believes even the sceptics will realise the importance of education technology now and that there is going to be large-scale adoption of technology by universities impacting the learning and teaching methodologies and student assessments.

Many universities had digital transformation strategies that predated the pandemic. But, as COVID-19 forced almost all learning to go online, they were forced to make this transition faster than planned — giving the institutions an avenue to test out digital learning, and discover what works and what doesn't.

Singapore Management University (SMU)'s Provost Professor Timothy Clark says, "Technological developments, demographic shifts, changes in student expectations and international flows of students are critical factors that impact the future shape of higher education. The COVID-19 pandemic has altered and accelerated some of these trends."

Even amidst the pressures of the pandemic, institutions have seen perspectives on technology shift, from faculty and learners seeing it as a stop-gap measure to exploring the potential of technology to meet student needs. Technology has not only allowed most teaching and learning activities to continue amidst the COVID-19 crisis, but it has also enabled instructors to pay more attention to students' learning needs and design more interactive activities in a remote setting.

The need to transition away from traditional delivery formats of face-to-face classroom or lecture-style teaching have, at the same time, opened up a new world of possibilities in how learning can happen, in a way that is no longer limited to the physical space of the university.

Re-imagining the university campus

To Geronimo Uluyao, the university's role is to serve as a social arena — a site promoting "social interaction, intellectual discourse, research and societal contributions" — and that role has not changed, even as classes and lectures have gone virtual.

As educators and students explore the ways that learning can be taken out of the traditional spaces of the physical classrooms and lecture theatres, Associate Professor Foo Yong Lim, Assistant Provost (Applied Learning) at Singapore Institute of Technology (SIT) envisions that the physical space of the university itself will also evolve to accommodate emerging models of learning that go beyond unidirectional, teacher-to-student learning.

"Students should not go to university just to get content. With the internet, they can easily find content anywhere. The role of the university is to curate content, activities and collaboration," says Professor Foo Yong Lim of SIT.

To him, where online mediums facilitate content delivery, the physical space of the campus is invaluable as a social arena. This is reflected in SIT's architecture itself, which has eschewed the traditional bastions of university buildings — the lecture theatres — for smaller classrooms that facilitate meetings and face-to-face interactions. This transformation further enhances the university's central role as a site of discussion and productive discourse — the offline space of the campus becomes a nexus for hands-on, collaborative learning. "Students need to grow, and growth happens through feedback, working with teams, and real human-to-human collaboration," Associate Professor Foo Yong Lim, Assistant Provost (Applied Learning) Singapore Institute of Technology.

As the space of the classroom evolves to incorporate a greater level of teamwork, collaboration, and serendipity, Dr Gopalakrishna Prabhu at MUJ believes that the role of the teacher will also shift from 'Sage on the Stage' to 'Guide at the Side', as students are given greater agency and responsibility for their learning trajectories. "Educators will be co-learners, guides, facilitators and motivators. Students will change from passive recipients to active agents of their own education. They will be put in charge of learning, defining their own goals, making design decisions and evaluating their own progress," he says.

Furthermore, going online has also expanded possibilities, by breaking down physical barriers and allowing for collaboration across geographical lines. To Ajit Chauhan, Chairman of Amity University Online, this will change expectations for universities, whose students will be looking for a global experience — even within the walls of the university. They will be expected to leverage the online world, bring in global intellectuals and knowledge providers, build cross-border collaborations — and, with the reach of the internet, penetrate into smaller, remote cities to provide greater educational options.

The campus of the University of the Future will, then, be blended. According to Geronio Ulayao at DLS-CSB, educators must learn "how to be innovative and creative in weaving technologies into conventional teaching and learning approaches." Alongside them, the architects of the classrooms of the future must navigate how to combine both the hands-on, face-to-face meetings of the physical campus, with the boundless collaborative potential of the virtual space.

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Technology-enabled education is the future

Emerging technologies will feature more in the hybrid future of the classroom, to enhance the learning experience of students as well as help educators streamline their work.

"The major technologies which are going to shape the future education system are artificial intelligence (AI) for personalisation and proctored online examinations, blockchain for data storage, distribution & security, learning analytics (LA) for personalisation of learning, intervention to support students and data-driven decisions for administrators, and virtual reality (VR) & augmented reality (AR) for making books, lectures, exercises more immersive, interactive, and engaging to students. In the next few years, AI, VR and AR are going to impact the future of higher education in a big way," shares Dr Gopalakrishna Prabhu at MUJ.

Geronio Ulayao from DLC-SB believes that technology that augments the university's role as a social arena, such as "augmented reality (AR) and mixed reality (MR) may be developed within the context of an environment while promoting social connections." Whereas, SMU emphasizes the need for learning analytics.

"WITH MANY MORE LEARNING ACTIVITIES COMPLETED ONLINE IN THE LAST 12 MONTHS, IT WILL BE MOST BENEFICIAL IF WE COULD ANALYSE THE DATA IN-DEPTH AND UNCOVER AREAS TO IMPROVE OUR DELIVERY OF EDUCATION PROGRAMMES,"
LAU KAI CHEONG, VICE PRESIDENT & CHIEF INFORMATION OFFICER OF SMU.

Furthermore, AI will be able to shoulder much of the mundane tasks traditionally handled by instructors and teaching assistants. For instance, chatbots will be able to address FAQs in a course, face recognition will be able to take attendance, pattern recognition will grade technical answers and with machine learning, and universities will be able to offer personalised learning based on students' behaviour and reading patterns.

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Personalised education with the help of an LMS

In line with the recent trends, envisioning an education system that thrives and helps learners as well as educators in universities without a holistic online support system is almost impossible. For future-proofing education in universities across the Asia region and worldwide, universities need to embrace holistic tech-enabled solutions and this is where a learning management system or LMS can step in. Dr Gopalakrishna Prabhu at MUJ believes that the university of the future will be an online medium where the primary source of information and knowledge is the LMS, which provides the student with the flexibility of time, place and location. The future of education will have a learner-centric approach and learners will be self-driven to achieve academic goals while balancing other responsibilities.

However, engaging learners online is not going to be an easy feat and this is where an LMS can play a vital role.

Ajit Chauhan of Amity University Online believes that personalisation is increasingly becoming the answer to drive stickiness in learning. "Universities need to invest in technological infrastructure to provide a blended learning experience that supports both synchronous and asynchronous learning opportunities. Irrespective of the learning objective, variety is the best approach. The aim is to keep the learners engaged with a combination of elements like video, text, and images," he shared.

And, an LMS can help educators do that by creating immersive content personalised to each learner, giving feedback and sharing real-time insights. An LMS will enable teachers to move away from traditional one-size-fits-all teaching methods and offer personalised education to students at universities.

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Building the ecosystem to support next-generation learning

The final and arguably most vital aspect that will determine what the university of the future will look like is the need to foster a collaborative ecosystem where edtech vendors and developers work hand-in-hand with universities.

Even though he believes that edtech tools can never replace face-to-face or personal communication, Professor Foo Yong Lim from SIT foresees that the faculty will demand more features to make learning even more seamless. As the COVID-19 pandemic drives this positive change in perspective towards technology, he believes the collaboration between universities and edtech vendors will become tighter.

"In the past, most of the universities had a very basic learning management system infrastructure. Some faculty may have used it as a tool to curate content, but most probably used it as a dropbox to put files for students to access. They never fully explored the workflows enabled by an LMS," shares Professor Foo Yong Lim. "Going into COVID-19, a lot of the faculty were forced to learn how to use technology, and many found it surprising -- for example, with D2L, they suddenly found that the grading for online quizzes became very easy. For a lot of faculty who didn't previously use the built-in tools, they've suddenly realised that those tools are available. We are seeing more demand from faculty for newer features that they hope to see in our edtech tools."

"In the next five years, universities will be dependent on edtech companies to provide the technology for delivery of online orhybrid mode programmes as the development of the necessary technological tools and infrastructure requires a significant amount of investments and constant upgrades which universities cannot afford. The relationship between universities and edtech companies will move from the current vendor model to that of equal partners who collaborate to provide seamless student experiences from an academic and support services point of view," believes MUJ's Dr Gopalakrishna Prabhu.

DLS-CSB's Geronio Ulayao shares, "As online learning and teaching will stay for quite some time, the market is ripe for systems that are both affordable and meet the needs of the institution. I believe that this is an area where new innovation can take place. As the saying goes: necessity is the mother of invention."

SMU's Lau Kai Cheong believes that the collaboration and engagement between universities and industries will remain very important. "Universities provide the necessary training for industries' human capital and R&D input. While industries' demands and development trends will guide universities in their curriculum and research direction, edtech vendors can play a bigger role in building collaboration opportunities among education institutes," he shares.

Asia is ready for the future of eduction now

In Singapore, SMU conducted regular surveys and interviews with the key stakeholders in the last 12 months. It was found that both educators and students were much more receptive to online learning when compared to the pre-COVID period. "With the learning points gathered in 2020, we have greater clarity on what courses are more suitable to run online and which ones are not. We have better confidence in the right mix of features and tools used in online delivery, the duration of synchronous and asynchronous activities, the right amount of controls in remote assessments and so forth," adds SMU's Lau Kai Cheong.

In India, in September 2020, University Grants Commission, the Indian Education Regulatory body, published the UGC (ODL Programmes and Online Programmes) Regulations, 2020 allowing universities with certain eligibility criteria to start offering completely online degree programmes. Manipal University Jaipur is currently offering Undergraduate and Postgraduate Programmes in the domains of Management and Computer Applications online as per the UGC (ODL Programmes and Online Programmes) Regulations, 2020. Going forward, they are planning to introduce new programmes in the areas of Arts, Journalism and Commerce.

Along the same lines, Amity University Online's Ajit Chauhan shares that going forward, online learning will no longer be a choice but a part of the structural design of delivery. "In the student surveys that we do, 48% of those enrolled with us are working professionals. For them, the flexibility to continue learning in addition to their jobs is what brings them to online education," he says.

"In terms of student satisfaction, our first full online venture, Benilde Online Learning Term (BOLT), garnered an overall student satisfaction rating of 92% from 315 evaluation records while the first formal online term had an overall student satisfaction rating of 96% (Outstanding 31.23%, Very Satisfactory 47.70% and Satisfactory 17.01%) from 1870 evaluation records. We will continue to address the concerns and difficulties encountered by students and faculty and continue to push the envelope in terms of innovating our online learning and teaching approaches," shares DLS-CSB's Geronio Ulayao.

The future of university lies in holistic online learning supported by smart technologies, such as the LMS that not only enables educators to teach better, but also allows them to offer personalised education. Moving forward, an LMS is a right way to future-proof higher education and Asia as a region seems just ready for that.

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