The Economist Intelligence Unit

Connecting universities: Future models of higher education

Analysing innovative models for Afghanistan, Bangladesh, India, Nepal, Pakistan and Sri Lanka

An Economist Intelligence Unit report produced for the British Council

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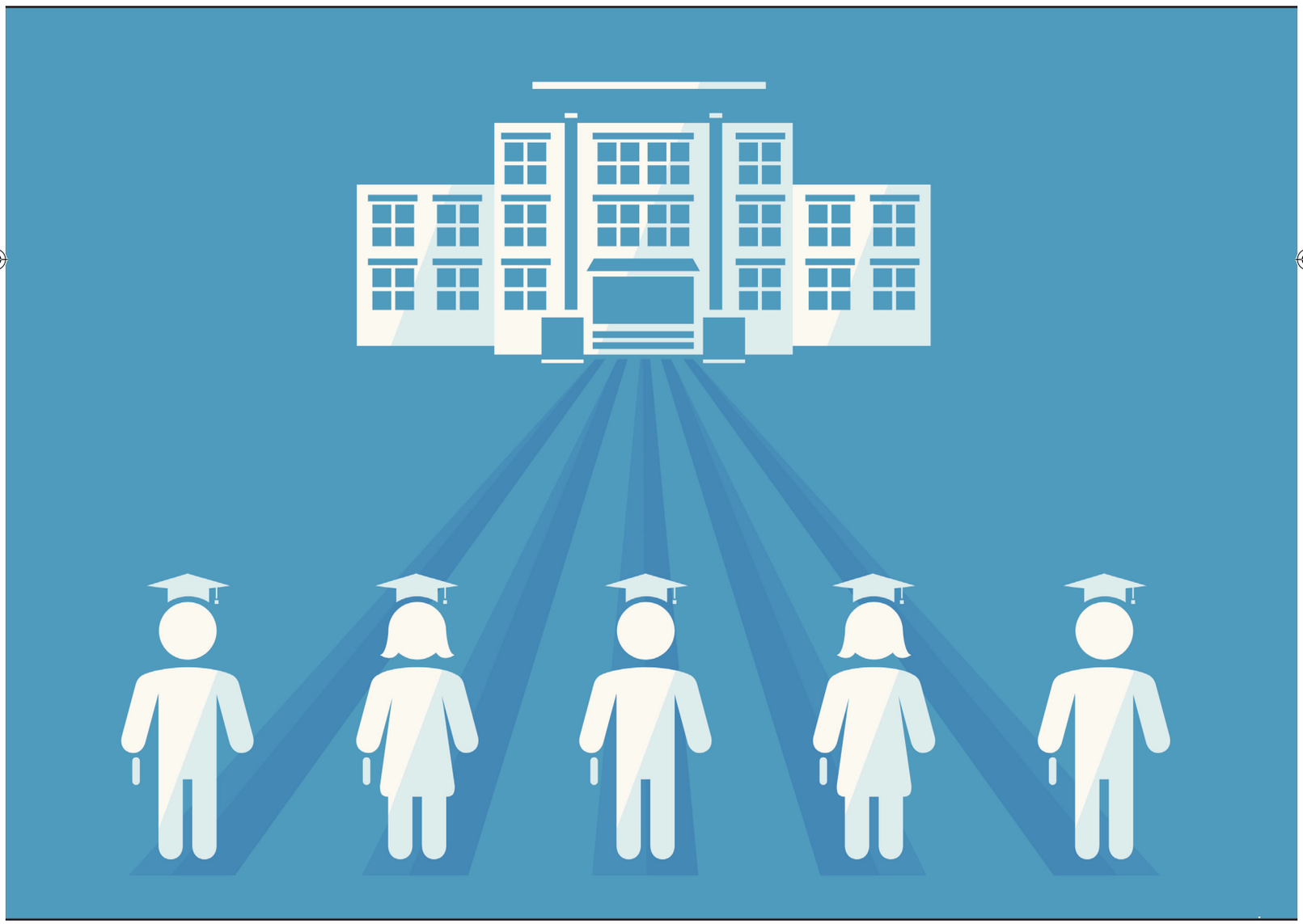

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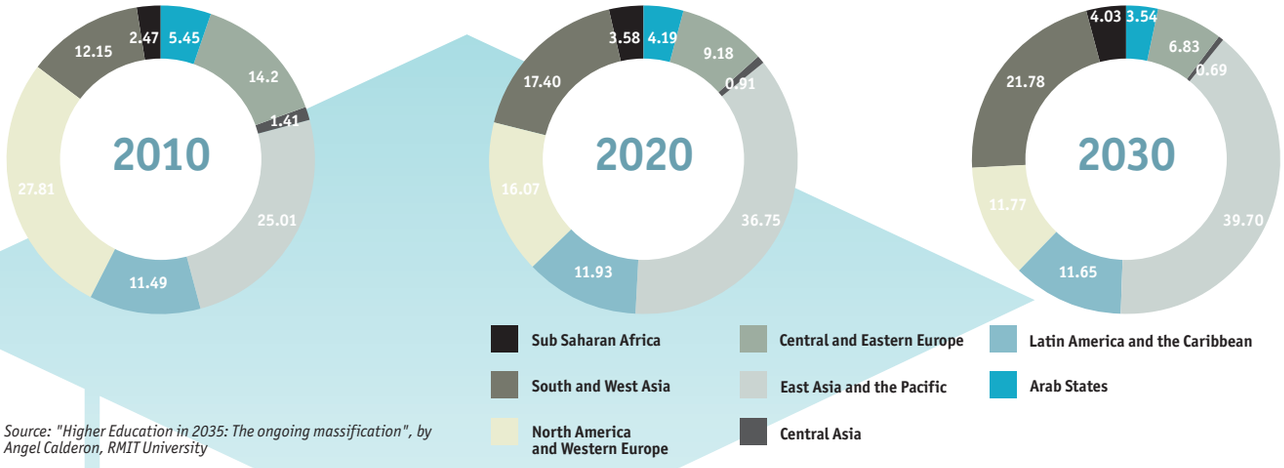
The changing university: In numbers



Source: "Higher Education in 2035: The ongoing massification", by Angel Calderon, RMIT University

Tertiary enrolment: Past and future

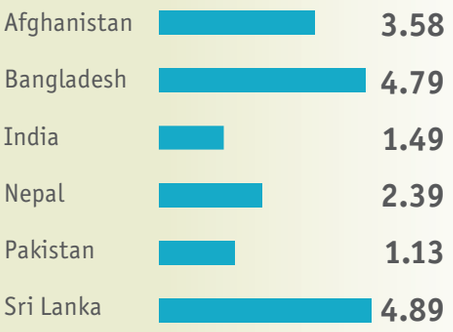
Global enrolment in tertiary education has increased dramatically in the last few decades. In 2000, there were 99.4m students enrolled in higher education institutions. In 2030, research expects this number to rise to 414.2m.

South Asia's proportion of global enrolment has been rapid: the region constituted only 12.15% of global enrolment in 2000, but this is expected to grow to over 20% in 2030. Growing economies and youthful population are driving continued growth in the region's appetite for higher education.

Current demand outstripping supply

South Asia's universities are already feeling the crunch, with insufficient university places. Private universities have been growing trend, but the large influx of such institutions raise concerns over quality assurance mechanisms.

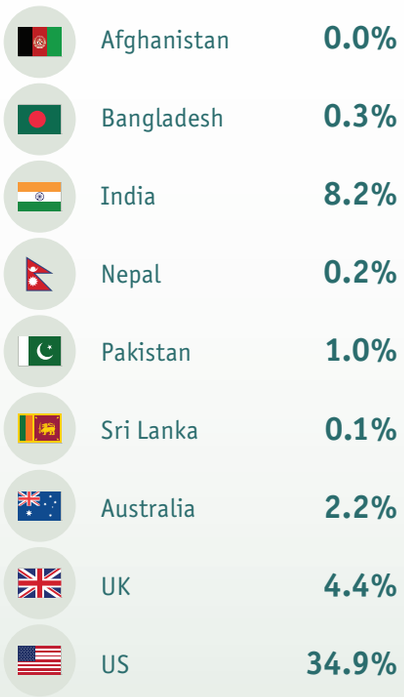
Number of "A" level student per available university space



Source: Country higher education statistics

The future is here

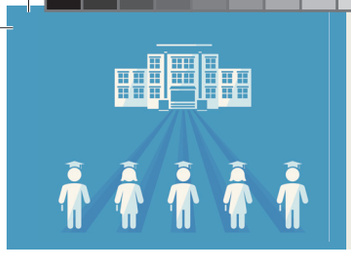
Enrolment in HarvardX courses as percentage of global enrolment



To cope with the growing appetite for education, there is a need to look at new models of higher education. One example is online learning through massive open online courses (MOOCs), which has proven to be popular amongst larger South Asian countries like India.

Other models include more transnational education partnerships and flexible, modular learning. The future is here and South Asia must innovate to meet future demand.

Source: HarvardX



Summary

As the traditional suppliers of higher education, universities today are operating in a rapidly changing environment. As well as coping with less resources, traditional learning has evolved: access to information is now freely available online; with smart phones, tablets and an array of digital tools at their fingertips, the habits and expectations of students have changed. A business model that was designed when universities were the guardians of information now looks seriously outdated.

This new research report examines the massive 'open market' that higher education has become, where new players are looking to 'unbundle' universities as a business model, putting pressure on institutions to find new—and sustainable - ways of working. The role of massive open online courses (MOOCs) has dominated discussions about new education models in recent years, but other online models are being explored—blended learning, for example, which mixes traditional and non-traditional learning methods. In South Asian countries such as India and Pakistan, online distance learning already plays a significant role in higher education. New online models represent a real opportunity to improve access to higher education but there are often policy and regulatory roadblocks. Similarly, demand is growing in South Asia for transnational education (TNE)—where reputable universities offer accredited courses overseas, increasing the supply of education in countries where state systems are under severe pressure.

While the challenge facing the traditional university model is in many ways immediate, interviewees who took part in this report highlighted that the threat is not imminent: the role of institutional education will endure. However, with higher education costs going up, the learning model with extensive support staff and hundreds of degree courses needs to change to avoid becoming irrelevant.

Past to present and future

Not long ago, a university education involved sitting in large halls listening to academics deliver lectures, or perhaps attending seminars before writing up an assignment—with pen on paper—to be delivered to a tutor by hand. The need for a bricks-and-mortar building has for centuries been a part of our collective understanding of higher education, but now that model is being challenged by new methods, online learning spaced and a different breed of student.

"Our new generation of students are completely relaxed about online education—after all, they communicate online, they access entertainment online, they do everything online. For them, non-digital systems seem fairly antiquated," said Anant Agarwal, CEO of edX, a not-for-profit provider of massive open online courses (MOOCs) founded at MIT and Harvard in 2012. "Education has not changed that much in hundreds of years. But the client base of learners has completely evolved."

Demographic changes are also opening up global opportunities for universities and new education providers. In Asia, a surge in demand for quality education in emerging economies such as China and India is highlighting the need for new models for delivering education.

With limited public resources, and information and knowledge now freely available online, the old system of broad-based learning, institutional research and a large, in-house support staff is being shaken up. For some, the university business model is no longer viable. Other education providers believe we have entered a brave new world of experimentation, innovation and opportunity in higher education, in which they will play a critical role.

The evolution of MOOCS

The market for online learning products reached US$42.7bn[1] last year, and is expected to pass US$50 billion by 2018. Asia's appetite for online degree programmes is growing at a rate of 17.3%—faster than anywhere else in the world. Seven out of the top 10 countries with the highest e-learning growth rates in the world are in Asia; growth in Nepal and Pakistan alone was above 30% in 2013.

The most popular of the new learning methods disrupting traditional modes of instruction are MOOCs, such as those provided by edX, Coursera, Udacity and FutureLearn. edX currently has more than 3m students taking its online courses—including 1.2m from non-Western nations—across 47 higher education institutions. Its open-source model has allowed countries around the world to deliver MOOC courses in their own languages.

Many universities are also starting to offer more collaborative blended models of learning, whereby students are taught using a mixture of online learning and face-to-face tuition rather than solely through traditional lecturing. "Universities are having to change substantially. The lecture model has been entrenched in universities, but we now need to move to a model where professors help the students learn, rather than lecture them," said Mr Agarwal.

[1] University World News, 'Huge Growth in e-Learning in Asia', 2014.

Where most Ivy League universities have embraced MOOCs, prestigious universities in the UK have held back, preferring to stick with traditional tuition.[2] Experts interviewed for this report had varying opinions about the potential impact of MOOCs on universities, although all agreed the model would play a big role in the future of higher education. A recent UK government report found MOOCs were poised to cause "dramatic and imminent change" and represent a "tipping point" for higher education.[3]

"Most students will get a mix of face-to-face teaching, tuition and mentorship, with some form of online experience. Very few will get purely online or purely face-to-face tuition," said Michael Barber, Chief Education Advisor at Pearson in the UK.

An online gateway

Around the world, the MOOC model of learning has caught the attention of policymakers keen to promote innovative learning methods and the integration of more technology into universities. Changing the way universities deliver courses is now a firm policy imperative in the US and UK, where MOOCs and 'blended' or 'flipped' classrooms are viewed as a means to improve learning outcomes while making universities more affordable and accessible.[4]

Although MOOCs offer education institutions "a useful lever for restructuring and transition"[5], there are still big questions around the business model, course completion rates, accreditation and quality control. The fact remains that 4.5m students are globally mobile (an increase on previous years) and the US has seen an 8% growth in overseas students.[6] "MOOCS are not going to discourage students from that experience of going to another country," said Rajika Bhandari, Deputy Vice President of Research and Evaluation at the US-based Institute of International Education (IIE).

Interviewees for this report believed that MOOCs were a transitional phase towards new university models, augmenting rather than replacing the traditional approach. Most said that they gave universities an opportunity to brand themselves globally, while testing new teaching methods and providing a gateway to fee-paying postgraduate degree courses. "They're a kind of experiment with the idea of making courses free, then seeing how many people will come and what the possibilities are," said Mike Sharples, Professor of Educational Technology at The Open University in the UK.

Growth of non-institutional providers

At the same time, the global higher education field is being flooded with a growing number of non-institutional or alternative providers, which places extra pressure on quality assurance systems.[7] Whether it is an online provider, a private company or a non-traditional institution such as the Khan Academy, higher education is now a massive open market, broken down—or "unbundled"[8]—by new, low-cost, modular and, in most cases, credit-free education providers.

[2] BBC, 'Massive Open Online Courses: Threat or Opportunity?', 2013.

[3] *The Australian*, 'Impact of MOOCs Real, But Not All Positive', 2013.

[4] The White House, 'Fact Sheet on President's Plan to Make Education More Affordable', 2013.

[5] UK Government Department for Skills and Innovation, 'The Maturing of the MOOC', 2013.

[6] *The Chronicle of Higher Education*, 'International Student Numbers Continue Record Growth', 2014.

[7] Inside Higher Ed, 'Quality and Non-institutional Higher Education', 2014.

[8] Huffington Post, 'Unbundled: Re-imagining Higher Education', 2013.

"We have this new emerging sector that is driven by online learning, an alternative sector that is non-institutional," said Louis Soares, Vice-President of the Center for Policy Research and Strategy at the American Council on Education. "This doesn't mean that the university model is going away, but it does mean students are voting with their enrolment and displaying this interest in a low-cost, episodic education for very specific purposes—much of it focused on vocational training."

All this is putting an enormous strain on a very old model of business, which new players see as being slow to adapt to a changing education landscape. "Universities have previously operated as a kind of package deal whereby you come in for a four-year period of time, a single professor teaches the course and writes the textbooks and does the whole thing," said Mr Agarwal. "They also deliver services such as healthcare, certification, career advice, housing, teaching and research, all of which can be 'unbundled'."

TNE continuing to grow

Just as online learning has grown in the last decade so too has the provision of transnational education (TNE) in Asia countries. With the cost of an overseas education unaffordable to many in South Asia, the growing presence of reputable universities in the region and a wider scope of study options—twinning, validation and franchising—has given governments a real opportunity to expand the supply and access of quality education.

The last decade alone has seen a marked growth in TNE activities in Asia with local education systems in countries such as India, Sri Lanka and Pakistan unable to meet booming demand for university degrees. That has seen rising numbers of students opting to study at home: the number of students undertaking a UK higher education award has grown from around 200,000 in 2008 to 600,000 in 2013[9] while the number of students registered in Australian offshore programmes reached 85,000 in 2013, up from 70,000 in 2007.

TNE growth is being driven by changing economic circumstances in some Asian countries - Southeast Asia, for example, is normally a supplier of large numbers of international students, but can now offer more job opportunities at home; governments have also integrated TNE into their local education strategies to develop their local capacity[10].

That is a trend that is likely to continue as South Asian looks to grow TNE in a similar fashion to a country like Malaysia, which is now a mainstream international education player. Malaysia liberalised its education policies in the 1990s, leading to an increase in private education supply from 6 private universities and 3 foreign branch campuses in 2001 to more than 400 private higher education institutions and 9 foreign branch campuses in 2013.[11]

[9] ICEF Monitor, 'The Substitution Effect of TNE on International Student Mobility', 2014.

[10] ICEF Monitor, 'The Substitution Effect of TNE on International Student Mobility', 2014.

[11] WENR, 'Malaysia: Shifting Mobility with Branch Campuses', 2014.

South Asia's university challenge

South Asian higher education systems face a number of critical infrastructure and financial challenges due to the pressure to accommodate a rising population of students. By 2020, India will have one of the youngest populations in the world, with an average age of 29.[12] University budgets are unable to keep up with enrolments, leading to lower salaries, reduced faculty staffing, less-qualified hires and declining teacher-to-student ratios.[13]

These are major challenges. For example in India, which aims to grow participation in post-secondary education to 30%, 1,500 new academic institutions needed to be built and millions more lecturers trained[14], as university faculties can barely cope with the demand associated with this target. India's higher education sector grew from 8.4m students in 2000 to 30m in 2012, and interviewees predicted it would reach 50m by 2020.

Neighbouring countries face similar strains. At the University of Punjab in Pakistan, for example, more than 100,000 students will compete for a degree course in medicine, but only 3,000 students have been admitted.[15]

Distance learning—especially through MOOCs—has become a useful means to keep costs low and improve access to higher education.[16] Across the region, more than 70 universities now deliver instruction exclusively through online distance learning. Interviewees viewed flexible, low-cost online models such as MOOCs and blended learning alternatives as a good option to 'scale' universities and private higher education institutes (HEIs) suffering from staff shortages.

"MOOCs can help bridge the gap as institutions are figuring out how to staff their classes and get the right people on board," said Ms Bhandari. "MOOCs could be a useful tool for blending in-class teaching with another style of instruction."

Small private online courses in India

South Asia is no stranger to MOOCs—after China, India has the second largest number of people in the world applying to do MOOCs.[17] Despite the educational challenges the region faces, there are some increasingly competitive universities now pushing at the door of global university status—the Indian Institutes of Technology (IITS) and Lahore University of Management Sciences in Pakistan among them. Institutions in India are also launching a national MOOC platform called Swayam[18], using the open-source edX technology. It will deliver multilingual courses and face-to-face support at centres around the country.

BITS Pilani is one example of how some universities in India have incorporated new learning approaches into their pedagogy to cope with the diverse needs of the student population. The university has four campuses, with 12,000 on-campus students and 20,000 more off-campus students studying engineering, science, management, pharmacy and social science subjects. BITS Pilani offers courses to its students through the MOOC platform Coursera, and along with IIT Bombay University

[12] British Council, 'Understanding India', 2014.

[13] UNESCO Institute of Statistics, 'Higher Education in Asia: Expanding Out, Expanding Up', 2014.

[14] *University World News*, 'MOOCs Providers vs. Sceptics at 'Going Global'', 2014.

[15] Interview with Dr Mukhtar Ahmed, Chairman of the Higher Education Commission, Pakistan.

[16] UNESCO Institute of Statistics, 'Higher Education in Asia: Expanding Out, Expanding Up', 2014.

[17] Opensource.com, 'Higher, Open Education for India', 2013.

[18] Class Central, 'India Announces Official MOOC Platform 'Swayam'', 2014.

will use edX to deliver three online courses from 2015 onwards, with plans to increase that to 40 to 60 courses in three years time. Through this online learning model, BITS Pilani will be responsible for course content and edX will provide the tools and platform to implement it.

The content will be taught to BITS Pilani students via small private online courses (SPOCs), although given student demand for more flexibility, there is uncertainty about whether the MOOCs model may be better for the future. "This is not going to be the mode of delivery going forward," said Bijendra Nath Jain, Vice-Chancellor, BITS Pilani. "My own sense is that it has to be offline, 'anywhere, everywhere' kind of delivery that MOOCs offers." The SPOCS model is being considered as a means of delivering richer content to very large classes in Indian universities, although interviewees were sceptical about the possibility of wider uptake among public universities.

"There is a huge scope for SPOCS in countries such as India where we handle very large classes—5,000 students, say, enrolled in a Bachelor or Physics degree programme requiring 50 faculty members to teach the same course simultaneously in the same semester," said Professor Nain. "I see large universities—Delhi, Mumbai or Pune University—using this technology to improve the quality of the courses they deliver, given the fact that the biggest strain on universities is a lack of trained faculty members. And I don't see that changing any time soon. In fact it is going to get worse."

Pakistan's blended ambition

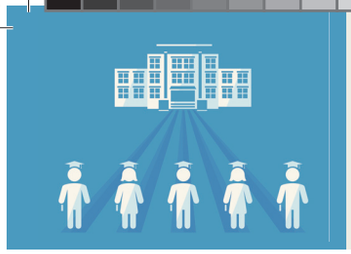
Pakistan's universities are also experimenting with new models of blended learning. Pakistan has a population of 182m but only 5.1% of people aged 17–23 (an age group of 24m) are currently enrolled in higher education.

The government is planning an ambitious Smart Universities scheme to bring free Wi-Fi technology to all 161 public universities in the next four years, beginning with a pilot[19] at its seven main universities. Similar initiatives are being rolled out across the region—for example the University of Colombo in Bangladesh's Digital Bangladesh initiative aims to provide 3G wireless connectivity to all universities, colleges and schools by 2021.

Pakistan's goal is to improve access to education from its current 5% to 15% by 2020, and is looking at involvement from the private sector to support access. "The acceptability of online education was not much appreciated in Pakistan before, but slowly things are moving and it is becoming a reality," said Dr Mukhtar Ahmed, Chairman of Pakistan's Higher Education Commission. "It is already at our doorstep and bearing in mind the shortage in faculties and the shortage of resources [in Pakistan], I think this might be the only solution."

At the International Technology University (ITU), Pakistan, a cross-disciplinary teaching and research institution, students work together to solve 'locally relevant' problems using cutting-edge technologies. ITU has based its teaching methods on design-centred learning in an effort to 'ingrain entrepreneurship'. ITU is planning to have its students register in a one-semester MOOC course with edX or Coursera, then run a campus-based version of the course so students can achieve the necessary 'letter grade' from the university and get the peer interaction a MOOC cannot offer.

[19] The International News, 'HEIs to be Turned into Smart Universities', 2014.



"We have to work with a variable quality of faculty members here—different professors use different benchmarking methods depending on their background or how stern or otherwise they might be," said Umar Saif, Vice-Chancellor of ITU in Lahore, Pakistan. "This MOOC gives us, among other things, a standard yardstick against which we can measure the quality of our students."

New methods of quality measurement

As interviewees for this report pointed out, benchmarking quality is likely to get easier with the growth of blended learning, big data and analytics. Institutions will be able to chart a student's progress based on how they interact with technology, and accurately calculate the value of their learning. Knowing what students are learning—and when and how—will be part of the unbundling of traditional university models, ushering in an era where students pay for the outcome, not the enrolment.

"New tools of adapted software or learning analytics will help us to better tailor resources and design education to produce better learning outcomes for students," said Mr Soares. "You can now see what percentage of the learning experience is happening in an online environment and this gives education providers a really good snapshot of how and when students learn—and also what they've learned."

Additionally, there is enormous potential for mobile learning models to emerge in South Asia. In India, smartphone ownership is up 184%[20]—more than 200m devices—in 2014.[21]

FutureLearn has 250,000 registered learners on its platform, of which 30% are accessing courses via a mobile device. "It's only in the last year that course providers have woken up to the fact that the majority of people will be accessing online courses using their mobile phones," said Mr Sharples. "As universities move towards more blended learning they'll also move towards mobile learning, because they have to accommodate people whenever and wherever they are."

The future: online and asynchronous?

As pedagogies continue to evolve in response to technological disruption, some universities have moved ahead of others. The University of Liverpool in the UK presents one of the best[22] examples of how pedagogies are adapting to changing student needs and behaviours, focusing on customisation, convenience and real-time 'social' learning.

Students learn in an 'asynchronous' online environment: courses have no fixed structure; there are no lecture times; students can interact with their instructors and fellow students at any time; and they can customise their degree programmes to suit their needs and career priorities. This is just one model; there are many others and they differ depending on each student and their education needs.

"If you do well-designed online courses, you get feedback in real time and it will give much more precise feedback than you got from the best tutor marking your university paper," said Mr Barber. "There are lots of different models and we won't know yet which ones will be the most successful …

[20] IDC, 'India Continues as One of Fastest Growing Smartphone Markets', 2014.

[21] *The Guardian*, 'Smartphone Explosion in 2014 Will See India Pass US', 2014.

[22] University of Liverpool – Online Learning Overview.

Some will be successful for particular students and some won't. Most students in time will get a mix of face-to-face teaching, tuition and mentorship with some form of online experience. Very few will get purely online or purely face-to-face tuition."

Embracing a new normal

Interviewees told us that innovative approaches to online delivery methods in South Asia are succeeding, despite the barriers. In their view, the only thing holding back global ambitions in South Asia are the region's regulatory bodies and the complexity of its higher education system. In terms of India, interviewees also stressed the friction between the country's global ambitions and its 'local' realities, and expressed pessimism about the challenge facing higher education reform.

Interviewees suggested that to meet the needs of a more globalised education system and to improve the profile of its institutions, India needed to open up its system and embrace a more 'light touch' regulatory approach towards higher education. "What over-regulation means is the ability to innovate decreases," said Pratap Bhanu Mehta, President, Center for Policy Research, India. "If the state had a slightly lighter hand in India, you would see a lot of interesting innovations happening in higher education."

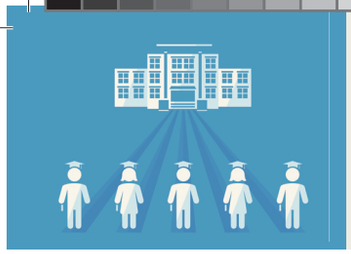
The "massification" of education supply brings with it numerous challenges for quality assurance, a point acknowledged by most respondents. Measuring the quality and reliability of education is going to get more complicated with growing - and more diversified - forms of education supply. For example, in TNE provision alone the ecosystem consists of branch campuses, degree programmes provided by local private higher education institutions, articulation programmes, online distance learning and MOOCS. As new teaching and learning methods emerge, it is stretching the traditional processes - and definitions - of quality assurance in higher education[23].

Recommendation: Sweeping changes

The future for universities is very much 'open' - as national borders vanish and more disruptive technologies emerge, all universities will have to work harder to demonstrate their distinctiveness and value—a point that all our interviewees mentioned during discussions. As competition increases for staff, students and funds universities will have to become more focused operations.

While new models of learning are rapidly emerging around the world, with the educational emphasis shifting away from the institution and towards the consumer, it is difficult to predict which models will dominate the future. One trend that dominated all interviews was that the consumer was now in charge: whereas students previously attended a university to learn, now the university has to come to them. That is an existential challenge for some institutions.

[23] University World News, 'Towards Quality Transnational Education', 2014.



The future university, in most cases, will be more streamlined - some will need to consider whether they have the resources and capacity to maintain such a broad spectrum of educational focus. A central theme of interviews is the ongoing impact of technology and the re-examining of a university's core function, amid rising competition. Some universities, for example, need to explore their status as simultaneously global and local institutions, combining on-campus tuition with the kind of online learning methods examined in this report.

The increasing role played by online learning, in particular in India and Pakistan, shows ambition to innovate to meet the demands of new students. Each university will need to develop areas of specialty as part of the gradual "unbundling" of traditional higher education models. New business models should centre on the things that each university does best, which will differ greatly.

There is now a far wider range of higher education choices available and more flexibility in the ways that students can learn. Few of the interviewees believe that there is an imminent threat to universities in their current form, but if these old institutions don't adapt, they risk becoming irrelevant. Universities will need to continue to embrace technology and innovate, be more nimble and flexible, and keep an open mind to new forms of education provision, such as TNE for example, to develop new revenue streams. If the future of university education raises questions about the structure, content and format of learning environments, universities must provide answers as to what new formats might work.

Acknowledgments

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