

# CAMPUS REVIEW



## **Disrupted, not defeated: technology is threat and catalyst**

By: [Patrick Avenell](#) in [News](#), [Top Stories](#) February 4, 2016

The ongoing development and introduction of new technology in university environments is changing the nature of tertiary education, providing new revenue streams, competition and disruption, states a report commissioned by the Australian Higher Education Industrial Association (AHEIA) and written by PwC.

Emerging technology is challenging the notion of a traditional campus experience in several distinct ways. The first is in the range of new devices students are using in their university careers, such as smartphones, tablets and notebooks.

Then there is the sheer volume of information freely available on these and other devices. Before the internet knowledge resources were limited to books, journals and similar print publications.

Technology has also lowered the barriers to entry for new and differentiated tertiary education providers. These can take the form of: online coursework from internationally focused bricks-and-mortar institutions, like those [Stanford Online](#) offers in the US; non-accredited or unaffiliated modules from [Coursera](#) and [Peer to Peer](#); OR corporation-

sponsored Massive Open Online Courses (MOOCs), including [mooc.org](http://mooc.org), which has received funding from Google.

Online campuses have proven to be both a source of new business and new competition for traditional, physical Australian universities. Just this week, the University of New South Wales, King's College London (UK) and Arizona State University (US) [announced a triumvirate called PLuS Alliance](#) "to help find research-led solutions to global challenges and expand access to world-class learning", which will be monetised through "a suite of related learning programs to be delivered online". The old sandstones are having to compete more fiercely for students and dollars. PwC estimates that revenue from online learning products will surpass \$50 billion by 2018, from essentially zero as recently as 10 years ago.

To remain relevant to digitally native high school graduates and other prospective students, and to capture a significant slice of this pie, the authors of the report noted, traditional universities are focusing on their inherent advantages while filtering online elements into their overall proposition.

"In the opinion of a great number of sector stakeholders, increased competition from online providers, coupled with the increasing expectation of the digital native generations, is forcing universities to make a decision (consciously or otherwise) on the level of technological engagement they use," the report states. "Many point out that the potential differentiation for universities lies in the practical experience provided, the offerings of the physical space, and the skills (such as interpersonal skills) that foster through a physical learning environment.

"While campuses will remain a valuable offering and experience to students, digital technologies will transform the way education is delivered and accessed."

Heather\* started at the Australian National University in 2005 as an undergrad fresh out of high school. Last year, she received her PhD. She gave an interesting overview of how the use of technology has changed.

"Basically, I used to listen to lectures on tapes in the library if I missed one," she said. "Readings were in big bricks that would often run out before you could get your hands on one. Then things went online, which enabled easier access. But when lectures went online, the neoliberalism of the universities kicked up a notch and started emphasising technology to the detriment of face-to-face interaction: fewer lecturers, more online content.

"The justification is that students need to work more these days and therefore need online content. But it's really just cost cutting."

When Matt Miller started his undergraduate business degree at the University of Newcastle in 1995, he had to attend every lecture and tutorial on campus. "When it came to handing written work in for marking you would physically take it to your tutor and they would hand it back to you marked several weeks later," he said, looking back. "By today's standards this process was slow and cumbersome."

Miller is now enrolled at the Australian Catholic University studying a graduate diploma in theology. "Everything is available online," he said. "There is an option to complete some

subjects in an intensive mode on-campus, which I recently did for a subject in Bible studies. Otherwise my whole course is online.”

Although Miller said he missed the interpersonal contact with other students from his undergrad uni days, he said that without a “virtual classroom” he would not be able to study at all, considering he has two school-age daughters and a full-time job.

The healthcare sector is intimately experiencing technology’s disruptive nature. IBM’s artificial intelligence, anthropomorphised supercomputer Watson — famous in mainstream circles for [beating Ken Jennings at his own game](#) — has been working with medical professionals to achieve outcomes much less trifling than winning at *Jeopardy!*

“A physician can describe symptoms and related factors to the system and Watson can then identify key pieces of information, mine the patient’s data to find relevant facts and combine this information with findings from tests,” PwC noted. “Watson then forms and tests hypotheses by examining a variety of data sources. The system can also explain to a human physician how the conclusion was reached.”

In industries such as health, there are current and future applications that will probably change the nature of research.

“In the higher education sector, this technology will see a shift from the digitisation of content already used in teaching to the use of [for example, eResearch: artificial intelligence ... for instantaneous literature research, synthesis, data analytics and visualisation.”

*\*Name changed.*

Online article: <http://www.campusreview.com.au/2016/02/emerging-technology-a-disruptive-challenge-and-a-growth-opportunity-for-traditional-universities/>