Phenomenons amongst fads

The challenge: sift through all the hype to understand which new gadgets and tools will lead education down the path of success.
By **Rob Livingstone**

We are all living in a global experiment, the results of which will not be known for some time. Assessing the downstream effects arising from the interplay of influences such as globalisation, the commoditisation of jobs and skills, the transfer of wealth from West to East and disruptions of careers and industries from information technologies is no trivial exercise.

Amidst the noise of change and disruption, the education sector has to deal with its own raft of challenges. Will the latest trend or fad in technology allow schools and tertiary educational institutions to maintain or improve on outcomes despite funding cuts? In the increasingly connected online world, how are standards to be maintained when students can so readily outsource their online homework to people in low-cost countries at peppercorn rates? How can change be managed in an environment where the half-lives of technologies are measured in years, yet educational outcomes are measured in decades?

Educational institutions have to come to grips with how to select and implement new and emerging technologies that are seen as transformational, cost-effective or even disruptive. There are a range of challenges in ensuring that the decisions taken now, will, in fact, result in improved outcomes in the future for educational institutions, governments, students and society as a whole; funding models are the least of the concerns. Here are just a few of the issues:

BALANCED BUDGET VS. UNBALANCED OUTCOMES
State and federal governments are carefully scrutinising every education dollar spent, so the focus for schools and tertiary institutions will, of necessity, shift to how, where and when technology can be used to lower short-term education-related costs. Does the need to balance today's budget books trump concerns about the adverse impacts that implementing inappropriate technologies and

approaches would have on tomorrow's educational outcomes?

As with any experiment, the results will speak for themselves with the passage of time. Question is, how will your children be affected?

PEDAGOGY AND EMERGING TECHNOLOGIES
We are all immersed in our own multifunctional, concurrent digital worlds. Multitasking seems to be de rigueur for the contemporary student. Being plugged into Facebook and other social media, listening to music and studying, all at the same time, seems to be the default position.

So what role does the technologically rich, concurrent learning experience have to do with the overall pedagogy? Professor Clifford Nass of Stanford University says, "The top 25 per cent of Stanford students are using four or more media at one time whenever they're using media." However, he continues, "The research is almost unanimous, which is very rare in social science, and it says that people who chronically multitask show an enormous range of deficits. They're basically terrible at all sorts of cognitive tasks, including multitasking".

In the world of new, emerging and disruptive technologies, education professionals should be cognisant of the potential drawbacks of how these advancements are used.

FROM LEARNING TO eLEARNING TO mLEARNING THEN pLEARNING THEN
The journey of the transformation of learning is seemingly endless – from old-school, teacher-led learning, to eLearning, to mLearning (mobile learning) to pLearning (pervasive learning). The tags and brands given to learning modalities are often the realm of consulting organisations, IT vendors and marketers attempting to define a framework that helps to create the need that can define a market. This is analogous to pharmaceutical companies who are accused of influencing the definition of diseases; routine human ➲

conditions such as unhappiness, stomach aches and boredom are increasingly being re-defined as disease, which helps define the market.

Understanding the drivers behind fundamental changes in the delivery of education services through technology should be at the core of any decision-making.

SCHOOL OF THE AIR TO SCHOOL OF THE INTERNET

The Australian Outback's School of the Air is a classic case where technology helped overcome the tyranny of distance, to a certain extent, in the delivery of teaching services to children in remote areas. In the current online and interconnected world, we now have the possibility of School of the Internet, where the options for collaborative learning supported by appropriate technologies are real. However, the development of students' social and other important life skills is not compromised in an increasingly technologically dependent educational environment.

DRINKING FROM THE FONT OF KNOWLEDGE OR THE FIRE HYDRANT OF INFORMATION

Democratisation of knowledge is not a new concept; it's evolved from cave paintings, to books and now the digital domain. But the democratisation of knowledge can be a double-edged sword. The modern ability to access a seemingly infinite array of information from the internet is akin to drinking from a fire hydrant. When knowledge is disseminated without the appropriate evidence-based rigour, as is often the case when using the internet, there can be adverse consequences. Misinformation in the recent debate over low childhood immunisation rates is one example.

DEMOCRATISATION OF SKILL

The education industry is not immune from the transformative power associated with the democratisation of skill. For example, the legal industry, one of the classic professions, is being transformed by the democratisation and globalisation of skills and knowledge. As more and more companies bypass law firms and go straight to overseas legal process outsource (LPO) providers, law firms are now realising the influence LPO providers have in the market.

The advent of Massive Open Online Courses (MOOCs), where experienced educators develop rich online content that can be endlessly delivered at near zero marginal cost, is an attractive business model for those focusing on short-term expense. How this transforms the role of the classroom teacher remains to be seen.

THE NEXT STEP

Defining the roadmap for the adoption of new, innovative and potentially disruptive technologies for the education sector is no trivial matter. The first, and probably most important, step lies in ensuring that policymakers and educational institutions arrive at a common and well-informed understanding as to the potential of the new technology landscape. Achieving that common understanding in the short term, when immersed in a sea of opinion, vendors' vested interests and technology evangelists – all fuelled by the need to cut the costs of delivering education – is the real challenge. ∎

Rob Livingstone is the director of a Sydney-based IT advisory practice. rob-livingstone.com