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Teaching with technology: A university student perspective and action process

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Teaching with Technology:
A University Student Perspective and Action Process
In the contemporary teaching environment, technology plays an essential role. It has catalysed fundamental changes to the student-teacher relationship. By definition, we expect our teachers to be more experienced than their pupils, and to have greater expertise in what they teach than those they teach it to. But with iPad apps for children designed almost from the day they exit the womb, this generation of students has a head start when it comes to technology and, thereby, access to information.

The digital schooling phenomenon exemplifies a broader societal change which sees technology permeate across every inch of day-to-day life. Technology enriches our hospitals and homes. It dominates our industry and community. And now, more than ever, it has entered our learning institutions. Unlike before, classrooms, lecture theatres, libraries and laboratories are technology-focused and digitally-enhanced. All levels of education, schools – primary and secondary, TAFE, universities, and even day care centres, now feature technology in some way, shape or form.

Using university as a case study, we can see how technology marks every step of the educative journey. Students apply and enrol online. Email is the primary means of communication within the university network and most, if not all, lectures are presented through slideshow displays on large digital projectors. Assessments are submitted online by means of Turnitin plagiarism software, and the results of these assignments are subsequently accessed on the web. Academics monitor student progress on a Student One database, and when it finally comes time for students to graduate, they register to do so online. From beginning to end, technology is an inherent feature of university and campus life. The student experience has unequivocally been digitised.

Moore’s law, a rule of thumb in the computer industry, suggests that technological capabilities double every two years. One need not look further than the annual release of new-age iPods, iPhones and iPads to see the evolution of technology is staggering. The challenge for educators, and indeed the challenge for humanity in the 21st century, is to stay ahead or, at the very least, keep up.

This year, the Bond University Student Association presented its new Vice-Chancellor and his senior executives with two important papers. The first, presented in February, was the Teaching with Technology Position paper. It outlined the student wish list for technology in the university environment. The second, presented in July, was the Academic Audit. This represented the first ever, student-led, root and branch review of education policy and academic practice at Bond University. Unsurprisingly, many of the review’s 70 recommendations demonstrate the student preference for technology in their learning experience.

Both papers arose from a year-long push for student-oriented reform at the university. The recommendations forged are the culmination of months of meetings and dialogue within student associations and representations. They represent feedback gathered from two dozen, student focus groups, voice forums and education round tables. Before publication, they were tested in a survey of 209 students. In total, it is estimated some 500 students provided feedback in some way, shape or form on either or both of these papers.

Teaching With Technology

One request relates to opening hours in two of the university’s technology hubs. The Main Library, home to the resources that support the learning and research needs of the university community, was perceived as closing too early. The Multimedia Learning Centre, a collaborative-friendly learning environment and host to the latest in technological innovation and enterprise, did as well.

Students outlined the case for change and the Vice-Chancellor agreed. The end of the January semester saw a comprehensive trial of extending the Main Library and Multimedia Learning Centre opening hours. The trial, alone, provided students with more than 100 hours of additional access to the library and, for the first time ever, 24-7 access to the learning centre. Students voted with their feet. Each week, hundreds flocked to the library in particular. The pilot was so successful that the university permanently extended the hours.

Similar success occurred with single authentication. Students and staff daily utilise a variety of applications ranging from access to email and course content, to enrolment, timetabling and campus life. As
a result, students often waste valuable time, entering password after password and, where passwords vary, having them reset.

The call for single authentication, so that just one password is required for all applications, is a reasonable one. The Vice-Chancellor agreed with the student call for a single password authenticating access to all university applications, and has commissioned a move towards it. This kind of mechanism is not simple and is not secured without cost. However, the ball is now rolling and students are satisfied with assurances of commitment.

Finally, students scored again on the issue of online assignment submission and marking. Currently, students dual-submit, first uploading an electronic copy for plagiarism purposes and then handing up a hard copy at the relevant faculty office. The hard copy aspect of this system is redundant. Academic research has consistently concluded that the submission of assignments online reduces the turnaround time involved in the marking process.

Academic Audit

In every faculty at the university, students voted almost 2:1 in favour of universal lecture streaming. Students are firm in their belief that family matters, work commitments and illness are a fact of life. Lecture streaming serves to prevent students from falling behind when, through no fault of their own, they do not attend a lecture. Lecture streaming also functions as an effective study tool leading into exam periods.

Step one is implementing universal lecture streaming. Step two involves making these streams as accessible to students as possible. While the existing lecture capture system allows students to stream an online broadcast, Apple’s iTunes U permits the download of lectures for later viewing. Students can then view lecture content on their iPod, iPad, iPhone, desktop, netbook or notebook computer. True to the platform’s tagline, students can ‘learn anything, anywhere, anytime’. Of all the recommendations tested for student support, iTunes U had the greatest support. Some 92% of students surveyed responded “yes” for the lecture streams to be made available via iTunes U.

Meanwhile, student administration has been fundamentally digitised. While 21st century students were no doubt the catalyst for this, the ad hoc migration of these systems to online mediums has resulted in a patchwork array of distinctive systems and inconsistent platforms. Two-thirds of students are of the opinion that these disparate student systems should be merged into one. As a result, the Academic Audit recommends an all-in-one student dashboard that incorporates functions currently provided for by four, separate student systems.

The Academic Audit touches upon the breadth and depth of the academic landscape at university. Given this, students could not have been happier with its reception by university management and academic decision makers. Some recommendations are controversial, others take time and cost money, and many go against long-standing practice. Nevertheless, the review has been well received as a blueprint reform and a guide to the education 21st century students want and need.

Learning from the process and the product, it is clear that with the right research and clear consultation, academics appreciate the student voice and vision. In the current climate of the tertiary education sector, institutions must satisfy student demand to continue to survive, thrive and prosper.

It is not surprising that a common theme to all recommendations is a student preference for technology. The 21st century student belongs to the most technologically-capable generation in human history. To keep up with the pace of technological change, academics and administrators must think fast and look forward.

Every day, research and innovation are changing the technological climate. By and large, this is for the better. If we can’t keep up with the change today, we will struggle tomorrow. The everyday technology we use today was unfathomably to most a decade ago. A glimpse into the future may see face-to-face teaching replaced by an entirely digital classroom. Pen and paper may be a thing of the past. Teaching with technology may not mean a projector but could mean a hologram. Computerised marking by ‘intelligent processors’ is not out of the question. Accelerated learning, digital teaching and techno-centric degrees are all potentially on the horizon.

Students believe that the scene is set for an authentic education revolution. A national broadband network, the most tech-savvy generation civilization has ever known and academia increasingly not afraid of, but encouraging change, will foster the growth of a new digital age of teaching and learning.

It is a brave new world and we should embrace it with arms wide open. Formal schooling can be cutting-edge. Available technologies are state of the art, and digital fluency can mean a competitive advantage to universities, schools and the nation. Lead the way and get out in front. Contemporary students are calling for teachers and institutions to build on existing, digital foundations and lead the way to teaching and thereby thriving, with technology.

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Matthew McLean is the Vice-President (Education) of the Bond University Student Association. He studies a Bachelor of Law on a Vice-Chancellor Scholarship at Bond University. He serves on the university’s Academic Senate and a number of its standing and sub-committees. Matthew authored the Bond University Student Association’s Academic Audit and their Teaching with Technology Position Paper. He works as a Research Assistant at the Office of Quality, Teaching and Learning and the Centre for Law, Governance and Public Policy.
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