Facilitating active learning opportunities for students through the use of technology-enhanced learning tools: the case for pedagogic innovation and change

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Abstract
This paper summarises recent findings from UCISA case study and survey research on the pace of change in the institutional adoption of technology enhanced learning tools across the UK higher education sector, and will address the rise of student-controlled and creative technologies to promote information, knowledge-sharing and networking in learning and teaching activities. Current generations of students are now arriving on campus with the expectation that their technologies will seamlessly interconnect with university services and support their learning experience. The paper discusses the impact these technological developments are having on the delivery of campus-based courses – specifically the scope that learning technologies now present for innovation in the delivery of the taught curriculum. Through a presentation of case examples from the University of York we consider how the affordances of mobile and online learning technologies are being applied to support active learning opportunities for students.
The past decade has witnessed significant changes in the UK higher education sector. The deregulation of the marketplace and entry of new degree providers such as the University of Law and Pearson College London has led to an increasingly congested and competitive undergraduate admissions market where the quality of student services counts. Technology enhanced learning (TEL) services have become an important component of the student learning experience and a focus for investment by universities in student-facing services such as lecture recording and video technologies.

Recent investment decisions by universities in TEL provision have been informed by student expectations as well as a continuing commitment to the enhancement of the quality of learning and teaching. As reported in the 2014 UCISA TEL Survey (Walker et al., 2014), feedback from students now tops the list of factors encouraging the development of TEL services, with students now commonly viewed as consumers and/or partners in educational development, with a greater voice on the scope and quality of services that universities should be providing for them (Wenstone, 2013). In this context institutions are being strongly encouraged by the UK Higher Education Academy to support flexible learning opportunities, in line with the recommendations of HEFCE’s 2011 paper: Opportunity, Choice and Excellence.

Students now expect their experience of higher education to involve the use of online and campus-based learning technologies, with instant access to learning resources and support. The Jisc Digital Student project (Jisc, 2013 - ) has highlighted the transactional and transformational expectations that students share towards technology adoption, with the former addressed by universities through improved access to Wi-Fi for student-owned devices and by the optimisation of online learning and teaching services for mobile access. Transformational (educational) expectations relate more to the ways in which digital technologies are employed to support learning activities, and in this respect we are now starting to see universities consider ways in which centrally support and student-owned technologies can be used to support formal and informal learning and in so doing also address the digital skills and employability of their students: the University of Greenwich’s implementation plan for the embedding of mobile technologies in curriculum design (Kerrigan et al., 2014) represents a recent example of transformational change in this respect.

At the heart of these developments lies the opportunity for pedagogic change and innovation, based on creative uses of technology which enable students to learn in more flexible, effective and efficient ways. To this end passive consumer technologies such as lecture recording and video may be rebranded, so that they support a new culture of active learning, with a focus on increasing student engagement and collaboration in learning activities –transitioning from ‘sit back’ to ‘sit forward’ learning activities (Young, 2013).
Whilst much of the discussion and ideas on pedagogic design are not particularly new – take flipped learning as an example, repackaging ideas originally expressed by Eric Mazur in 2006 – the identity of the people engaging in the debate is. We have observed a number of Vice Chancellors from leading UK universities seizing on the digital agenda – investing in MOOC services to support outreach and in campus support for teaching and learning, with broader discussion of the opportunities to maximise contact time on campus with students (through flipped classroom pedagogies) and engage students through the mobile agenda (BYOD). This is leading to top-down changes in digital strategy, with implications for campus-based teaching (cf. University of Leeds’ Digital Strategy for Student Education).

We are seeing similar developments at the University of York. As part of a wider review of programme design at the University, a new pedagogy for the design of learning and teaching has been developed to inform the ways in which we support students in their learning (Robinson, 2015). The York Pedagogy encourages academic staff to design in to their courses meaningful study activities which offer active learning opportunities to students and our vision for the use of learning technologies (York, 2013) underpins this design approach. Staff are being encouraged to become proficient in the use of technologies to facilitate learning, expanding the opportunities for students to rehearse and articulate their knowledge and support the development of lifelong learning skills.

There is a recognition here that learning technologies may support different modes of learner engagement and activity and increasing levels of student-led activity and control. At one end of the spectrum, learning technologies may be used to enable out-of-class learning to take place, providing students with flexibility in the way that they learn through easy access to study resources. The online space, whether it be a virtual learning environment or other web-based environment, can provide a locus for formative learning – testing and collaborative activities. Going a step further along the spectrum of learner engagement, technology can also underpin transformative course design approaches, in which students take direct control over their learning process through student-led teaching and discovery based learning approaches. Other examples of transformative designs draw on the design of course materials to support personalised learning pathways. This may involve a diagnostic test of quiz to assess a level of knowledge or skill, with the results leading an individual to a particular pathway of resources / activities and extended reading to address the knowledge gap or extend learning through more challenging examples. Designing personalised learning which recognises prior knowledge, aptitudes and preferred learning styles is a challenging task, but one that is highly motivating and engaging for students.

Through a presentation of case examples, this paper will discuss how the University of York’s pedagogy is being applied to programme and module design, and will highlight how the affordances of mobile and learning technologies are being used to support active learning opportunities for our students.
References


