Deeper learning by design: what online education platforms can do

Gavin
Melles

FUTURE OF HIGHER EDUCATION: We continue our series on the rise of online and blended learning and how free online courses are set to transform the higher education sector. In the final part of our series, Swinburne University's Gavin Melles looks at how we design online education.

Online learning not only needs good content from experts, it needs the right kind of system to support it. These online platforms need to be designed in a way that is intuitive, easy to use and that enhances student learning.

Systematic learning

There are two kinds of platforms that university students use. One is the learning management system or LMS and the other is the emerging open online course, also known as the MOOC.

An LMS is used across a university to put course content online for fee paying students. It's used for administration, communication between students and lecturers, it also houses learning content, like text, video, and short quizzes or games. The open online course is much the same but free to any student, with a greater emphasis on peer instruction and feedback.

There are specific challenges that come with the design of an LMS or an online course site – its design can effect teaching practices and student engagement. We need to evaluate these systems in the context of a commitment to good teaching and "deep" learning – and that can't just mean the ordinary student surveys.

Universities and course providers must understand the needs of an increasingly diverse student cohort, so that they can design their online course sites and LMS accordingly.

As Lindsay Tanner in a recent article in the Australian suggests there has been lots of tech(nology) and not much ped(agogy) in responses to rising student numbers and new ways of learning.

> Leveraging online open education platforms for meaningful evaluation of learning, openedconference.

Barriers to learning

There are many potential barriers to online study. Research has shown that students can be stopped from learning effectively online because of administrative issues, social interaction, academic skills, technical skills, learner motivation, time and support for studies, cost and access to the internet, and technical problems.

This list suggests something of the breadth of human, technological, pedagogical and institutional issues that configure the problem facing universities.

Such questions cannot be answered by just finding the right platform. And as researchers Blass & Davis (2003) pointed out almost a decade ago this also does not mean simply putting existing teaching materials "on the Web" but rather a shift towards interactive learner-oriented use of technology. Some but not all universities have taken the message about usability and purpose seriously.

Custom learning

The choice of platform and the degree of flexibility with which it can be customised is key. Commercial LMS

platforms, such as Blackboard, or free platforms, like Moodle, offer different degrees of flexibility and structuring that may or may not contribute to the effective delivery and use of curriculum material.

Such platforms may integrate with existing web 2.0 technologies such as Youtube, or Facebook, with which students are already familiar. Chris Dawson at ZDNet Education recently points to three key issues for increasing adoption and use of learning platforms - integrating with existing Web 2.0 gadgets, e.g. Facebook, better responses to teacher demands for tools such as capturing lesson content, and considering costs savings by moving to simpler more cost effective systems.

Poor design

The question of what are the best online education sites partly deflects attention away from more fundamental issues. Web-design on university sites in general seems to be poor.

Students, for example, value consistent use of LMS. Faculty must have guidelines that lead to the use of LMS in consistent ways. Researchers Brown & Voltz suggest that six key dimensions need to be addressed: creating rich learning activities, situating activities within an interesting story line, providing meaningful opportunities for student reflection and third party criticism, considering appropriate technologies for delivery, ensuring that the design is suitable for the context in which it will be used, and bearing in mind the personal, social, and environmental impact of the designed activities.

With its open courseware MIT lead a trend, now followed by other top-100 universities like Harvard and UC Berkeley. One of the most successful aggregator sites is Coursera with over 1.5 Million users, gathering a wide range of introductory and other courses for massive open online course (MOOC) access.

> Coursera.

Changing ideas?

Whether or not open courseware represents a "seismic shift" in higher education as reported by the New York Times remains to be seen. Such programs challenge Australian universities to develop non-proprietary attitudes to community engagement.

Despite the plethora of platforms and technologies employed and the rise in open courseware, one recent US report, describes systems that support interactive learning online (ILO) as still at a very early stage.

The study suggests more sharing of results between institutions on platform performance and greater investment in more sustainable and customisable platforms; two suggestions that Australia also needs to consider as it moves forward.

Thus, pedagogy must guide decisions about technology. Whether Australian universities can respond with sophisticated answers to a complex environment remains to be seen.

The series will conclude this Monday with a panel discussion in Canberra co-hosted with the Office for Learning and Teaching and involving the Minister for Tertiary Education, Chris Evans.

*We'd love you to take part: leave your comments, join the discussion on twitter.com/conversationEDU, facebook.com/conversationEDU.