



Implementing e-learning: A migration story

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The shift to an open source learning management system (LMS) raises questions for the integration of technology and pedagogy in an institutional approach to e-learning, and for strategies to build effective student learning through staff development. Implementation at La Trobe University involved the migration of over 1300 subjects to Moodle by the start of Semester 1, 2011. This paper describes this process as a migration story in which successful implementation is a necessary but not sufficient stage to achieving an effective e-learning strategy, in this case, one that meets particular pedagogical needs by embedding pedagogical choices that match the blended learning needs of a multicampus university. The risk is that implementation defaults to technology requirements, and is enacted in a way that pre-empts and sets the conditions for academic development in e-learning. This paper examines the ambiguity of “implementation” that arises from the separate goals of LMS configuration and pedagogical needs.

Keywords: e-learning, learning management system, Web 2.0, academic development,

Background

This paper describes the university-wide implementation of the open source learning management system (LMS), Moodle 2, at La Trobe University for the commencement of Semester 1, 2011. The e-learning environment at La Trobe University presents a complex, multicampus environment, with a student population of 29664 (in 2010) distributed over two city and four regional campuses (69.9% at one city campus), for which a primarily blended learning approach is adopted for undergraduate degrees. This learning environment includes large student cohorts (over 1000 students), and subjects that are taught simultaneously over several campuses.

The LMS implementation occurred as a response to external contingencies, and the consequent choice of LMS involved a level of institutional risk: support for the existing LMS was to cease at the end of 2010, and Moodle 2 was a first-time installation in an Australian university. In this context, implementation was structured as a content migration project, managed externally by Netspot, and modelled in part on the implementation of Moodle at the University of Canberra (Carter & Arnold, 2009). The project aimed to migrate or transfer all subjects from the previous LMS to Moodle for use at the start of Semester 1, 2011, and to train as many

academic staff as possible to a level of minimal functionality of Moodle.

This paper aims to raise the questions about implementation that are directed towards establishing sustainable e-learning in the university: what does implementation entail when it is scoped beyond functionality? How should staff development and support be designed if it goes beyond a technology training program? Will an LMS migration project default to a transmissive pedagogy, or can migration embed pedagogy as well as content into e-learning?

It's not purely technical

The commitment to e-learning by universities is shaped to a large extent by economic imperatives and the potential of information technologies for massification and extending learning over distance (Goodyear & Ellis, 2008; Snyder, Marginson & Lewis, 2007). It is not surprising, therefore, that as LMS have become mainstream in universities over the last two decades, there has been a tendency towards the “management system” aspect of the LMS and a transmissive approach to learning (Lane, 2009; Bayne, 2008; Malikowski, 2008). This emphasis is currently under challenge with the advent of Web 2.0 and PLEs (personalised learning environments) (Downes, 2010; Mott, 2010; McLoughlin & Lee, 2010), nevertheless, the use of LMS broadly reflects what Goodyear and Jones (2003) identified as a “default pedagogy” (p. 40) based on “access” and a functional transmission of content. In this approach, the technological *how* may come to shape the pedagogical *what*. The persistence of the troublesome accommodation between technologies and practice in e-learning is captured by Blin and Munro (2008), who comment that despite the investment in LMS in universities:

there is little evidence of significant impact on teaching practices and current implementations are accused of being focused on improving administration and replicating behaviourist, content-driven models (p. 475).

The issue with institutional learning technologies arises when their implementation is framed by technology system requirements that exist prior to a project and set conditions for e-learning. In this instance of implementation, there were technical and external imperatives for instigating a university-wide migration project, hence a critical goal was for the new LMS to be functional and usable for all subject university wide. A migration project implements a model of minimal, or “interoperable change” (Marshall, 2010, p. 180), rather than disruptive or transformative change. From the broader perspective of institutional teaching and learning strategies, however, LMS functionality and usability are really a means to student learning, hence the challenge remains for staff to be able to integrate the new LMS into their teaching practice, and incorporate academic goals into e-learning. Function is not enough to address this challenge.

The migration story

The strategy for implementation of Moodle at La Trobe University was framed as a content migration project which aimed to achieve widespread technological functionality with minimal staff disruption. A program of staff communication and training included these components:

- Preparing teaching staff by migrating their subjects in the new system without effort on their part. Staff were encouraged to postpone development of new or revised subjects.
- Staff support and training consisting of a program of workshops for staff from November 2010 until the week prior to Semester 1 in late February 2011. Attendance for these workshops indicated that 48% of academic staff completed the Moodle basics workshop (see Table 1).
- Staff support and training that included the production of 26 guides in PDF format, 15 two minute short videos, demonstrations, student “rovers”, staff drop-in centres (La Trobe University, 2011)
- Student support via a Help desk, Student guides (PDF and HTML), and Video Guides.

Table 1: Moodle training workshops and participation

Training workshop session	Academic staff
Moodle basics:	1239 (48%)
More Moodle - Groups & Groupings	171 (6.7%)
More Moodle – Quizzes	142 (5.6%)
More Moodle - Gradebook	139 (5.4%)
More Moodle - Assignments & Turnitin	34 (1.3%)

Initial reports in early Semester 1 on the content migration project indicated success in functional terms: the system remained stable at times of critical use, for instance, in the first week and on the due date of the first assignment.

The content driven model: Implementing what?

Implementation of institutional e-learning necessarily involves trade-offs and negotiations between competing institutional and pedagogical goals (Marshall, 2010; Uys, 2010). This instance of implementation was determined by contingencies that required a fast-track process of content migration to the new LMS. With the selection of Moodle occurring in June 2010, the system becoming available to users for subject development in October 2010, leaving little time and few resources for familiarisation and subject development. These implementation demands – for full functionality of Moodle across the university by the start of Semester 1, for widespread but minimal training – overshadowed or postponed the opportunities for a more pedagogical approach to e-learning staff development, and for exploring the potential for an open source LMS such as Moodle for incorporating uses of Web 2.0 and social media. The goal of large-scale migration framed implementation as a “content-driven” model, conducted through an information technology (IT) project management process, raising questions concerning the type of e-learning that is produced or put in place on completion of the migration project, and how technology and pedagogical design can work together to build an environment for effective student learning.

Professional Development: A model of ownership, excitement and engagement

If the above outlines an information technology (IT) approach to LMS migration, including a tools training component, then the question remains: What kind of academic staff development should be pursued once the migration team has moved on?

What we propose as a follow-up to the migration training is a reaction against the dull, under resourced, IT-driven, passive service approach. It is more than just advocating a pedagogical stance. It is about academics taking ownership of what they do, carefully crafting a pedagogy adapted to a very flexible medium, and adding excitement, engagement and specificity to a bland institutional environment. To encourage ownership and unique pedagogical craftsmanship we outline the following important elements:

26. **Learn by doing:** rather than academics having things done for them, for example content upload or the creation of discussion forums, academics should design the learning themselves.
27. **Scaffolding professional development:** lecturers would ‘do it themselves’ but in consultation with staff such as academic developers, learning technologists, educational designers, and/or media production staff.
28. **Adopt a project approach:** Part of the mechanism that enables scaffolding and assistance is the means by which support staff can walk academics through the process of creating a learning design and implementing a constructively aligned learning environment. Adopting a project approach provides a formal methodology that facilitates professional development and learning environment creation. The project could be very small scale and not too onerous in its implementation. Process and product must be balanced.
29. **Provide a creative environment:** The first three points need to be packaged within a creative environment to encourage expansive thinking and novel solutions. The lecture-tutorial paradigm has a history that is centuries old in higher education, so its abandonment (or supplementation) requires creative use of the digital medium. The promotion of an open source-open course set of values also encourages an expansive mode of thinking (see below).

Sometimes criticised as a “cottage industry”, implementations of this approach, such as the Courseware Design and Development Program at the University of Melbourne (Hirst et al, 2004), have demonstrated that enough academics participating in the program can produce a critical mass of people creating interesting and engaging learning environments. Models can then be promulgated and adapted, but with a specificity of creative expression that the institution has always allowed and encouraged of its individual academics in teaching.

Zooming out to a broader view than assisting the individual academic, there is a role to play for a central university unit and local faculty staff working in cooperation to scaffold the learning. A network of centre to faculty and faculty to faculty cooperation provides the broader framework for strategic developments to live alongside individual initiatives. Top-down and bottom-up can co-exist where values embrace the contribution each can make to the e-learning experience. Such a mutual compact is also dependent on each side acknowledging the contribution the other can make.

The OE Model: Open Source, Open Course

Alternative approaches to the adoption of e-learning via the content model described above have been enthusiastically adopted for some time now. MIT's Open Education (OE) is a celebrated demonstration of one such model, and extends the concept of open source software to educational resources in order to revolutionise the way that students, academics and institutions interact (Baraniuk, 2008, p 229). Since 2001, MIT has been sharing its courseware online through its OpenCourseware project, and at the time of writing has published more than two thousand courses, with a hundred million visits recorded (MIT OpenCourseWare, 2011).

Cambridge University is one institution to adopt this approach to the provision of e-learning resources. The Centre for Applied Research in Educational Technologies (CARET) provides Cambridge with its LMS, Sakai, and supports this through the active involvement in the Sakai developer community. CARET's e-learning strategy takes the view that technology changes rapidly, and is expensive, and that online learning is unlikely to be a major component of face-to-face learning. It therefore adopts an approach to "operate as an innovation unit" by identifying and developing innovations that make learning better or easier, and "support R&D with University learning and teaching innovators".

Australian universities have by and large been slow to adopt an OE model that goes as far as MIT's, and few have even gone as far as Cambridge in making innovation a truly central component of the support for their LMS. Indeed, OE as a philosophy is about more than choosing an open source LMS, just as there is no necessary connection between choosing an open source LMS and adopting OE values as an institution. However, the recent adoption of Moodle in a number of institutions such as La Trobe may signal a step towards the support for innovation, if (a necessary if) open source technologies are used to extend OE values to the educational experience.

Conclusion: Challenges for implementation

While academics are expected to be proactive and reflective in their teaching practice in face-to-face settings, why is it often acceptable for them to passively assign tools in an e-learning environment? Critical to the approaches outlined above, both learning by doing and the OE model, is the provision of an opportunity to explore potentialities of e-learning, by establishing a supported space of conversation and innovation around student learning goals. Where information technology goals frame implementation, the complexity of e-learning in a university is dramatically reduced, but at the cost that pedagogical choices are presented in packaged form, and innovation is pre-empted and foreclosed. The challenge for the OE model of e-learning starts *before* the technology arrives, to re-scope implementation to encompass the pedagogical effort and learning goals of its practitioners: teaching academics, academic developers, learning technologists, and educational designers.

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