

Enter the matrix: Leveraging the LMS

Iseult Blanchard and Debbie Emerson
Information and Education Services
The University of Melbourne

Abstract

The University of Melbourne has begun the implementation of a Learning Management System based on the Blackboard learning and content systems. This will become the University's primary platform for online teaching and learning from Semester 1, 2006. At the same time, the Information Division, whose brief it is to support the implementation, has undergone a major realignment and has begun to introduce a matrix-style management model. This paper looks at how the matrix management model creates opportunities to provide balance, integration and seamless support and training to staff and students in the blending of face-to-face and online environments.

Keywords

Matrix management, learning management system, IT infrastructure library

Introduction

With the introduction of the campus wide Learning Management System (LMS) the University of Melbourne envisions the enrichment of teaching and learning and the on-campus experience by providing opportunities for academics to complement their face to face teaching with anytime, anywhere access to high quality content and resources. The University of Melbourne sees itself as a campus based university where face-to-face interactions will be supplemented rather than replaced by online learning. The University recognises that diverse groups of students will need greater flexibility to accommodate different approaches to learning, learning styles, expectations and lifestyles (McPhee, 2005). Therefore access to online learning must be intuitive and blended into their learning, enriching the experience, both on and off campus. Such access must provide flexibility to accommodate different learning styles, different lifestyles, and make allowance for individual learning pathways. With moves to 24/7 access, a healthy balance between study, work, and life with family and friends should also be sought.

While some academic staff may find the introduction of online delivery of teaching and learning quite challenging, from both the implementation of new technologies, and ensuring pedagogic quality in the delivery of subjects online, many may embrace the opportunity. These aspects have informed the approach of the Information Division (ID) in setting in place a framework of interlocking services for students and academics that seeks to ease the transition. These seamless, cross-functional services are part of the benefits derived from the matrix management system currently under implementation in the ID.

One of the challenges in offering a seamless and quality service is overcoming the silo issues that emerge when such disparate support groups are brought together. The groups consist of librarians, IT trainers, educational designers, administrative and technical support staff, each providing quality services, but acting in isolation and in some cases duplicating services. It should be noted that a number of departments already utilise different learning management systems, so a reluctance to change systems arises as an issue that needs to be addressed. To provide "one stop" ease of use services the University has committed itself to creating a number of learning hubs, centres where students can access information, learning resources and technology, similar to centres already successfully established at other leading universities (Penn State University, 2005). The learning hubs will be a place where matrix management meets the LMS.

The matrix

It is necessary to look at new ways of working and adapting to changing needs of our academic staff and students. The strategic vision of the Information Division includes the introduction of the matrix model of management, and a service framework incorporating IT Infrastructure Library (ITIL) principles attempts to address these changing needs and as a means of avoiding a "reactive and chaotic ... service delivery and quality" (Brittain, 2004).

One of the strategies for the ID for 2005 is to make tangible progress on the implementation of ITIL as a quality framework for delivery of information technology services and systems across the University (The University of Melbourne, 2005a). In an approach similar to University of Pennsylvania's "eLion" approach to student services, the Information Division also requires that project leadership be highly integrated through the use of collaborative teams (Wagner, 2005).

The ID is committed to implementing structures which facilitate strategic responses, devolved accountability, teamwork, flexibility, innovation, and effecting and efficient resource use (O'Brien, 2004). The mechanism to provide this vision is the matrix management model. A simplified version of the ID matrix shows how its departments will utilize the leadership and coordination skills of the Planning and Projects and Marketing and Services groups. These groups are providing Client Relationship Managers (CRM's) to assist in the communication process. Matrix management can create challenges for those involved "as traditional organizational boundaries decrease, differences (and conflicts) over authority, control, resources, and perspectives may, in fact, increase" (McDermott, Brawley, & Waite, 1998). The CRM's should ease this difficulty for the ID, both internally and with the larger University community, as they will liaise between interested parties and research customer needs.

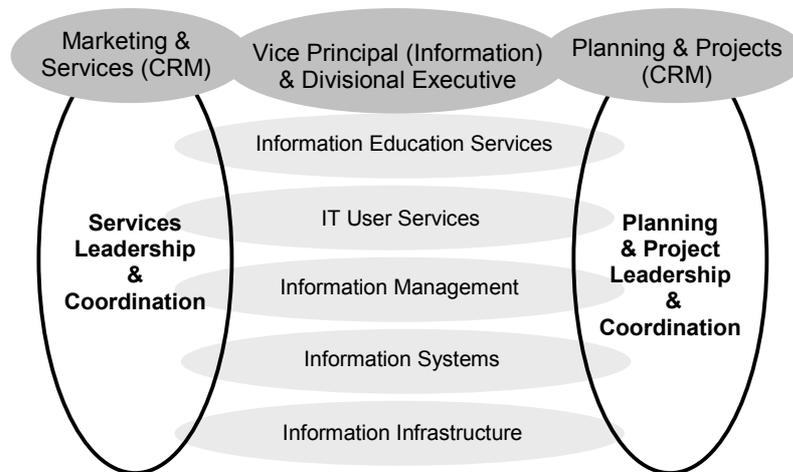


Figure 1: Information division relationships matrix

This framework gives the ID the opportunity to create collaborative teams of professionals, responsive to the needs of academic staff and students. Staff will have opportunities to share knowledge and expertise and to provide integrated quality services. In order to ensure provision of a consistent high standard of quality service, administrative departments including the ID already undergo evaluation of their services via the annual Quality of University Management Administration (QUMA) survey (University of Melbourne, 2005b).

Learning hubs

Learning hubs are an ideal example of a place where the LMS and the Matrix model of support will come together. The concept behind a learning hub is that of a centre where learners are able to attain a balance between their social needs and access to information, learning resources and technology. Learning hubs will support collaborative and blended learning, and provide students with access to Information Communication Technology (ICT) and Information Literacy (IL) skills training. The LMS will provide the framework for integrating ICT and IL by building them into online subjects. For example, by using a combination of the LMS and a Common Searching Interface, information professionals can make subject-specific library content such as eReserves available to courses. The ID has committed itself to a ten year plan that espouses ownership and understanding in the University of the value of learning hubs (The University of Melbourne, 2005a).

It is planned to locate within these learning hubs friendly, accessible service desks, effectively "one stop shops", for 1st level IT and Information Services and assistance. These service desks provide students with support for a range of issues, information, ICT-based and technical, and attempt to ensure solutions are of consistently high quality and provided quickly. Users of a central system may feel frustrated when poorly supported services are offered and inconsistent or unhelpful advice is provided at service points.

Using the ITIL model, the “one stop shop” will gather information via help desk software on the current needs of staff and students. Combining this with the matrix model, the information will allow support groups to identify needs, then coordinate and collaborate with the appropriate groups in the ID to address gaps. This may require accessing information on use of an LMS feature (quizzes, discussion groups or gradebook), having online resources developed, a face-to-face consultation or the development or running of a training session.

Implications for teaching and learning

A document called ‘Nine principles guiding teaching and learning in the University of Melbourne’ was developed by the University’s Centre for the Study of Higher Education and later adopted by Council. This document states that the quality of the day-to-day interaction between staff and students and between students themselves, whether structured or incidental, is at the heart of the Melbourne Experience (James & Baldwin, 2002). In an institution with such a commitment to face-to-face interactions, online education can provide opportunities and is seen as complimentary to the campus-based experience. It is envisioned that tools such as discussion forums, which are not universally utilised, are to become widely used and popular, particularly among a student body that already embraces technology innovations such as SMS with enthusiasm. A discussion forum is an example of a tool that can be both synchronous (students joining the group at a designated time to join a discussion) and asynchronous (students joining a group when able, to contribute to the forum and read the archived discussion). Anecdotal evidence from student feedback suggests that access to archives of discussions is a very popular study aid as a record of issues, discussions or perspectives shared between students.

In the creation of the learning hubs it is envisioned they will include professional training facilities for academics that address their ICT and IL professional development needs. One goal is to encourage innovation in teaching, particularly in relation to the application of technologies, and the use of information, in the teaching environment. Learning communities or communities of practice need to be developed and encouraged. Information Division staff will work with faculties and departments to transform teaching and learning practices with the use of multimedia and related educational technologies and appropriate pedagogical practices in a wide variety of ways (McPhee, 2005).

Recent classes offered in the LMS include an innovation not normally available in previous class models. An IL expert is partnered with an ICT expert for each session. Where the class is largely IL focused, an ICT person would assist; where the class was predominately ICT, an IL person would assist. Not only does this model provide an additional person to assist with training in an environment where class sizes frequently rise above twelve, but it also has the added benefit of providing the students access to contrasting perspectives and skill sets. This model should readily transfer to training resources offered through the learning hubs.

Challenges and opportunities

One challenge being faced is resistance to change. Change may appear to threaten current work practices, whether the change is the adoption of matrix management or the adoption of a new LMS. For those involved it can feel that the process is being imposed on them without an opportunity to contribute to the change. “Buy in” must be sought from all staff and students. This can be achieved with workshops, information sessions and marketing initiatives. If staff and students are unsure of what is going on, and the benefits are not clearly expressed, then they will wonder why we are doing this. This is true for all the groups involved: ID staff, faculty support staff, academic staff and students. ID staff may not want to work outside their comfort zone. Support staff may have developed a rival system, investing many hours and considerable pride in their achievements. Academic staff may well be thinking, “Why fix what isn’t broken” especially if the LMS they are currently working with addresses their needs. A student struggling with IT, having mastered accessing one LMS may be reluctant to add yet another seemingly un-transferable skill to their set if they can’t see the immediate benefits for doing so. One challenge of university life is to encourage people to become life long learners. Change is part of life. There has been an evolution of education tools from story telling, to pen and paper, to film and now information technology. As new tools develop they should, where appropriate, be adapted and used.

The benefits of adopting the LMS for both teaching and administrative staff must be clearly communicated. This may be achieved by providing positive examples of pedagogically sound ways people are already using an LMS. One forum for doing this is via the Multimedia and Educational Technologies for Teaching and Learning Enhancement (METTLE) seminars where guest presenters are invited to showcase their innovative use of technology in teaching and learning (Information Division, 2003).

The examples must be realistic and demonstrate the traps and negatives, in addition to the benefits and positives. Changing structures and technologies is relatively easy in comparison to changing cultures. The University is asking academics to use tools that will make the way they teach fundamentally different. Academics are being shown how to use these tools, but they also need to be shown the pedagogical reasoning for using them, plus examples of current successful use. Engagement is the key, and the challenge is to cultivate participation while they are enthusiastic and motivated, before they experience problems or become discouraged.

At the University of Melbourne each student completes the Quality of Teaching Survey for each subject. Survey outcomes are reported back to individual members of staff and to the Academic Board and Council (McPhee, 2005). This feedback is used as an indicator for improvements in teaching and learning. The use of the LMS will take some of the pressure off academic staff who must communicate with ever increasing class sizes, and it gives them the opportunity for early intervention using LMS-based assessment tools. This will assist academics in collaboration with students to develop more individual learning pathways, thereby creating a more student centred learning environment. Lecturers are also under pressure from students wanting quality resources, fast responses to queries and quality feedback. The LMS can help facilitate all of this; it can assist with administration and feedback to large cohorts of students, plus assist with standardising the marking of papers by tutors.

Conclusions

In Semester 2, 2005 the LMS pilot phase will have 167 subjects nominated and be available to over 19,000 students. The introduction of the LMS will provide significant benefits, enriching teaching and learning and the on-campus experience. Many academics have shown enthusiasm in complementing their face-to-face teaching with use of the LMS and are looking to the ID for assistance with the transition of their subjects to online delivery.

The ID is only in phase two (of three) of the restructure and ID staff are still adapting and growing into their new roles. The move to the matrix management system envisioned by the ID executive, promises to ease the transition to the new LMS for both academic staff and students by bringing together the diverse support groups. This approach will combine collaboration, teamwork and negotiation to ensure that both academic staff and students are kept sustained and motivated during the transition.

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Author contact details**Iseult Blanchard**

Information and Education Services, Information Division, The University of Melbourne
i.blanchard@unimelb.edu.au

Debbie Emerson

Information and Education Services, Information Division, The University of Melbourne
d.emerson@unimelb.edu.au

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