

Making it Real: Project Managing Strategic e-Learning Development Processes in a Large, Campus-Based University

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Abstract

The University of Sydney is a large, research-intensive, campus-based Australian University. Since 2004 a strategic initiative of project-based eLearning support has been creating teams of non-academic and academic staff, who have worked together to develop online resources to meet identified needs. The University's aims in continuing to provide this framework are to engage academics in educational change and to implement innovation. Project management principles are intrinsic, including an extended application and planning process (in which committees of academics represent faculties); they provide a framework and a shared language for talking about both conceptual development and practical issues involved in creating online learning and teaching resources. This fosters teamwork, dissemination of ideas and networking of teaching practitioners both within and across faculties. In this paper we will detail how the project process has allowed development teams to align the personal and pedagogical goals of academics and educational designers for teaching improvement with the strategic goals of the university and its constituent faculties.

Résumé

L'Université de Sydney est une université australienne qui est grande (plus de 45 000 étudiants), axée sur la recherche et qui a le siège de ses activités sur un campus. Depuis 2004, une initiative stratégique impliquant du soutien à l'apprentissage en ligne fondée sur des projets crée des équipes de personnel académique et non-académique, qui travaillent ensemble pour développer des ressources en ligne pour répondre aux besoins identifiés chez les enseignants (Wozniak, Scott, & Atkinson, 2005). L'objectif de l'université en fournissant ce cadre est de soutenir l'enseignement dans le changement éducationnel et de mettre en place l'innovation. La manière de gérer l'apprentissage en ligne à l'université a été décrite dans un article antérieur par Ellis, Jarkey, Mahoney, Peat & Sheely (2007): ils décrivent comment le jeu entre l'orientation stratégique de l'université et les objectifs d'apprentissage et d'enseignement au sein des facultés détermine la forme de l'apprentissage en ligne qui soutient alors l'apprentissage des étudiants. Le but de cet article est de décrire comment les principes de la gestion de projet sont appliqués pour soutenir des collaborations stratégiques

dans le cadre de projets entre les spécialistes de l'apprentissage en ligne et de petites équipes de professeurs afin de créer des activités d'apprentissage qui sont alignées avec les résultats d'apprentissage des étudiants.

Introduction

The University of Sydney is a large (more than 45,000 students), research-intensive, campus-based Australian university. Since 2004 a strategic initiative involving project-based e-learning support has been creating teams of non-academic and academic staff, who work together to develop online resources to meet identified teaching needs (Wozniak, Scott, & Atkinson, 2005). The university's aim in providing this framework is to support academics in educational change and to implement innovation. The way that e-learning is managed at the university has been described in an earlier paper by Ellis, Jarkey, Mahoney, Peat & Sheely (2007): they detail how the play between the strategic direction of the university and the learning and teaching goals within the faculties determines the shape of e-learning that then supports student learning. The purpose of this paper is to describe how project management principles are applied to support strategic project-based collaborations between e-learning specialists and small teams of academics to create learning activities that are aligned with the learning outcomes of students.

Project management principles are intrinsic to the approach used on these strategic projects. In brief, the process includes:

- an extended application and planning period, in which committees of academics represent faculties and help to articulate and prioritise projects over a six-month period followed by a conceptual planning process lasting from three to seven months (involving a project manager and academic staff)
- a project development process lasting up to nine months (involving project manager, academic staff and educational designer/s)
- a learning and evaluation period during which the students experience the e-learning activities.

These three stages provide a framework for talking about both the conceptual development and practical issues involved in creating online learning and teaching resources. They provide a shared experience that helps to foster teamwork, dissemination of ideas and networking of teaching practitioners both within and across faculties.

The traditionally understood role of 'non-academic support staff' is changing within the modern university (Housego, 2002). As well as providing support for academic teaching (as these staff have traditionally

done), the Sydney eLearning team also sees its role as directly supporting the academic endeavour by working with academics who are interested in jointly engaging in educational change and implementing innovation. Project managers work closely with academics, developing the pedagogical underpinning of each project, suggesting technical solutions and negotiating with the academic to determine project workload and establish realistic project time frames. The team's educational designers continue to liaise closely with the academic as the project is developed, and the evaluation and consequent tweaking of resources after students have used them is built into the project's scoping process.

It can be a challenge to create new teams with members who each have specialised knowledge, and who require a shared understanding of how their skills and strengths interact most effectively (Caplan, 2004, pp. 186-187). Previous research (Wozniak, et al., 2005) identified uncertainty about roles in multidisciplinary e-learning teams; both disciplinary specialists and educational designers reported difficulty in understanding what the other team members' roles might encompass. Discipline specialists viewed their own roles as including "coming up with ideas to put online", 'showing the best way to teach content in my discipline' and 'fostering creativity in the team' (p. 738). Educational designers saw their roles as "to provide specific information and content", 'provide good examples', 'ensure that project outcomes are met', 'provide technical and educational expertise', and as an 'agent of change by promoting new ways of looking at old problems'"(p. 738).

This article aims to describe and discuss our experience in meeting these challenges. It begins with a description of the structure of the e-learning teams, then details the stages of development a project goes through and how these relate to the faculty planning cycle, before analysing the key stages of the project management process and the relationship between the project development process and pedagogical development within the institution.

Structure of eLearning Project Teams

Each project team consists of faculty-based academics who are usually course or unit of study co-ordinators, e-learning designers who work with them to develop the online activities, and an e-learning project manager. Each project team works on a specific project that has been endorsed by a faculty sponsor (usually the Dean or Head of School). As the university is currently comprised of 17 faculties, Sydney eLearning is organised on the basis of three clusters that loosely represent the strong disciplinary culture of the university. Although project managers work within a single cluster, educational designers work across the clusters,

depending on the skill mix that is required at different times in different clusters. This has allowed the team to develop a broad view of learning and teaching work across all of the faculties within the university.

Figure 1 provides a visual representation of the team structure as implemented across the three disciplinary clusters. It also shows how teams are both informed by and contribute to both faculty and university-wide learning and teaching goals.

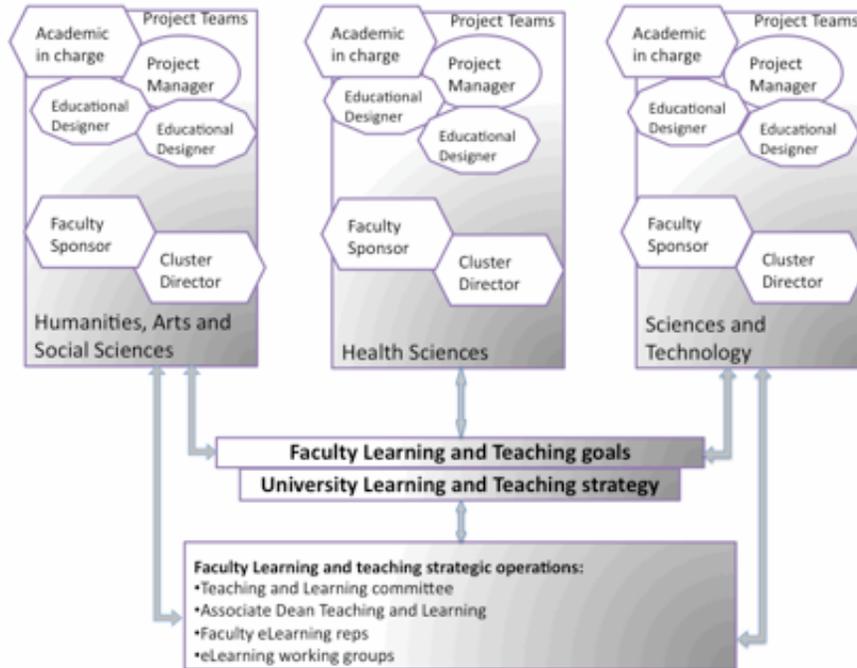


Figure 1: Structure of e-learning project teams

Faculty Representatives

Faculties' learning and teaching plans, aligned to the university learning and teaching strategy, determine the strategic direction of the projects. Faculty e-learning representatives are therefore a key part of strategic project initiatives. Faculty Deans each appoint a representative who fosters the implementation and development of e-learning within faculties by active membership of the Faculty Learning and Teaching Committee. It is expected that each representative will raise faculty awareness of current university e-learning strategies, support the dissemination of e-learning operational information (deadlines, events,

etc.) and maintain their involvement with regular e-learning cluster and working group meetings

Academic-in-Charge

The academic-in-charge provides the academic quality assurance for the project. S/he is usually responsible for the design of the objectives, activities, assessment and outcomes of the unit of study or course that is the focus of the project. Academics initiate a project through an application (in conjunction with the faculty representative); they provide the academic content during the project development phase of the cycle; and they oversee the evaluation (in conjunction with the project manager and the cluster director).

Project Managers

The project manager is responsible for the quality assurance of the development processes. S/he prepares, organizes, ensures completion of and sometimes maintains 12-15 strategic projects within each cluster every year. Their first contact with the academic applicant will usually be as much as a year before the development phase is commenced, and on the basis of ongoing discussion in that period the project is shaped and its size and scope determined. The importance of documentary tools to ensure that all team members are as clear as possible about the scope and limits of the project are emphasised by Hurst and Thomas (2004) and once development has commenced it is the project manager who ensures that deadlines are being met and satisfactory progress is being made, according to the Letter of Agreement and scoping documentation. The project manager is responsible for all project documentation and reporting, including assembling and distribution of applications for ranking by the faculty representatives, and may sometimes be involved in evaluation of project outcomes and on-going maintenance of the resources created within the project's development phase.

Educational Designers

Educational designers generally have postgraduate qualifications in education, and at least one of a number of other advanced skills in an area related to online design work, for example, graphic design, 'back-end' technical skills, pedagogical theory, or skills with animation. Educational designers are allocated to project teams on a contingent basis. Each semester the project managers negotiate the skills they require for each project in context of the available educational designers. For example, if a project requires substantial graphical work, an educational designer with expertise in graphic software packages will become part of the team.

Cluster Directors

Cluster directors are experienced members of the academic staff who are seconded from faculties (0.2FTE). A cluster director works closely with the faculty representatives to develop e-learning awareness and strategies within the cluster and with the Director of Sydney eLearning to ensure congruence with university-level strategy. S/he also works closely with the project managers, advising and consulting on the progress of both current and future projects. A cluster director's experience in academic culture can be an especially useful aid in supporting a project manager when complex academic issues need to be resolved. They also play a key strategic role in their work with the faculty representatives on the selection of projects for the following year.

Integrating Strategic Educational Design into Faculty Curriculum Planning

The purpose of the e-learning development cycle is to integrate innovative educational design into the curricular planning of faculties. The staged approach to the e-learning project management process allows it to extend over a two to three year period, but also to integrate with the teaching semesters of the University. Writing about the experience of incorporating eLearning into a university's teaching, Alexander (2001) points out that "Teachers' planning of learning experiences...is strongly underpinned by their thinking about what learning means." (p. 244). Being aware of the strongly disciplinary nature of academic culture at Sydney, we have worked as closely as we can with faculties to incorporate both disciplinary understandings of pedagogy and the teaching aspirations of individual academics into our project planning process.

Stage 1: Project Selection

One of the key faculty representative roles is the fostering and facilitation of nascent projects in the consultation process that takes place in the selection of the projects to be undertaken in the following year. Figure 2 provides calendar-related details of the selection process. This extended period allows both academics and project managers to conceptualise the intended educational outcomes of the project in quite a detailed way. This is not to say that the project's final form is always clear at this stage; this is usually decided once the educational designer becomes involved the following year. However, appropriate pedagogical principles, broad outcomes and curriculum design are often clarified in discussion during this period.

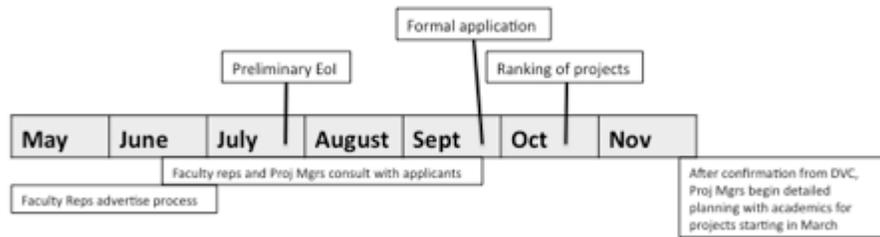


Figure 2: Timeline for selection process

The selection process involves two formal written applications: the expression of interest and the formal application. Pro formas are provided for both of these, and academics are encouraged to submit drafts to the project manager and/or their faculty representative for comment.

The expression of interest (usually no more than a page) asks the academic-in-charge for a brief description of what they would like assistance with and the aims of the project, the perceived benefits, and some details about the breadth of its application and which of the universities' strategic teaching goals it addresses, along with any key timeframe issues. These preliminary proposals are discussed at a meeting of faculty representatives, the cluster director and the e-learning project manager.

The application, which is written by the academic-in-charge after further consultation with both their faculty representative and project manager, much more strongly reflects the strategic nature of the project application process. Table 1 lists the categories of information that are required in the final proposal, in which it is clear that applications are to be aligned with both the university's and the individual faculty's strategic goals.

Table 1: Details Sought in Final Application (Expression of Interest)

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- Project title and description
 - Perceived benefits
 - Alignment with strategic e-learning objectives the university has identified
 - Alignment with university and/or faculty learning and teaching strategic plans
 - Resources required, other aid applied for, time and/or expertise faculty can devote
 - Listing of other issues that will assist in ranking, e.g., large classes, pre-existing resources
 - Date completed resource required
 - Additional information
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As academics with an active interest in learning and teaching, the faculty representatives form an important link between faculty learning and teaching policy formation and e-learning strategy. Presentations by project managers of ongoing projects at regular meetings both adds to shared understandings of how projects proceed and aids with problem-solving at a very local level. The annual project selection process detailed above is dependent on the discussion among and recommendations from the faculty representatives. Being aware of strategic concerns in their faculties and having talked to the academic applicants and received advice on e-learning strategic and technical matters from the cluster director and project manager, they decide in committee which projects will go forward for development the following year and how many hours each project team will receive.

From the time an academic makes their first enquiry, they are supported and assisted by their faculty representative and project manager, through ongoing discussions that help to shape the final application. Once the ranked applications have been supported by the Director of eLearning and the DVC (Education) (see Figure 1), the project manager continues working with the academic-in-charge to further shape the project before the development period begins. Staff are advised to attend our staff e-learning training to help them think about what they'd like out of the project, and we are presently discussing ways of tailoring training for academics who have been awarded project hours—this would be training equivalent to Stage 2 of Ellis's model (Ellis & Phelps, 2000). One common outcome of this part of the process is that academics report that they have become much more aware of the pedagogical basis for their teaching—what has been implicit in their transfer of disciplinary knowledge has now become explicit for them and for some has provided a language that is facilitating other discussions of learning and teaching matters within faculties.

Project selection is essentially a 'bottom-up' process: individuals are assisted to articulate their own teaching needs and align these with disciplinary pedagogical practice and university strategic policy, without pressure or involvement at the level of either faculty management or university management more widely (cf McMurray, 2001). The case that McMurray describes is one in which project management principles were used in a way that conflicted with the academic organisational culture; our choice has been to use them to support and foster teaching culture in faculties. Each e-learning project is generated by an academic, who is responsible for providing the academic content for the educational designer to create the resource. The autonomy of individual academics is not limited by this process—on the contrary they are supported to reach their self-defined teaching goals.

Project Experience 1: Music Education

This project demonstrates the way that the structure and resources provided by the strategic eLearning projects can assist academics' development as online practitioners, and in turn influence the wider community in their faculty.

The music education academics expressed interest in working on their own strategic eLearning project after first receiving a small number of hours of "at-elbow" support within the faculty. These were provided as part of another strategic project designed to assist academics to get started with eLearning. This music education project thus aimed to develop the informational sites by including online activities that would help students to link the theory learned in the face-to-face classes with their experiences while on practicum.

When the project manager first met with the academics, after their EOI but before their detailed submission was due, the project seemed quite modest, but as the conversations progressed, it developed into an entity which was more focused on learning and better integrated with the face-to-face component of the units. Later feedback from the academics explained that these early meetings assisted them to "clarify our thinking and develop achievable goals...".

Since then, the academics have applied for further projects to extend the sites and to make changes to activities in response to student feedback and their own experience delivering the online resources. As their skills and experience with eLearning have developed, the online activities have become more sophisticated and assured and the sites now contain discussions, reflective and case-based activities, quizzes and multimedia. The academics themselves became eLearning mentors within their faculty, taking on the role of faculty representatives and presenting their work at in-house sessions. The process has now turned full-circle, with an

academic from the faculty commenting that he was so inspired by a demonstration given by one of them he put up an informational site for his unit of study this semester.

This can sometimes be a new experience for academics, as Scott, Mahoney and Peat (2008) discuss. They identified a lack of clarity about responsibilities within teams for all involved in the early days of eLearning projects at Sydney. For example, one academic reported feeling pressured when asked to provide teaching material that had existed “in their head” in a more concrete form for the project:

“The e-learning bit was dealt with by the e-learning team but the rest of us were sitting there doing our own thing. You think ‘Oh, the e-learning team will do all of that.’ And then they say, ‘Where is the content?’ You think, ‘Well, it’s in my head.’ But, you know, somebody has to go on and do that, so I think we didn’t factor in those things so well.” (p. 3)

These reported challenges have been taken into account as the e-learning team has continued to streamline its project processes. For example, greater efforts are now made to be as transparent as possible about the process for allocating educational designers to teams, and the scoping document (discussed below) now includes very clear listings of the responsibility of each team member, along with the deadlines for content provision that are decided with academics as soon as the project has been approved for resource creation some months hence. However, not all faculties have as yet fully incorporated workload policies for e-learning (see Alexander, 2001, p. 246), and some projects are not effectively completed because of shifting academic interest and commitment. The challenge for the eLearning team is to work within this less-than-certain environment. Hurst and Thomas (2004) provide an excellent discussion on the issues of accountability and uncertainty in online environments, and their conclusion that “Sometimes the trick is simply to assign an initial responsibility, and then trade it off as necessary” (p. 213), would be one that our experience would lead us to endorse. In the Music Education project detailed above, initial flexibility led to a successful, although not the original, outcome, with pay-offs for academic staff that had not originally been foreseen.

Stage 2: Project Development

Most of the project development work occurs in the second year. During this stage, the academic-in-charge, project manager and educational designers collaborate to produce the online learning objects or modules that are the tangible project outcomes.

One of the challenges in this stage is the competing demands on the time of the academic-in-charge and colleagues who may be involved in

the project. Every year 4000 hours of educational design and project management time is allotted to each cluster of five or six faculties, and the projects are worked on in two blocks over the academic year (Figure 3). Project period 1 (12 weeks), takes place during the first semester of the year (beginning of April to the end of June), and project period 2 (24 weeks), occupies the second semester and the summer/Christmas break (beginning of August to the end of January).

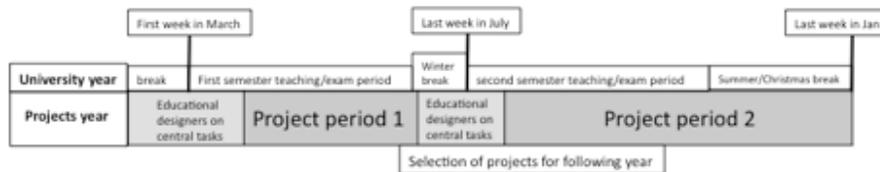


Figure 3: Strategic project development periods

The extended proposal process discussed above provides opportunity for the academic-in-charge to incorporate adequate time to prepare materials in advance of the project development phase. Academics know what their commitments will be to the project either four months (project period 1) or 10 months (project period 2) before the educational designers are ready to begin work. During this time the project manager keeps in touch with them and will work with them to create a realistic time-frame for resource development. Some apply for a separate grant in order to provide themselves with more time and/or staff resources in order to prepare their project material or to engage more actively in the development processes. As identified by Hurst and Thomas (2004), the role of trust in the development of online learning projects is important to consider. Our extended time frame increases the time in which this essential trust can be developed. Initially the faculty rep and the project manager establish a relationship with the academic through the application process, and the early conceptual stages of development. As the resources are being developed the educational designers work to consolidate this initial trust.

If a project cannot be completed in the time available due to unexpected complications in its development (e.g., difficulties with technology, over-confidence either of educational design or academic predictions of required work load), the academic is usually able to apply for further time in the future, and a high degree of flexibility is exercised

by the project managers to limit the number of uncompleted projects (see Project Experience 2 below for details as to how this might work in practice) . Where projects have not been completed as planned it is commonly related either to the circumstances of the academic (change of employment or teaching allocation), or where a better solution than we were able to offer has been found (this frequently relates to advances in web-based technologies that we are not able to support).

Project Experience 2: Second-Year Field Science

E-learning projects have been used to support teaching in science where the use of face-to-face practical teaching time is being re-organised to maximise learning during periods of practical experience.

A unit of study co-ordinator in Environmental Science originally approached us to create a virtual field trip, to both prepare the students for the reality of their first field trip and act as an aide-de-memoir after it was finished, and to replace the field trip experience for the few students who were unable to attend. This was initially agreed to, and a site was prepared, but the time necessary to create the resources that were needed to replicate the field trip experience was underestimated, and the project wasn't completed.

The following year more project hours were set aside to complete a scaled-down version of the site, which would not aim to replicate the field-trip experience (which, it was now agreed, wasn't really possible), but would act as an aid for students preparing for and revising their experience. On that basis the site was then re-organised and completed by another educational designer, but the lecturer still did not feel it met his needs and again the resources that had been created were not used. Project evaluation established that the revised proposal may not have been fully understood by the educational designer, and that there was a lack of communication between the unit of study co-ordinator and other teaching staff who had not been invited to contribute content.

In the second semester of that year a new team member who had high-level skills in graphic design was assigned to work with the lecturer to improve the usability of the site. He was able to build on the work of the previous team members to improve the site by making greater efforts to include content from other members of the teaching team, and by making the appearance of the site more engaging.

The unit of study co-ordinator is now very satisfied with the outcome of the project. He has a usable site, and was able to report at a training seminar that the extended experience of working with our team, although it had been frustrating for him at times, had changed the way he was teaching the unit of study - he can now expect students to do more

independent work in preparation for their field trip, and he feels they are doing their field work much more efficiently. The site is still being used by students for the first time, so no formal evaluations are yet available.

Stage 3: Evaluation

The semester following the completion of Stage 2 provides the first opportunity for academic staff to evaluate the integration of the new online activities with the student experience of learning. Student focus groups or online surveys are commonly used during this teaching period to collect student perspectives. Common evaluation questions for this stage of the process include:

- a) what were the main two or three things you learned in your course (your main course outcomes)?
- b) What was the relationship between the key outcomes of your course and the e-learning activities you engaged in?
- c) To what extent do you think the e-learning activities helped you understand the main outcomes of your course?
- d) How did you approach your e-learning activities in your course? What did you do and why?

While not exhaustive, evaluation questions like these allow lecturers to evaluate the extent to which students understood the purpose of the course and the extent to which the e-learning activities assisted them to achieve the key learning outcomes.

Kenny (2004) suggests that “When independent professionals such as academics and teachers are involved in an innovative project, the project management process needs to support practices that enable professional growth and learning.” (p. 390). Our extended project process, which goes far beyond a simple response to an expressed need, is embedding the practices Kenny refers to into our project cycle.

Project Experience 3: Third-Year Lab Science

The hands-on nature of laboratory-based science education and the consequent extensive reliance on an experiential pedagogy has meant that staff have not often considered opportunities to develop online resources beyond those required for document delivery. However, the changing nature of science teaching has meant that e-learning is increasingly being seen as a means of providing support for laboratory teaching.

A Biological Sciences lecturer initially approached the e-learning team because his previous teaching model was not sustainable with the increasing student interest in his third-year class in advanced laboratory techniques. He wasn't sure what we might be able to do to help—he

didn't really have a lot of interest in "online" learning but he'd heard that we might be able to help him put some video resources online. He was concerned that the available class-time didn't simply become focused on manual skill development; he wanted students to engage with the theory and underlying principles of what they were learning to do.

During preliminary discussions with the Project Manager he identified two main outcomes for a project: as described in the preliminary paragraph of his application, he wanted students to "actively and independently seek answers to the set tutorial questions for each laboratory experiment". He also wanted some relief from the repetitious task of repeating safety information to every class.

The second of these was dealt with relatively easily: the university had recently activated a streaming solution which would deliver videos - that he could easily create—through the LMS, enabling him to quickly check that students had watched them before the first lab class.

He was granted project hours to create an online quiz-type resource structured in such a way that students would not merely give answers, but would have to prepare for tutorial and lab classes. The Educational Designer devised a 'carrot and stick' approach, in which students would be asked to do a quiz with complex questions before class, then discuss the quiz in the class. Feedback to the answers would only be available to students who attended the face-to-face session. If students hadn't attempted the quiz, the class discussion would not be very meaningful to them.

This online resource has not yet been evaluated as it is presently being offered for the first time. However, the lecturer reports that the process of working with the educational designer and developing the project materials has helped him to think more clearly about what and how the students in the unit were learning.

Project Management Principles Informing Pedagogical Practice

Classic descriptions of project management theory list nine principles of project management or knowledge areas: management of cost, time, scope, quality (for purpose), human resources, communication, procurement and risk, and integration of all of these (Project Management Institute, 2007). Each of these is addressed at Sydney eLearning in a way that meets the needs of the university culture and our goal of enabling the teaching goals of staff and their faculties.

Issues of cost have been dealt with by making the unit of currency in the projects the number of hours allotted to each project rather than a cash amount. The academic, in early discussion with the project manager, nominates the number of hours they will be able to devote to materials preparation and consultation. However, arguably the most difficult job

that project managers face is allotting putative hours to upcoming projects in preparation for the project's consideration by the committee. It is an imperfect science but it is not often a point of complete failure. Sometimes projects are reduced in scope to fit the hours; sometimes other projects don't progress for a variety of reasons and more time becomes available. Most cluster groupings will have at least one ongoing resource project, such as a website of good practice examples, that can expand or contract as necessary across each project cycle.

Procurement is not an issue either, as inputs of staff time, skills and salaries are sustainably funded on an annual basis, not from within faculty resources. The remaining project management principles outlined above, and the necessary integration of these, constitute the basis from which we carry out our management of e-learning projects. Keeping in mind warnings about 'classical' project management principles needing modification for the successful development of learning resources at tertiary institutions (Kenny 2004), and in order to lessen the risk of projects failing by either not being completed or not meeting the goal of improving learning for students, the approach to management of eLearning project development is based on the following principles, all discussed in more detail below:

- Selection and careful planning
- Quality control
- Reporting and other communication
- Control of timelines with flexibility
- Ongoing maintenance

Risk Management Overview

There are two key risks for our e-learning projects: either that the project is not completed in time and thus may never be completed, or that it is completed but does not meet the original aims or desired outcomes. Some factors that could allow this to happen are:

- insufficient material/ content
- insufficient or untimely feedback, resulting in delays in finalising work
- timelines not adhered to
- misunderstanding of team members as to what is required from them
- misunderstanding of team members as to what it is possible to achieve through a project
- unanticipated technical complexity arising during the project

In the project management process outlined here, risk is managed by:

- conceptual planning: as detailed above, several months of discussion takes place between individual academics and e-learning staff before the project is articulated for peer review
- consultation: committee of academic peers (the faculty representatives and cluster director) discuss each project at least twice before approval is given and hours are allotted
- detailed planning, initially by the project manager and later by educational designers, with the academic-in-charge, leading to
 - documentation, including a clear scoping document, giving details of who is expected to do what when, followed by
 - close supervision of educational designers by project manager, time tracking of project and continuing discussion with academic-in-charge
 - flexibility as far as possible within and between cluster teams to meet unexpected contingencies.

Scoping Documentation

The project manager, in conjunction with the academic-in-charge, manages projects day-to-day. Their respective responsibilities are outlined very clearly in a scoping document. The scoping documentation provides deadlines for the identified project milestones (Table 2), and also identifies the level of risk that each milestone carries and the effect on the project if it is not met (Table 3). Such effects may be fatal and the project could fail completely; sometimes it will mean that the completed project will be smaller or incomplete; sometimes it is possible to move deadlines by mutual agreement to meet unforeseen crises. In any event, the scoping documentation means that the responsibilities of the project team (academic-in-charge, other faculty staff, project manager, and other e-learning team members) are all transparently delineated. Also included in the project documentation is a list of things that are **not** part of the project, for example complex programming tasks or hosting of completed resources. Tables 2-4 show extracts from specific sections of a typical scoping document.

Table 2: Sample Project Plan for Project Period 1

Task/Milestone	Time Frame	Brief Description of Task/Milestone	Responsibility
Task 1	End April	PM* and ED** meet to discuss project	AiC*** and PM
Milestone 1	Mid May	All content has been provided to PM & ED	AiC
Milestone 2	Mid May	ED completes prototype of online learning objects/modules	PM
Task 2	End May	AiC, ED & PM meet to discuss prototype	AiC and PM
Milestone 3	Early June	ED refines online learning objects/modules	PM
Task 3	Mid June	PM & AiC meet to review project progress	AiC & PM
Milestone 4	Late June	ED finalizes online learning objects/modules	AiC & PM
Task 4	Late June	ED conducts staff training for ongoing maintenance of online learning objects/modules	AiC & PM

* e-learning project manager ** educational designer *** academic-in-charge

Table 3: Sample Risk Analysis for Project Period 1

Time Frame	Milestone	Responsibility	Potential Risk	Likelihood	Potential Impact	Contingency
Mid May	1. All content provided to ED	AiC***	Some content delayed	Med	High	Project scope may need to be reduced
Late May	2. Dev. of prototype	PM*	Work doesn't meet academic's requirements	Low	Med	Time allowed for research and consultation before dev. of prototype
Early Jun	3. Dev. of online modules	PM	Work doesn't meet academic's requirements	Low	Low	Time allowed for redev and consultation before resources finalized
Late Jun	4. Staff training and handover	PM & AiC not avail.	Staff	Med	Low	Time for training made avail. following week

* e-learning project manager ** educational designer *** academic-in-charge

Table 4: Sample Communication Plan for Project Period 1

Time Frame	Communication Mode	Present	Purpose
Late April	Meeting	AiC***, ED**, PM*	Project planning
Mid May	Meeting	AiC, ED, PM	Project initiation; review milestone 1
Late May	Meeting	AiC, ED, PM	Review milestone 2
Early June	email	From PM to AiC	Confirm progress and review completion date
Late June	Meeting	AiC, ED, PM	Review milestones 3 and 4; Project review and sign-off of development phase

* e-learning project manager ** educational designer *** academic-in-charge

Reporting and Other Communication

The development phase of the project generally results in the creation of an e-learning resource. However, past projects have included strategic e-learning training of a faculty's staff, reports on the use of a specific e-learning solution and an audit of e-learning artefacts that were 'hidden' on faculty servers—that is, they had been created by individual academics for their own teaching purposes, but were not collected, shared, reported on or listed anywhere that the faculty could reasonably easily access. In this phase the reporting process is regular and formal:

- project managers submit a written fortnightly internal report on all cluster projects (read by the e-learning operations manager who is thus monitoring overall project progressions), which is available for later auditing and analysis
- project managers also write a detailed report at the end of each project period, covering all issues that have arisen in the projects, which is used in external reporting

Other documentation:

- letters of agreement and scoping documents formalise agreements about who will do what when - and also what will not be done in this project
- educational designer sign-offs, which record agreement to the approach to be used in the project and lessen the risk of educational designers exceeding their brief.

The sign-offs by educational designers are a recent introduction, and have proved valuable in keeping projects on track. They are created after the initial development-phase discussion with the academic-in-charge and other academic staff in the project team. The project manager and educational designer agree to and sign off on the approach that will be used to implement the project goals in the development and training phases of the project process. One of the difficulties earlier identified by academics in the project process was an uncertainty as to the boundaries within the project team (Scott, Mahoney & Peat, 2007). Without wishing to cement process in what is essentially an uncertain project environment, the educational designer sign-offs and carefully designed scoping documents provide strong guidelines for the development phase of projects.

Control of Timelines with Flexibility

A database with a web interface is used by project managers to ensure that the projects are moving according to the deadlines outlined in the scoping documents. The educational designers and project managers daily enter the time they have spent on any of five phases of a project:

- planning
- development
- training
- reviewing/evaluating
- maintaining

Along with close supervision of the educational designers by the project manager, the database has proved invaluable in providing clear tracking of project progress. As the limiting factor for these projects is usually time, reports generated by the database, when read in association with the scoping document, allow the project manager to be quickly alerted to any projects that are falling behind deadline and provide a basis for initiating discussion with the academic-in-charge (if necessary).

Maintenance

As discussed above, once a project is complete it is handed over in its entirety to the academic-in-charge. The ongoing maintenance of the e-learning activity is then the responsibility of the academic as a normal part of their teaching. Guidance and staff training on the use and maintenance of the resource is usually provided in the planned hours for each project. There is an e-learning helpdesk that operates on every working day of the year, and academics who have worked in the project teams can also be directed there if they have difficulty maintaining their resource. In addition, 10% of project hours can be used for specialist maintenance of artefacts created for former projects if necessary.

Conclusion

We have described an approach to project management that is embedded in the everyday teaching activity of academics in charge of units of study in which e-learning activities take place. The project process described enhances the visibility of the pedagogical underpinnings as well as the academic content of a unit of study.

Recent research has identified national trends in project management processes in Australian universities. McMurray (2001) describes an earlier situation where IT-driven decisions and project management principles overrode the pedagogical considerations and autonomy of academic decision-making processes with disastrous results for students. The need for project management to be carefully aligned with organisational culture is also articulated by Kenny (2004):

The project management process has to be embedded within the organisational planning processes and in tune with the natural rhythms of the organisation. The support of senior management is important and can be demonstrated by the provision of adequate resources based on a thorough project scoping process prior to a decision to proceed. (403).

Our project processes are now embedded into faculty teaching and learning cycles, and the extended period of our project process has become part of the organisational rhythm of the university. The current university-level recognition of e-learning as an important strategic initiative, in association with the acceptance and continued use of this project based approach to the strategic development and implementation of e-learning within faculties, are indeed important contributors to our ability to continue to meet the expressed e-learning needs of academics at this particular research-intensive university.

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