

Implementing effective Learning Designs: An overview of an ALTC Competitive Grants Program project

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Learning Design for the higher education environment is a complex task, especially in light of the increasing diversity of the student body. Learning materials need to be designed to take advantage of different student ability levels, learning approaches & media, and curriculum developed to support a huge variety of outcomes that are often discipline specific. Learning Design is a professional activity for which many of our academic staff is not trained. In the project outlined in this paper we will implement a learning activity planning tool that will provide comprehensive guidance for academics that will assist them in the development of inspiring Learning Design examples and supportive activities. The project team will initially explore the issues to emerge from the implementation of Learning Designs and identify barriers to their widespread adoption and ways of overcoming them. These findings will then underpin the implementation of a learning activity planning tool that addresses these adoption challenges in its design and streamlines the planning process. A tool will then be developed which can be used by academic staff to tailor these exemplary examples to meet the individual lecturer's and/or course co-ordinator's particular requirements, whilst providing them with the underlying pedagogical principals involved in the Learning Design.

Keywords: Learning Design; LAMS; Scaffolding; Research projects; ALTC projects.

Background

The expansion, restructuring and refinancing of the Higher Education sector in recent years has meant that classes are not only larger but quite diversified in terms of student ability, motivation and cultural background (Biggs, 2003). This change has created an atmosphere where some lecturers are rethinking their teaching approaches and are seeking out what is known about facilitating effective learning. This is the challenge this project will address by implementing learning design scaffolds, ie, a learning activity planning tool.

Expert teaching at university level requires mastering a variety of teaching techniques and being able to encourage most students to use the higher cognitive level processes that the higher ability students use spontaneously. Therefore, to be effective, academic staff need to draw upon different strategies, approaches and theories - not just traditional ones. Hence, any planning tool will need to be able to accommodate a variety of approaches to learning, different modes of delivery and a range of key principles of effective teaching in higher education and adult learning. Additionally, academic staff report that their academic disciplines exerted the strongest influence on their course planning (Stark, 2000). This suggests that any learning activity planning tool may need to provide subject-specific advice, and so a generic solution (one size fits all) that cannot be easily modified, is unlikely to be universally successful.

Although academics have always been teachers, a number of researchers point out that it is not always regarded as their core business (Laurillard, 2002; Gibbs, 1996; Knight, 2004; Ramsden, 2003). Biggs' research (2003) demonstrated the first priority for many was to keep up with developments in their content discipline and to contribute to them through research. He observed that developing teaching expertise takes second place in the university environment: a set of priorities dictated as much by institutional structures and reward systems as by individual choice. Therefore a tool that provides an improved teaching and learning result without requiring the academics to fully immerse themselves in another area of study (ie. education) may be very useful in this environment.

Making student learning a high priority at a time of increasing student diversity places much more responsibility on the academics. It also implies that the academic staff must know

something about student learning, and what makes it possible (Laurillard, 2002). In 1996 Gibbs reported that most academic staff were less sophisticated as teachers than as researchers and even the best teachers were often gifted amateurs rather than rigorous professionals with any knowledge of the literature. Without any co-ordinated tool designed to address this issue, quality teaching at the higher education level can still be inconsistent.

Toohy (2002) proposes that exploring new models of learning design is the only realistic way to handle these pressures and maintain current standards. There is an opportunity to bring together the need to rethink higher education provision with what is known about encouraging effective learning so as to produce learning designs which offer greater possibilities than some of the current solutions.

A solution this project offers is the utilization of a learning activity planning tool built using the theoretical principals of Learning Design. The central ideas behind Learning Design represent new possibilities for increasing the quality and variety of teaching and learning within a learning context (Britain, 2004). Learning Design encourages the analysis of the process of designing learning activities by providing a framework for academics. This enables them to reflect in a deeper and more creative way about how they design and structure activities for different students or groups of students. Designs that prove to be effective may then be communicated and shared between teaching staff or retained for re-use on future occasions (Britain, 2004).

It is proposed that generic learning designs could serve as pedagogical frameworks to support academic staff in creating new learning experiences, with the lecturer adapting the learning design, specifying the particular activities and choosing or creating the resources and supports needed to suit his/her students (Bennett, 2004).

Finally, the use of new technologies in universities is growing rapidly with many claims for their increasing impact on the processes and outcomes of teaching and learning. Therefore, as the learning activity planning tool is being designed for widespread usage, it will need to accommodate all these different facets of teaching and learning in the higher education environment and be able to embrace technological integration, in order that it meet the future needs of our increasingly diverse student population.

A way forward – structured guidance

Ramsden (2003) found that academic staff look for support with their teaching for a number of reasons. They may be concerned about their students' performance, they may want some reassurance about their teaching techniques, or they might want to try an innovation. Some academic staff do not know how to start improving their teaching, often overwhelmed by the field's complexity, and they ask for a simple solution that will quickly solve all their difficulties.

Depending on the infrastructure provided by their institution, help may be on hand in the form of professional development staff but as each university tries to do more with less, often the availability of help is limited, if it can be offered at all. Stark's research (2000) found that most university academic staff do not avail themselves of expert assistance when planning courses even if it is readily available and rarely read educational literature. They relied on their own ad hoc observations because they did not find the information available to them about learning and teaching meaningful. As a result, these academics were attempting the complex and challenging task of effective teaching with no training nor were they intending to make any attempt to develop their teaching skills in the short term. This is not an isolated incident and similar findings have been reported elsewhere (Knight, 2004).

This Carrick project has arisen out of this need for alternative methods of support for these academic staff. As an initial step, sharing learning designs, resources and methods used by others have been trialled successfully at a number of universities. Members of our Project Team have worked with two examples of this: The Learning Design Template Project at Queensland University of Technology (Heathcote, 2006) provided academic staff with templates that embedded pedagogical principals, eg. problem-based learning, critical

thinking. The Online Course Templates Project from the University of New South Wales (McAlpine & Allen, 2007) produced templates based on specific learning designs that were developed to support courses. Both these projects were successfully piloted. Additionally, academic staff may also have access to external example designs such as those provided on the “Learning Designs” website at the University of Wollongong (Oliver, Harper, Hedberg, Wills & Agostinho, 2002), the LAMS Community (www.lamscommunity.org) or the Technology-Supported Learning Database developed by Ron Oliver at ECU (<http://aragorn.scca.ecu.edu.au/tsldb/>). However, Goodyear (2005) notes that the resources available to university academic staff for learning design are not of a consistent quality, are difficult to locate in relation to a particular pedagogical framework, and are not constructed in such a way that they capture and distil the practical implications of research-based knowledge and nor do they accommodate the iterative nature of design practice. This project aims to address these gaps by widening the audience for existing learning designs beyond the original, specific institutions and disciplines by developing a simple to use and flexible learning activity planning tool that guides teaching staff through the learning design process.

Research Questions

The following questions will be addressed by this study:

- What learning designs can be readily adopted by particular disciplines as templates for best practice?
- What pedagogical issues emerge from the implementation of learning designs in particular contexts?
- How can identified barriers to academics’ adoption, adaptation and reuse of learning designs be overcome?
- How can the adoption of effective learning designs be facilitated by the use of supports and scaffolds, such as, a learning activity planning tool?

Project Outcomes

- A range of courses and units across several disciplines that have adopted pedagogically sound learning designs from participation in the project.
- Improved student learning outcomes by introducing a range of learning designs that promote best practice.
- A community of educational developers and academic staff who are participants in the project and are able to engage with additional staff in their own and other universities to disseminate the project outcomes.
- A highly scaffolded but flexible learning activity planning tool that helps academic staff understand the rationale for using exemplar learning designs and guides practitioners through learning design options.
- 20 exemplar learning designs and guides.

Methodology

The project will employ a design-based research methodology (Reeves, Herrington & Oliver, 2005) which involves a flexible, iterative process as follows:

1. Analysis of current learning design research literature determining needs and opportunities for application of learning designs in the participating universities, by researchers, educational developers and teaching staff.
2. Develop an initial Phase 1 design solution to identified needs for learning design development with a planner and guides to using existing learning designs.
3. Implement Phase 1 planning tool and guides in participating universities.
4. Evaluate outcomes for staff and students from Phase 1 implementation.

5. Review of Phase 1 project outcomes by the whole team. Identify research aims and further design and development for Phase 2. Revision of the theoretical framework.
6. Disseminate outcomes through workshops at other universities. Upload to a repository for interested staff to implement the learning designs and planner in collaboration with the project team during Phase 2, to enable wider adoption during this phase.
7. Redesign planning tool and guides to using learning designs for Phase 2 based on critical needs from Phase 1 evaluation.
8. Implement Phase 2 in the participating universities and provide information and online support for the wider group of interested adopters.
9. Evaluate outcomes for staff and students from Phase 2 implementation.
10. Review of the project outcomes. Further dissemination through workshops offered at a range of universities, conference papers, journal articles and promotion of software tools and guides (available through open source software and creative commons licences) via new and existing repositories.

Methods will triangulate both quantitative and qualitative data and span 7 universities. A literature review will be conducted to form a sound theoretical basis for the research. A detailed mapping and analysis of current models will be undertaken and workshops will be run with an inter-disciplinary expert working panel to establish best practice.

Approach

Project funding will be used to support researchers in establishing a sound theoretical underpinning for the project, whilst practitioners will be supported in their endeavours to design, review and disseminate project outcomes. Some funding will also be allocated for technical support for the configuration of relevant online environments. The project does not anticipate funding being required for new software development (as the software will build on existing open source components such as LAMS V2 for integration with common learning management systems, eg. Blackboard, WebCT, Moodle, Sakai, etc.).

The project will combine face-to-face workshops for training and sharing of experiences with an online community incorporating discussion forums and utilise a number of existing repositories (eg. Carrick Exchange, Technology-Supported Learning Database and LAMS Community).

Activities and Deliverables

- Conduct a series of workshops to promote the adoption of best practice and introduce a Learning Design approach, and sharing of experiences among practitioners.
- Foster the use of an online community (including promotion of discussion forums and repositories of learning designs) to support the project which will be available to the wider community.
- Develop a theoretical framework which identifies the environments most conducive to the adoption of pedagogically sound learning designs.
- Implement and refine a learning activity planning tool that guides practitioners through the learning design planning process.
- Share the learning designs produced through repositories and other communities where relevant.
- Produce research articles and conference presentations at a national and international level.

Dissemination Strategy

As the project involves academic and educational development staff at 7 universities, the potential for dissemination is high among the participating universities. By offering workshops at additional universities at the end of Phase 1, combined with online resources, the project team will enable staff at other universities to adopt the approach using sound learning designs, the prototype planning tool and guides. An ongoing liaison with the project team will be maintained online to facilitate adoption. As the project develops there will be more information for potential adopters. In this way, the project team can progressively build a community of users, which will continue after the project is complete.

Methods for effective professional development and mentoring will be developed during the project to suit discipline and institutional contexts regarding sharing and reuse. The Carrick Institute approach to dissemination will be adopted using "consultation, collaboration and support for ongoing dissemination both during the project and after the project is completed" (Carrick Institute, 2006, p. 1).

All project deliverables will be made freely and openly available as either open source software or open content (using a Creative Commons license). The project will use existing dissemination vehicles such as the Carrick Exchange, the LAMS Community and Newsletter, ECU's Technology-Supported Learning Database and national and international conferences.

Conclusion

Related Learning Design projects already completed by members of the project team have demonstrated that this approach has the potential to develop good learning and teaching practice so that it may be shared, re-used and disseminated throughout the sector. The learning activity planning tool developed in this project will provide comprehensive guidance that enables teaching staff to access pedagogical approaches that can engage the increasing diversity of the student body. There is potential for the outcomes of this project to be applied to a wide range of discipline areas to promote and support strategic change in higher education institutions for the enhancement of learning and teaching.

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Leanne is currently working with MELCOE (Macquarie University's E-Learning Centre Of Excellence) in Sydney, Australia. She is managing a number of research projects including the planner project described in this presentation that will provide a scaffold to help new university lecturers and teachers develop effective Learning Designs. Until April 2007, Leanne was working with the Australian Centre for Educational Studies at Sydney's Macquarie University. Prior to that Leanne spent a number of years working as a teacher in both primary and secondary schools and as Technology Trainer for the Department of Education's Training & Development Directorate.

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