The Final Chapter: Implementing Effective Learning Designs

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This ALTC-sponsored project demonstrated that generic learning designs can serve as pedagogical frameworks to support academic staff in creating new learning experiences. It explored the issues to emerge from the implementation of learning designs and identified barriers to their widespread adoption and ways of overcoming them. These findings underpin the implementation of learning design templates which address these adoption challenges in their design and streamlines the planning process. The templates can be used by academic staff to tailor 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; generic templates; Pedagogical Planner

Overview of the project

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 and 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 are not trained. In this project we implemented scaffolded learning design templates that provide comprehensive guidance for academics and which assist them in the development of inspiring learning design examples and supportive activities.

This project also explored the issues to emerge from the implementation of learning designs, identified barriers to their widespread adoption and ways of overcoming them. This expanded the previous work in learning design of a number of our Project Team members (Cameron, 2006, 2007; Dalziel, 2003, 2007; Heathcote, 2006; McAlpine & Allen, 2007; Dennis, 2007; Philip, 2007, Philip & Nicholls, 2007; Walker & Masterman, 2006). These findings underpinned the implementation of the scaffolded templates that addressed these adoption challenges in their design and streamlines the planning process. A number of excellent learning designs have been developed to provide teaching staff with an opportunity to share examples of good design practice. This project developed a framework 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.

Project outcomes

A range of courses and units across several disciplines that have adopted pedagogically sound learning designs from participation in the project.

We have completed the implementation of learning design templates and accompanying advice with a range of academics and students in a diverse range of disciplines. Their feedback was instrumental in how the templates and advice were configured in the planner tool. This included iterative development of the best formats/structures for providing pedagogical advice to teachers on the adoption and adaptation of novel learning designs (both within the templates themselves, and in the accompanying Planner advice sections).

Improved student learning outcomes by introducing a range of learning designs that promote best practice.

While most of the implementation in the project was with lecturers (in assisting them to consider novel learning designs for future use), some examples of implementation with students were conducted, such as the iterative use of designs with two cohorts of Education Masters students (see Evaluation for details). Student feedback indicated that the wide range of teaching techniques supported by the templates, particularly those that involve collaborative learning, were seen as a strength of the project.

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 summary of meetings, conference presentations and workshops is provided in Figure 1 & 2 (see below). Throughout the life of the project, team members made 42 presentations to approximately 2,445 people. Additionally eight hands-on workshops were conducted which were attended by 94 delegates.

An initial successful presentation and workshop at a conference in Cadiz, Spain in July 2008 was followed up by an International Learning Design conference at Macquarie University in December 2008, followed by a three day meeting in December at The University of Sydney which involved discussions about a variety of related approaches to the problems being addressed by this project. The learning design research community has continued to meet at academic conferences on Learning Design hosted by members of the project, such as at the Open University in July 2009, Sydney in December 2009, and most recently in July, 2010 at Oxford University in the UK, further consolidating the strong affiliations with Oxford University, London Knowledge Lab (University of London), and the UK Open University. The number of interested parties continues to grow, most recently with a delegation from Greece and Cyprus.

We also had a number of institutions from Singapore (eg, National University of Singapore, Nanyang Technology University) that were interested enough to request workshops and in May 2010, one of the project team travelled to Malaysia to present to two universities there.

Locally we have had strong interest from schools in the NSW Department of Education, ACT Department of Education, and the Department of Education in Northern Territory.

The community also continues to grow by word of mouth and a video presentation was prepared so that those who could be present at a face-to-face presentation or workshop can learn about the Planner.

Any enquiries of this nature are now referred to: http://wiki.lamsfoundation.org/display/planner/Activity+Planner. This page includes an eight minute video that outlines many of the features of the current Planner. This webpage has continued to attract interest both locally and internationally and it has been a useful means of explaining the Planner.

Members of the project team continue to make presentations, run workshops and build an active community of educational developers, academic staff and interested others both within Australia and internationally – this is expected to continue beyond the life of the ALTC supported project.

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.

Throughout the life of the project, members of the project team have gradually refined a style guide and layout guidelines for a basic structure for the creation of scaffolded exemplar learning design templates (see Appendix 3). These have been implemented in the LAMS Activity Planner Tool to illustrate their utility at our workshops but the style guide and layout guidelines have not been designed exclusively for any particular piece of software. As can be seen in the exemplar examples, the layout of the learning design can be described adequately in text.

Style guide and standardized layout guidelines

The following descriptions are the result of an iterative process that determined the most effective form of documentation at each stage of the learning design process.

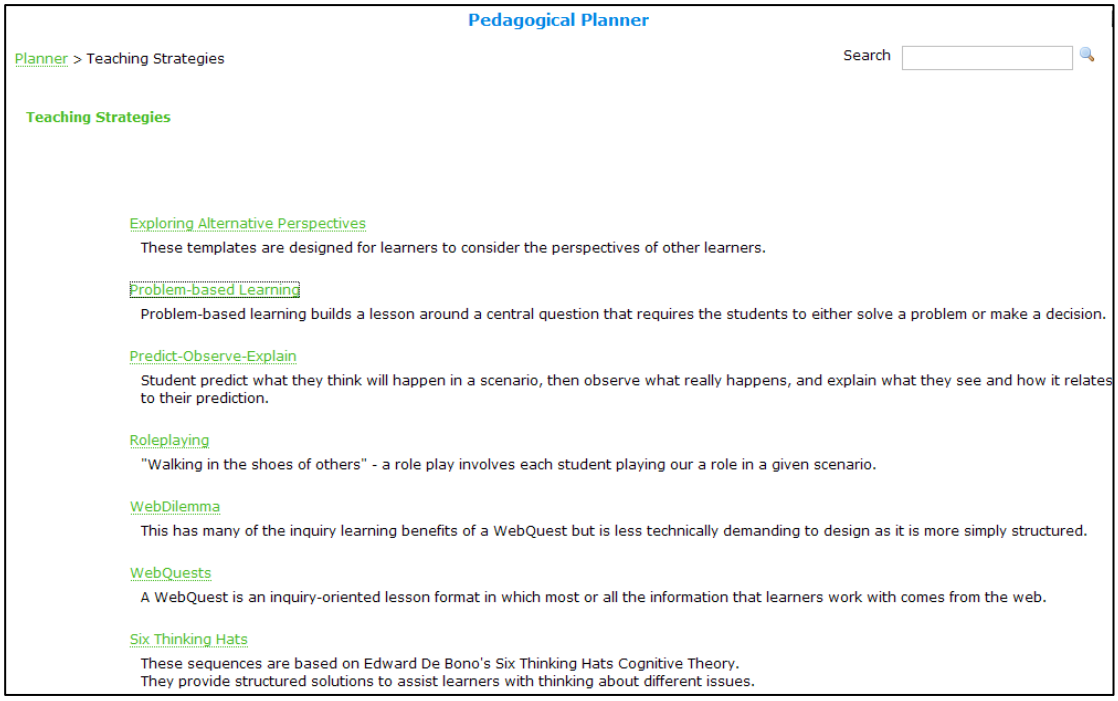

Figure 1: Level 1- Entry Screen

At the introductory level, all that is required is a very brief description of the learning design. This one or two sentence description should encapsulate the essence of the design in simple, non-jargonistic language that would be accessible to the average lecturer.

E.g. Problem-based Learning
Problem-based learning builds a lesson around a central question that requires the students to either solve a problem or make a decision.

Level 2: Explanation Screen

The next level requires two or three paragraphs outlining:

- A description of what the learning design is, in natural language;
- Under what circumstances the learning design is useful;
- How it can be used; and
- One or two easily accessed references for further reading.

It should also include a diagram or flowchart of the design that clearly demonstrates the order of activities and the lesson flow. This is then followed by a link to a populated example. A brief description of the sequence should be included.

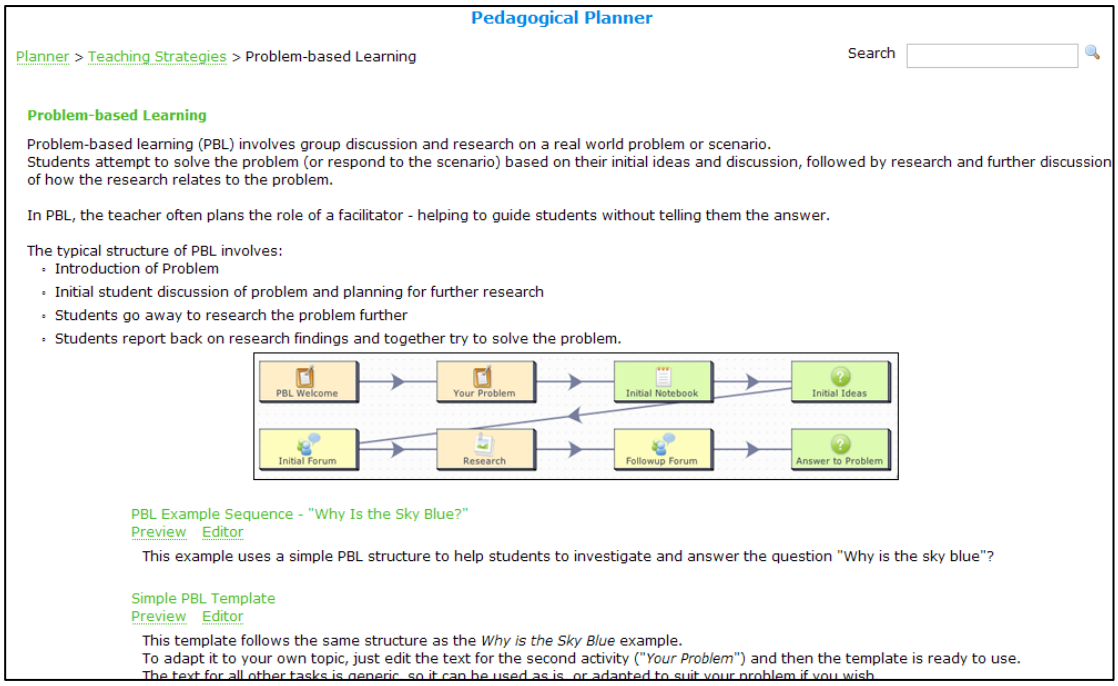

Figure 2: Level 2 – Explanation Screen

A generic template link is then provided. It has been stripped of all content so that new material could be cut and pasted into it.

There may then be a further link to other variations of the learning design. An additional section can be added with other generic examples if relevant. eg If the main generic example was for a two role 'role play', an example of a four role 'role play' could be provided in the additional section as an example of a variant of the main example.

Level 3: The worked example (learning design with content)

From testing, it became very clear that lecturers had difficulty working through a learning design if it did not include some meaningful content. The content of the example sequence should be based on a topic of broad general interest so the learning design is easily accessible to a lecturer from outside the discipline area. It should represent a 'typical' application of the learning design.

Level 4: Generic template (learning design without content)

These generic examples have been stripped of all content that makes them specific to one particular example. The basic structure of the learning design remains, as does any text is not required to be specific to any topic.

Within the generic example brief instructions are provided about the nature of the content to be inserted. This information is located precisely where the new content is to be inserted and the instructions are clearly notated that they must be removed. Any text to be removed is provided in square brackets [ ] and highlighted in yellow.

Further editing advice can be offered contextually at the point of text entry in a pop-up window.

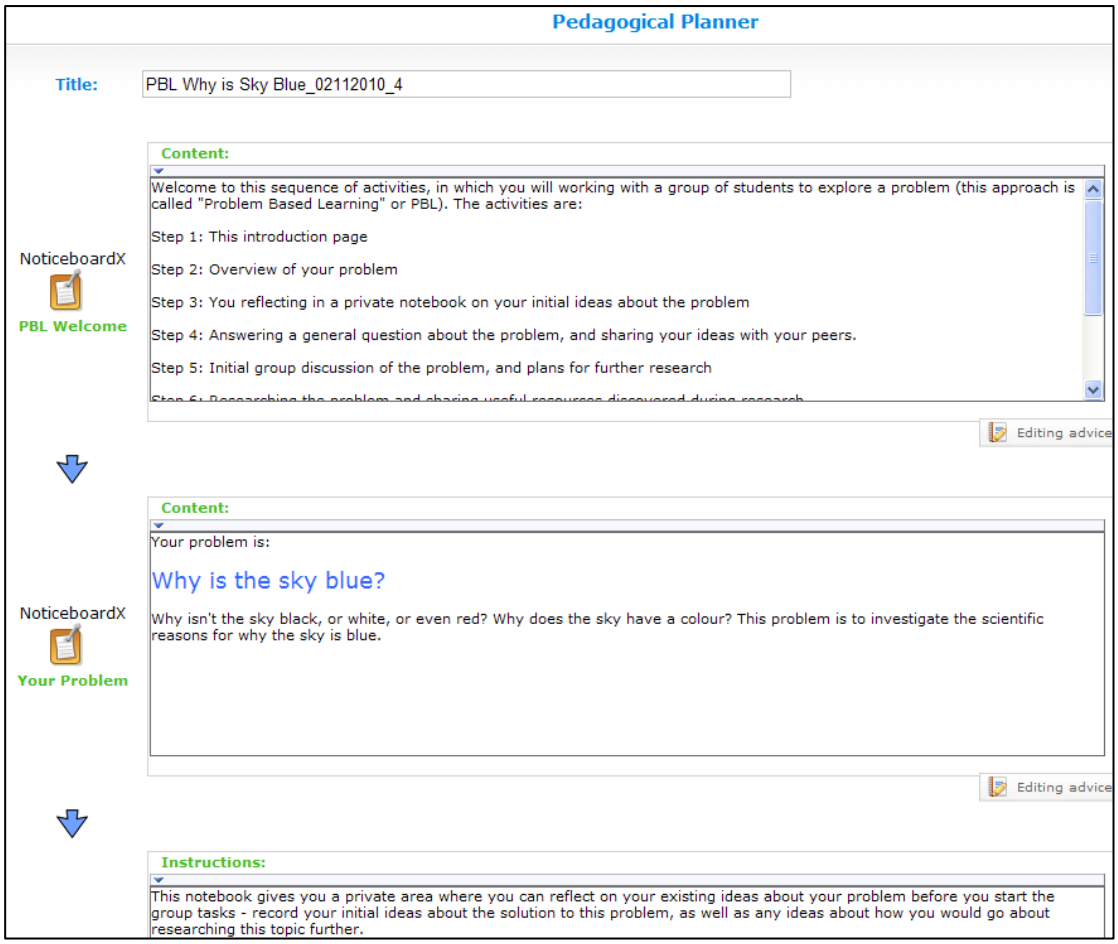

Figure 3: Level 3 – The worked example (learning design with content)

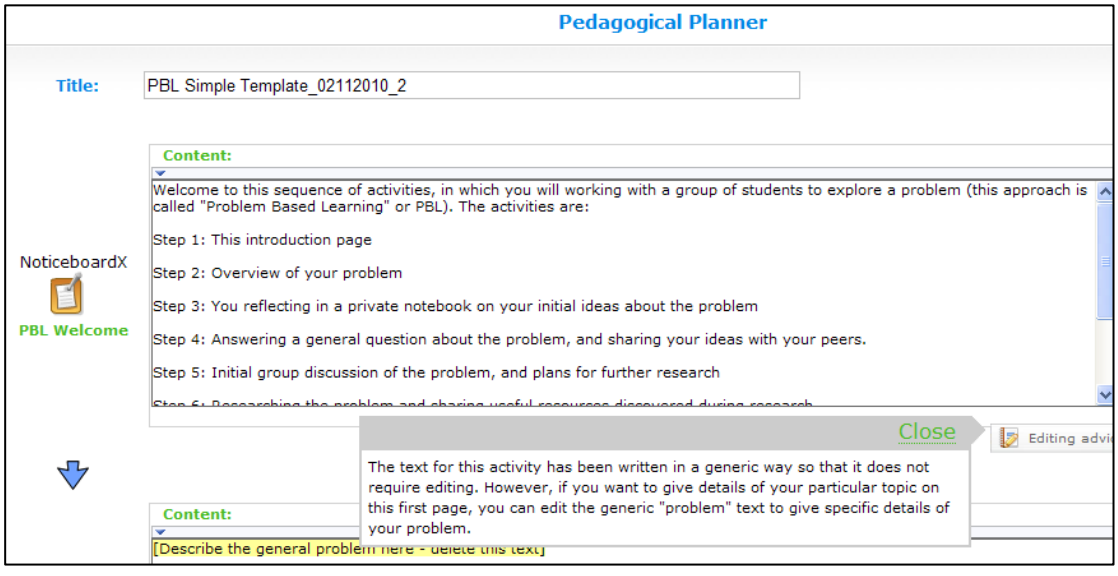

Figure 4: Level 4 – Generic template (learning design without content)

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

Interactive presentations, demonstrations and workshops have been made nationally and internationally. The Planner has also featured in the keynote address of three international conferences. The response at these workshops continues to be very positive.

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

In addition to a project webpage and an online discussion forum established for the project team, an open community to discuss the concepts, project and its deliverables was established in a number of Cloudscapes at the Open University (UK) Cloudworks site (http://cloudworks.open.ac.uk/). Ongoing general discussion of Learning Design template issues also occurred within the LAMS Community during the life of the project.

Develop a theoretical framework which identifies the environments most conducive to the adoption of pedagogically sound learning designs

Throughout the life of the project, members of the project team have researched the literature, reflected on and trialled modifications as the templates have been put into practice. Members of the project team were invited to a two day summit in September 2010 as the culmination of this work. Many of the publications from during the life of the project reflect the evolving theoretical framework for creation and adoption of learning designs.

Produce research articles and conference presentations at a national and international level

The team produced 19 publications and 42 conference presentations. The project team continue to present about the project and national and international publications continue to grow (see project webpage for list as of October 2010 – http://implementinglearningdesigns.lamsfoundation.org).

20 exemplar learning designs and guides.

During the lifetime of the project, the team has completed 30 designs. The style, layout and design of the scaffolded templates has evolved over the duration of the project to the standardized framework described in Appendix 3.

This is the part of the project that concentrated on pedagogical design, but team members who have long experience in learning design also wanted it recognised that the utilising of the LAMS tool has progressed the flexibility of the idea of learning design significantly. One participant can remember a decade ago having to work with a web designer for every page to go online whereas this project enables an individual lecturer to play around with a design and repurpose it with relative ease. Another team member's view was that it is an 'ugly truth' that software design in this area is a very difficult thing. He felt that LAMS was 'right enough' for people to work with and that at the same time work needed to be progressed in integrating pedagogical planning into other platforms such as Moodle.

The Activity Planner is 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. There is a short introduction to the planner that can be viewed at:
http://wiki.lamsfoundation.org/display/planner/Activity+Planner

Those with a LAMS community login can go to the activity planner sandbox to see the designs a http://planner.lamscommunity.org/lams/

Those interviewed who participated in the workshops where templates were discussed and developed were especially enthusiastic about the way in which they were engaged in the design process. What is also of interest is that participants who were engaged in the project to work on the development of their particular discipline-'Predict-Observe-Explain' for the scientists, or 'Problem-based Learning' for the engineers-were inspired to try other approaches such as 'Role play' or a 'WebQuest' because they were playing with the planner. Participants also suggested that the use of the planner to support activities that were face-to-face, that is, not linked with online activities such as LAMS, would be a fruitful area for further development of the concept of the pedagogical planner.

Taken from the Activity Planner page on Teaching Strategies, the section below gives a flavour of the way in which teachers are invited to think about the activities that they construct. The learner-centric language here is noted.

- **Exploring Alternative Perspectives**

These templates are designed for learners to consider the perspectives of other learners.

- **Problem-based Learning**

Problem-based learning builds a lesson around a central question that requires the students to either solve a problem or make a decision.
Predict-Observe-Explain
Student predict what they think will happen in a scenario, then observe what really happens, and explain what they see and how it relates to their prediction.

- **Roleplaying**

"Walking in the shoes of others" - a role play involves each student playing our a role in a given scenario.

- **WebDilemma**

This has many of the inquiry learning benefits of a WebQuest but is less technically demanding to design as it is more simply structured.

- **WebQuests**

A WebQuest is an inquiry-oriented lesson format in which most or all the information that learners work with comes from the web.

- **Six Thinking Hats**

These sequences are based on Edward De Bono's Six Thinking Hats Cognitive Theory.

They provide structured solutions to assist learners with thinking about different issues.

Lessons learnt that may assist other institutions

It is in the character of people who are early adopters of new approaches that they are often solitary voices, however sometimes change also involves mobilizing the cooperation of colleagues, not the least because of issues of equity between students. This is not just about learning design, but more generally about change in practice and how this is supported within institutional structures. Two examples were recounted by project participants:

One participant was introducing some problem-based learning activities to her unit. This involved the careful training of tutors on how to guide and facilitate rather than offer mini-lectures or give solutions to problems. It also involved getting the agreement of colleagues not to offer the old approach (questions and answers) to students in the alternative cohort. This lecturer was acutely aware that the learning

culture of the students valued tutors who could offer solutions and viewed as incompetent the tutors who were committed to making students work out alternative paths to solutions. This lecturer told the students that they were introducing this new (Problem-based Learning) approach because it was useful and it would enhance their professional prospects, however there was resistance. Also, despite the cooperation of her Director of Teaching and having worked with colleagues, the approach was not maintained. This lecturer felt that her tutors had compromised their own reputations within the discipline to support the new pedagogy and she felt let down by her colleagues.

The second example involves a lecturer again working on alternative participatory models of learning in a unit of work that she redesigned around activities that have become part of the planner. She had invested a significant amount of time in redesign, worked closely with educational developers and had trained tutors. When she passed this unit on she reported that all of this development, including the online activities, was discarded and that the student experience 'went back a hundred years'.

The issues here are, as mentioned earlier in this report, around the limits of what the community of practice can achieve. Where do institutions step in to help the sustainability? What kinds of support and supervision structures can best assist innovators to experiment in the first place and then to incorporate what they have learnt into their wider disciplinary communities? As one interview put it 'this is the million dollar question'.

Conclusion

This project has explored what one participant described as the 'granularity' of the field of learning design through the prism of the pedagogical planner. As is evident from the frank reflections of all of the participants in this evaluation, this is a complex and sometimes difficult field to be engaged in. By concentrating on concrete deliverables such as the examples in the Activity Planner the project has provided a substantive beginning to a practical exploration of sound pedagogy across a variety of disciplines. There remains considerable work to be done in expanding this conversation so that individual practitioners receive the support that they need to develop and refine this work.

As already noted it is clear that the philosophy shaping this project is to focus on individual practitioners and particular activities. The work on fostering a community of practice and especially the mobilisation of the LAMS community of practice is a positive way of learning from the experience of many. However at some stage it will be necessary if only for strategic purposes to think about how such approaches will be linked to the strategic planning environments that are now shaping the learning and teaching environments of universities in both Australia and internationally. Some participants in this project were constrained in their own implementation of the project because they needed to work on a program-wide scale. They also saw the need for a way of making the very useful planning available in the Activity planner something that could be used to describe and record face-to-face activities.

It was recognised throughout the project that LAMS is not the only platform through which the activities planned will operate and it is clear that the domain of the software is something that will continue to be explored and built upon. Finally there is scope for the explorations to be made of how the practices encouraged in the planner relate to student outcomes. It will be essential for this work to be done so that there is substantive evidence to drive the adoption of the strategies produced from engagement in this project.

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