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Sharing Learning Designs That Work.

Leanne Cameron
Macquarie University, leanne.cameron@mq.edu.au

Chris Campbell
University of Notre Dame Australia, ccampbell1@nd.edu.au

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Leanne Cameron
Macquarie E-Learning Centre Of Excellence
Macquarie University
Australia
Leanne.cameron@mq.edu.au

Chris Campbell
School of Education
The University of Notre Dame Australia, Sydney Campus
Australia
ccampbell1@nd.edu.au

Abstract: Sharing learning designs that have been previously trialled and proven successful is a means of disseminating innovation and best teaching practice whilst at the same time conserving teacher time and effort. Generic learning designs provide a lesson scaffold that can introduce innovative teaching strategies to lecturers without requiring them to become experts in learning design or theory. The LAMS Activity Planner is a tool that uses generic learning designs to provide comprehensive guidance for academics that will assist them in the development of inspiring learning design examples and supportive activities. In this paper, two learning design examples, WebQuests and Web Dilemma, illustrate how generic learning designs can be used to share and reuse good teaching practice.

Keywords: sharing, learning design, reuse, templates, modeling, LAMS, WebQuests, web dilemmas

Introduction

If educators are encouraged to share and reuse learning designs, they might look at their own teaching differently, question their existing teaching methods, search out reasons for the effects of their teaching on their students' learning and apply what they find in different assessment and instructional methods. Reusing learning designs of another experienced and/or successful teacher is a means of sharing innovation and best practice, whilst at the same time conserving resources. It seems reasonable, therefore, to suggest that the sharing and reuse of good teaching methods and exemplary learning designs should be encouraged and promoted. In this paper, we suggest that a planning tool can provide educators with access to a range of learning designs that have a high impact on their students.

Background

The concept of creating a learning design is familiar to most classroom teachers: it is what they do each time they prepare for a class. Lesson plans or learning designs are patterns for action: a sequence of activities, incorporating resources and tasks. Learning design patterns should embody "educational values and vision" (Goodyear, 2005, p.82). These patterns provide a reproducible and sharable template that can be represented in a variety of ways: graphically, textually, or in codable, machine-readable form.

Most university lecturers do not avail themselves of expert assistance when designing learning, even if it is readily available, and they rarely read educational literature (Stark, 2000, Knight, 2004). Instead lecturers rely on their own ad hoc observations because the information that was made available to them about learning and teaching in the past was not meaningful. As a result, these lecturers attempt the complex and challenging task of effective teaching with no training, nor do they intend to develop their teaching skills in the short term.

If much of the creativity and power in the lesson lies in the learning design as some suggest (Toohey, 2002), then planner tools may be of some help to these lecturers. By documenting the ideas which become the focus of study, the learning activities and the means by which student achievement will be assessed, learning designs can

be shared. (Of course the way in which the curriculum is brought to life is equally important, but the power of good teacher-student interactions is multiplied many times by good learning design.)

Heathcote (2006) suggests an ongoing obstacle to the widespread adoption of effective and engaging learning design is the degree of pedagogical understanding required by a lecturer to make the most of the available resources. There is a concern that before any learning activities are designed, lecturers must, tacitly or explicitly, know the principles of learning and how students learn (Ally, 2004). This is especially true for online learning, where the lecturer and student are separated. The development of effective learning designs should be based on proven and sound learning theories but unfortunately some lecturers have not obtained that knowledge as part of their preparation to teach in the higher education sector. A planning tool can offer a very practical approach to learning design for lecturers who appreciate the potential significance of their teaching role but do not have a strong educational background and are at a loss as to where to start.

Expert teaching at university level now requires mastering a variety of teaching techniques and being able to encourage most students to use the higher cognitive level processes that the more academic students use spontaneously (Biggs, 2003). Therefore, to be effective, lecturers need to draw upon different research, strategies, approaches and theories - not just traditional ones. Hence, these new planning tools 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.

Sharing and Reuse

The benefits of sharing and reusing learning designs have been well documented (Philip & Cameron, 2008). Sharing and reuse can conserve time and effort in creating learning designs by:

- Providing exposure to models of best practice;
- Providing scaffolding and mentoring for new teachers;
- Becoming a source of inspiration to even experienced teachers;
- Facilitating collaborative review, reflection and evaluation of learning designs;
- Allowing learning designs to be meaningfully archived and catalogued; and
- Facilitating communities and professional and student networks.

Those investigating learning designs are becoming more concerned with the value of the underlying learning design of good practice. Boyle (2006) suggests that in terms of sharing, it is the scaffold, the "pedagogical pattern", that potentially provides more opportunities for reuse than the content of the learning design itself. He is particularly interested in the pedagogical commentary which would ideally accompany a learning design, providing a contextualized rationale for the design of the resource.

Finally, the use of new technologies in universities is growing rapidly with many claims for its increasing impact on the processes and outcomes of teaching and learning. Therefore, any planning tool that is being designed for widespread usage will need to accommodate all the different facets of teaching and learning in the higher education environment and be able to embrace technological integration.

Using a Generic Template Approach

A generic template is a learning design pattern that is commonly derived by removing the subject content from a successful learning activity and distilling the activity down to its integral pedagogical parts. It represents the underlying structure so that content and resources can be added to customise the template.

Advantages of Generic Learning Designs

Generic learning designs facilitate rich learning experiences based around an activity approach that learning design encourages, over the more instructivist approach afforded by many existing learning management systems. They are particularly useful in the initial phase of learning design to trigger thinking about new approaches, activities and strategies (Bennett, Lockyer, & Agostinho, 2004). A generic learning design can improve instruction design efficiency, as lecturers can apply structure decisions across multiple designs (Schneider, 2005).

Limitations

Generic learning designs can be difficult to interpret as a stand alone resource (Bennett, Lockyer, & Agostinho, 2004) and, it has not yet been determined how efficient modifying generic templates is. Additionally, if a particular generic design is over-used with the same students, they will become bored with the sameness of their lesson designs (Sneider, 2005), which will in turn promote dissatisfaction in creative teachers.

The LAMS Activity Planner

With this in mind, the LAMS Activity Planner was developed to provide comprehensive guidance to university teaching staff so that they might have access to pedagogical approaches that can engage the increasing diversity of the student body. The tool can assist them in the development of inspiring learning design examples and supportive activities by streamlining the lesson planning process. Using the generic templates provided, academic staff can tailor these exemplary examples to meet their own individual requirements, whilst providing them with the underlying pedagogical principals involved in the learning design.

Documenting Learning Designs

A number of teaching strategies have been highlighted in the literature as representing good practice in teaching and learning. It is suggested that lecturers adopt a variety of pedagogical approaches and they should be able to explicitly acknowledge any discipline specific skills; encourage higher order thinking; practice reflection (both students and staff) and adopt student-centred teaching methods. An explanation and LAMS Activity Tool example of two of these approaches follow.

Example 1: WebQuests

A WebQuest is as "an inquiry-oriented activity in which most or all of the information that learners interact with comes from resources on the internet" (Dodge, 1995, p. 1). WebQuests are designed to use students' time well, to focus on using information rather than looking for it, and to support student thinking at the levels of analysis, synthesis and evaluation (Dodge, 2001). They are designed to be student centred and they use internet resources to encourage a richer student learning experience and a higher-order use of technology (MacGregor & Lou, 2004). However, there are many activities called "WebQuests" that are merely online comprehension or fact-finding exercises. These latter activities invite copy and paste responses rather than the higher-order thinking outcomes and deep knowledge seeking for which WebQuests have become known. Ikpeze and Boyd (2007) conducted a study on literacy through the use of WebQuests and they report that WebQuests are a natural way to teach both literacy and technology skills while immersing the students in authentic problem solving

There is a particular structure that is synonymous with a WebQuest that continues to evolve. It generally involves the following steps:

The Question → Introduction → Task → Process → Evaluation → Conclusion → Teacher Section (optional)

It begins with an essential QUESTION that encourages students to acquire background knowledge to construct meaning on a complex topic. The INTRODUCTION explains clearly and concisely what the WebQuest is about. The intention of the Introduction is to pique the students' interest and motivate them to undertake the Quest set out for them The TASK relates directly to the Introduction and describes and explains precisely what students have to do with the information they find. The Task should go beyond retelling and engage the students in problem solving, creating, designing and making judgements (Dodge, 2001). In the PROCESS section, the teacher explains exactly what the students are required to do and when. It is here the students are directed to specific links of internet resources they are to examine at each point. The links included should be readable and interesting to the students, up-to-date and accurate, and ideally, come from sources the students would not normally encounter (Dodge, 2001). It is in this section roles are commonly introduced. Separate responsibilities are created by having students read different web pages or by having them read the same webpages from differing perspectives. You can also divide the production responsibilities in ways that parallel production careers (eg. scriptwriter, graphic artist, or producer).

Though having teams and/or roles for students to play is not a critical attribute of a WebQuest, practical considerations lead to group work being more common than not. It is a highly effective way to ensure all students in a group contribute (March, 2000). The trap to avoid is creating separate roles that do not result in information consolidation as the end goal. Working in a group encourages students to teach, debate, and debug each other's conceptualisations (Dodge, 2001) and it gives them an opportunity to test ideas in an authentic, real world context (March, 2000). An EVALUATION rubric is commonly included to ensure students are fully aware on what basis they will be assessed. A WebQuest is usually completed with a CONCLUSION that challenges the students to act upon the knowledge they have gained. Additionally some WebQuests include a Teachers' Section that provides curriculum and implementation notes (Halat, 2008).

Figure 1 illustrates how the WebQuest structure has been converted into a generic template in the LAMS Activity Planner. To design a WebQuest for their own students, academics are prompted to include their personalised content into a pre-designed WebQuest format. Each step is carefully scaffolded to ensure the lecturer is clear what information is required. In this way, the LAMS Activity Planner tool enables all lecturers access to this effective and successful teaching strategy.
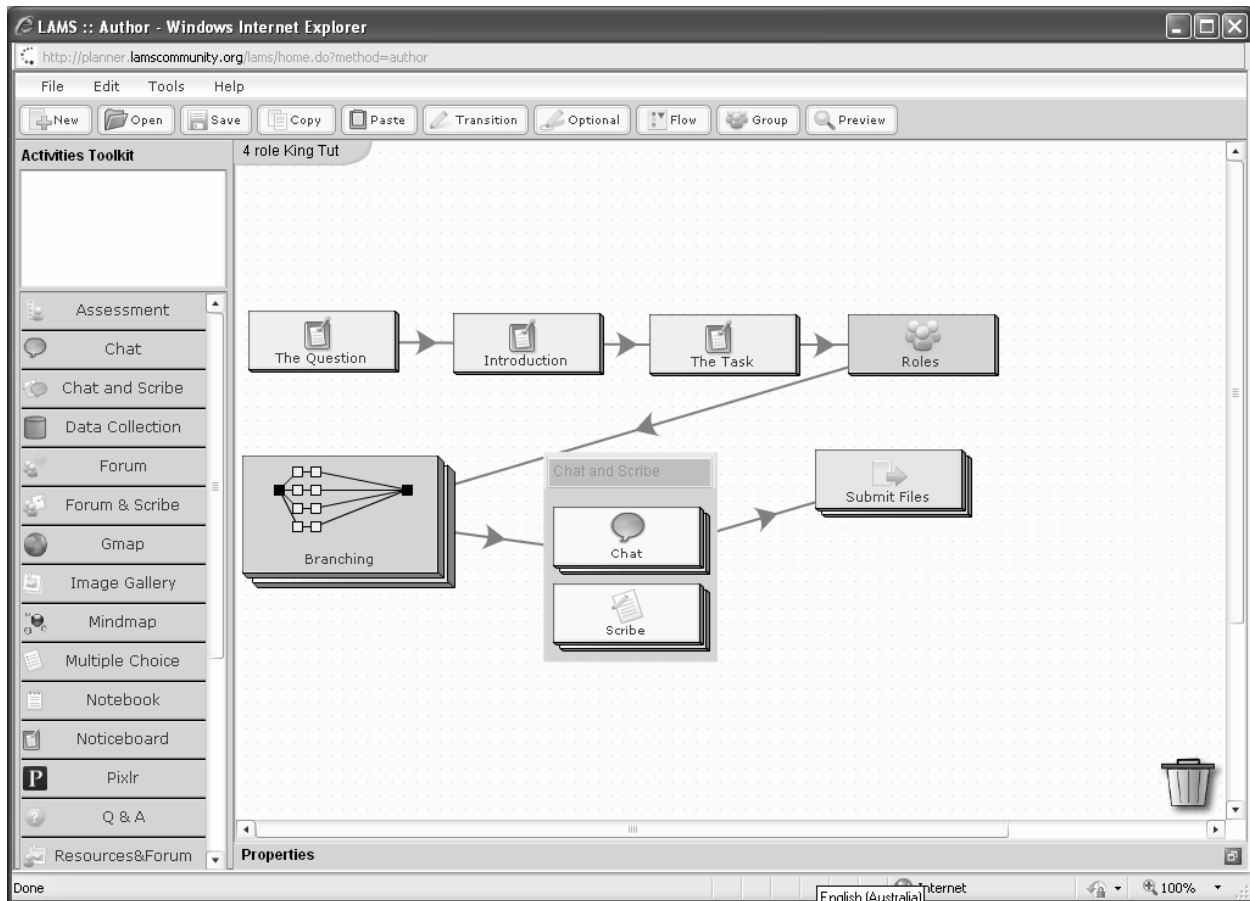

Figure 1: A generic example of a WebQuest

Example 2: WebDilemmas

The WebDilemma draws on the same pedagogical theory that underpins the WebQuest but provides an alternative to be used when time is tight, or a teacher wished students to come out of their inquiry with an informed opinion on a specific topic. As is the case with WebQuests, the WebDilemma aims to have students transform the information they locate, using the inquiry learning process but they narrow the student focus. WebDilemmas are not about dramatically changing the approach to teaching; they take well-respected educational theories and apply them to the problem of using the internet to promote intellectual quality in the classroom (Parkes, 2005).

WebDilemmas are a simple, but effective lesson format that encourages students to inquire by themselves studying the links provided, reach a position citing evidence for their position, and communicate their views. The key to a successful WebDilemma is the question that is asked. Ideally the question should be based on a real world controversy that has persuasive arguments on both sides. WebDilemmas work best with problems that are yet to be solved, or have no ultimate solution. The question should start with words such as "does", "should", "would', "could", "is", "are", in order to ensure students take a stand (Parkes, 2005).

Designed to encourage higher order thinking and high level student engagement, a WebDilemma is typically, a single web page that:

- Presents a real-world problem that has significance beyond the classroom in the form of a YES/NO question;
- Presents knowledge as being problematic by providing three links to websites that offer perspectives supporting both sides of the dilemma (the affirmative and negative cases). Keeping the number of resources down means that students will have more chance to study them in depth, rather than read lots of sources superficially.
- Incorporates Lyman's (1981) "Think, Pair, Share strategy" to encourage students to THINK (by themselves after studying the internet resources provided), PAIR (with a partner to defend their position) and SHARE with the larger class group their consensus (or otherwise) (Parkes, 2005).

Figure 2 illustrates how the WebDilemma structure has been converted into a generic template in the LAMS Activity Planner. To create a WebDilemma for their own students, academics are prompted to include their personalised content into a pre-designed WebDilemma format. Each step is carefully scaffolded to ensure the lecturer is clear what information is required. In this way, the LAMS Activity Planner tool enables all lecturers access to this effective and successful teaching strategy, regardless of their previous experience with the strategy.
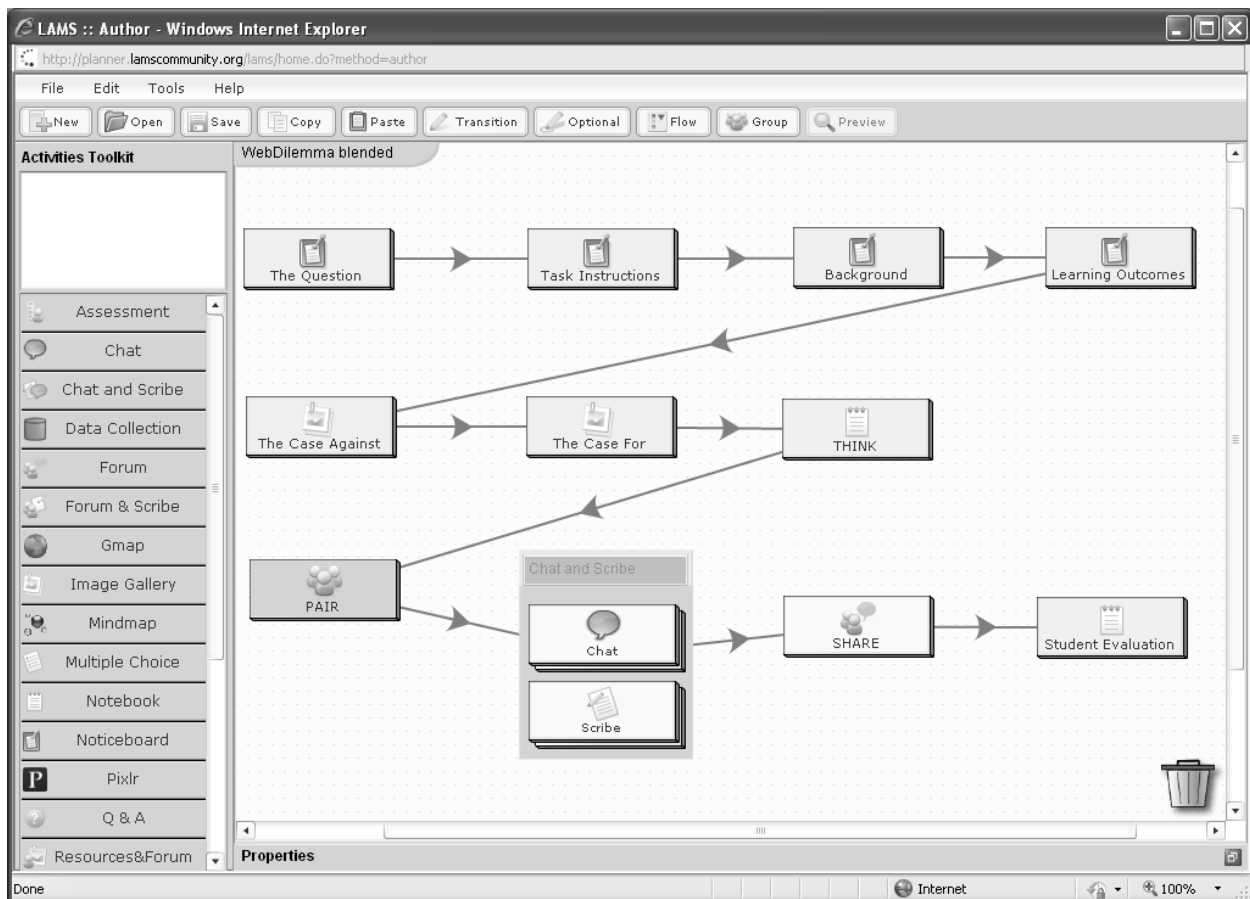

Figure 2: A generic example of a WebDilemma

Conclusion

Upon being introduced to the LAMS Activity Planner, initial indications suggest lecturers are happy to adopt a sharing and re-use approach. Other pedagogical planner trials indicate there are positive results emerging from user trials of planner tools in general (Knight, 2008). Planner tools provide an opportunity to give lecturers access to a wide range of resources in the context of an activity that has maximum impact on students, and enjoy a high level of academic credibility, without having extensive previous experience with the strategy. There is potential for the LAMS Activity Planner 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. It is hoped that as this Planner is increasingly used, it will encourage teaching staff to share and reuse a wide range of successful and innovative learning designs.

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