



Facilitating online discussion for interactive multimedia project management

Rob Phillips, Murdoch University, Australia

Teaching Context

| | |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject Area | Interactive multimedia, project management, facilitation, staff development. |
| Instructional setting | The two cases described originate from teaching in two units in the Interactive Multimedia Program at Edith Cowan University in Perth, Western Australia. Both cases were designed primarily to support internally enrolled students. |
| Participants | Third year undergraduates or postgraduate diploma students. There was a wide age variation amongst the students. |
| Study mode | Full time and part time (one external student). |
| Pedagogy | Group based projects. |
| Methods | Case 1 - monitoring of unsupervised project work. Case 2 - lecture material replaced by student generated online seminars. |
| Materials | Print based study guide, internal 'textbook', print based reader and some online resources. |
| Assessment | A rich mix of group and individual assessment methods. |
| Length of use | 1 semester. |
| Prior experience | Multimedia students are familiar with the Web. This was the tutor's first practical experience with online teaching and learning. |

Technical Context

Case 1 - a simple email discussion list.
<http://www.cowan.edu.au/eddev/98case/phillips.html> (accessed 20 Nov 2000).

Case 2 - the WebCT course management tool.
<http://cleo.murdoch.edu.au/asu/pubs/tlf/tlf99/ns/phillips.html> (accessed 20 Nov 2000).

Abstract

This case study describes experiences gained through the use of online technology to support teaching in 2 units on interactive multimedia. In the first unit, online support and progress reporting was provided through an email list server. The second unit was specifically re-engineered to make optimal use of online collaborative activities, supported by the WebCT course management system.

The experience gained in facilitating the online discussions associated with these units has been compiled into a set of guidelines about how to make effective use of discussion tools. This staff development resource has been summarised in the second part of the case study.

Contact Details

Dr Rob Phillips, Educational Designer, Teaching and Learning Centre, Murdoch University, Perth, 6150, Western Australia.
r.phillips@murdoch.edu.au.

About the Author

Dr Rob Phillips has a BSc (Hons), PhD (UWA) Grad Dip Comp Sci (Tasmania).

He currently manages the Educational Design group in the Teaching and Learning Centre, Murdoch University, Perth, Western Australia. This group is responsible for online course development and interactive multimedia production, as well as video production. The Educational Design Group also provides a substantial range of staff development activities and resources in educationally appropriate applications of information technology.

Rob has been President of the Australasian Society for Computers in Learning in Tertiary Education (ASCILITE) since 1996 - <http://www.ascilite.org.au/> (accessed 20 Nov 2000).

Murdoch University Teaching and Learning Centre's homepage is at: <http://cleo.murdoch.edu.au> (accessed 20 Nov 2000).

Why use online learning?

I started working with computer based educational material in 1992, developing stand alone interactive multimedia products and providing staff development on the use of the same. As time went by, the focus of my staff development activities gradually changed to the use of online technologies. An unexpected, but fortuitous, career redirection led to a period of teaching students (rather than their teachers). My experiences in the online aspect of this teaching activity form the two cases of this case study. This experience and 'street credibility' has been invaluable in my current role, expanding the use of online teaching and learning at Murdoch University.

The two cases I will describe originated from teaching in two units in the Interactive Multimedia Program at Edith Cowan University in Perth, Western Australia. Both cases were designed primarily to support internally enrolled students.

The two units to be discussed are IMM3302/4202, with online support through an email list server, and IMM 3202/4201, which was designed around online collaborative activities, supported by the WebCT course management system. In both cases, students were enrolled as third year undergraduates or as postgraduate diploma students. There was a wide age variation among the students.

The lessons learnt from both cases were combined with information and experience from other sources to produce staff development resource materials about facilitating online discussion.

Execution

Case 1 - Email based Online Support

IMM3302/4202 is one of the final units of the Interactive Multimedia bachelor's and/or graduate diploma programs. It is an essentially non-contact project unit with external clients, where students attempt to produce an interactive multimedia project to completion. The aim is to consolidate core multimedia skills learnt in other units, particularly project management studied in IMM3202/4201 (see below). Most projects are carried out by teams of students, because multimedia is essentially a team based discipline. Thirty-six students were enrolled.

The class only met three times during the semester; to establish teams, to check progress, and to present the final products. An email list server was used to facilitate inter-team and inter-student communication in between class contact times. Teams of students were expected to submit weekly progress reports about their project, highlighting achievements and barriers to progress. This served the purpose of keeping students on track, but also let students understand that others were facing similar difficulties, and led to sometimes deep discussion about project management issues. A more complete description of the conduct of the unit is provided in an internal Edith Cowan University teaching and learning conference (Phillips, Fairholme, and Luca, 1998).

Both the quality and quantity of student email discussion was high. This was achieved by allocating marks to appropriate list server use, structuring list server activities through weekly progress reports, and taking steps to minimise lecturer involvement in the list server, so that it became a student centred forum.

Case 2 - Integrated Online Collaborative Environment

IMM3202/4201 is a prerequisite unit to that discussed in case 1. It covers Interactive Multimedia Project Management Methodologies, through a project based approach, where teams of students consolidate the learning of project management methodology through the process of developing an online project. This unit was comprehensively redesigned to suit the online environment, using the WebCT course management tool.

The impetus for the redevelopment was a successful grant proposal to the Australian Government Committee for University Teaching and Staff Development. The intention was to blur the distinction between on and off campus modes of study for a suite of units offered by the School.

The methods used to teach this unit are closely aligned to Laurillard's model of the ideal teaching-learning process (Laurillard, 1993, p103, Laurillard, 1994). In this model, learning consists of a theoretical part, arising from "Discussion between teacher and student"; and an experiential part, arising from "Interaction

between student and world” where students interact with an environment created by the teacher. An important part of learning occurs when students link the theoretical and experiential parts by reflecting on their understanding based on their experiences, and by adapting their conceptual knowledge accordingly. This issue is discussed in more detail in Phillips and Luca (2000).

A comprehensive literature review was carried out as part of the grant process (summarised in Phillips and Luca (2000)). The range of group work activities described in Harasim, Hiltz, Teles, and Turoff (1995) and summarised in Phillips (1997), were helpful to our planning process.

The activities around which the unit was structured centred on online seminars. Students were assigned to teams, and were required to:

- prepare a summary posting for a project management topic covered each week, based on information obtained from the study guide, textbook, reader articles, URL’s and other resources,
- respond to questions and queries put forward by other students for that week,
- prepare a synopsis of the discussions that occurred that week.

In this way we hoped to enable external (distance education) students to participate in the learning process, and also to make the learning student centred. A more complete description of the design of the unit is provided in Phillips and Luca (1999) and Phillips and Luca (2000).

In practice, sixty-seven students were enrolled, but only two were enrolled externally, and one converted to internal as soon as she realised what was involved in this unit, because she lived nearby.

A specific consideration was the building up of a sense of community among the students. Many students need a sense of ‘who the other person is’ before feeling comfortable about contributing to discussion. We achieved this by encouraging students to publish a light-hearted home page about themselves.

Marks were explicitly allocated for the various online activities, in order to encourage participation. The quantity of interaction became too high to be sensibly managed by staff and students, enabling conclusions to be drawn about the logistics of running online seminars. However, the quality of interaction was also high, because students were successfully encouraged to become reflective practitioners in their use of the online activities.

In order to give students some understanding of what was required in the online seminars, the four unit tutors conducted the first online seminar themselves, thereby modelling the behaviours expected.

Forum messages were categorised according to their quality and marked on the number of messages of a certain quality. The categories are described in Table 1a, while the number and types of posts required to get certain marks is shown in Table 1b. You will see that to get top marks, you only needed to post two messages, but these had to be of high quality. Any number of messages, which demonstrated that the forum was being read, led to a maximum of two marks.

| Category | Description |
|----------|---------------------------------------------------------------------------------|
| E | Irrelevant, unhelpful |
| D | Demonstrates monitoring of discussion |
| C | Attempt at involvement, not grasping issues, does not progress debate |
| B | Good effort, demonstrates comprehension, progresses debate. |
| A | Excellent input, demonstrates strong comprehension, takes debate into new areas |

Table 1a Categories of quality in online discussion messages.

| Marks Allocated | Number and type of posts |
|-----------------|--------------------------|
| 6 | 2*A or 1*A and 4*B |
| 5 | 1*A and 3*B |
| 4 | 1*b and at least 3*C |
| 3 | At least 4*C |
| 2 | Any number of Ds |
| 1 | Any number of Es |

Table 1b Marking criteria for online discussions based on the number and quality of each posting.

Applications to Staff Development

The experience of using online technologies to support my teaching enabled me to consolidate theoretical understanding derived from my study of the relevant literature, and combine it into resources that I could use in my staff development activities.

Context

The context in which I worked was that the Internet provides a range of new tools to support human endeavours. From an educational point of view, its most important role is to support communication between teacher and student, and amongst students.

The Internet is better suited to student centred activities, supported by learning resources, than to the transmission of material, and the challenge for teachers is to design activities which encourage students to discuss, critique, summarise and reflect. These activities can be supported by web based discussion tools, or even email.

However, online discussions can be quite difficult to manage, practically. Many people have found that their students have not used the online discussion forums they have provided. Others have found the volume of discussion overwhelming and have drowned under the workload. In this context, we[1] [Footnote 1: I am indebted to my colleague Romana Pospisil for her contributions to these guidelines.] have developed a set of guidelines about how to make effective use of discussion tools, while minimising the amount of work you and your students need to do. The guidelines are separated into pedagogical (or educational design) issues and logistical issues.

Educational Design Issues

Integrated Discussion

It is important to integrate discussion use into the course, instead of treating it as an optional extra. You will need to think through specific and meaningful activities for your students to do which require discussion. A brief introduction to some types of discussion activities you can design for your students is given in Phillips (1997).

Set the Environment

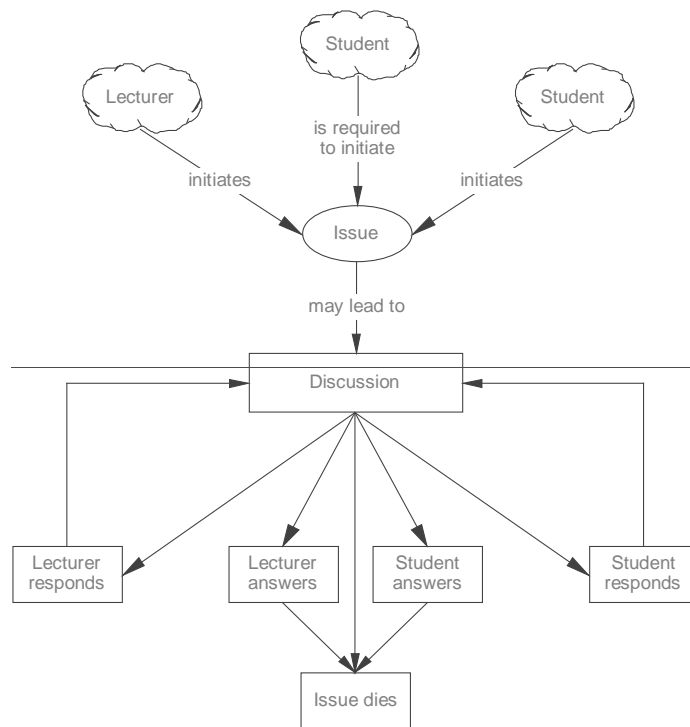
You will need to have a firm expectation about what your students will achieve, and communicate this to your students. If you are half-hearted, then they will be too. For example, if you just provide a discussion forum for student use, but do not provide activities that require its use, then the students will realise very quickly that it is not a core activity, and not use it.

A technique which can be used is to send out a joke every week to encourage students to access the discussion.

Another very important strategy is to allocate marks as an incentive for use. Depending on the assessment mix, an allocation of ten percent is appropriate.

A Model for Online Communication

The diagram below sets out the various possibilities for discourse between teacher and students. The teacher may raise an issue, or require the student to raise an issue. Alternatively, a student may raise an issue independently. If there is an interest, the issue may lead to discussion. During the discussion, the issue may be unequivocally resolved by either teacher or student, and the issue dies; or the discussion may be taken further, either by student or teacher.



The role that the teacher takes in facilitating discussion is an important factor in the success or failure of the discussion activity. If the teacher immediately answers all questions, then students will not feel a need to contribute. This leads to a lower value, passive educational experience for the student, and can lead to a heavy workload for the teacher.

A Student Centred Approach

If the teacher adopts a student centred approach, and, to some extent, relinquishes control, then the workload can be kept under control, and students obtain a richer experience. The aim is to help the students to do it by themselves.

The lecturer needs to make it very clear that discussion is for the students and avoid becoming the focus of the discussion. This can be achieved by:

- encouraging students to ask questions of other students, not of you,
- not responding immediately to student questions (wait a day to see who else responds),
- identifying issues and putting these as questions for students to discuss,
- encouraging reflection on the processes students are using.

Logistical Issues

Even with a strong educational design framework, online discussions can become unworkable if some logistical issues are not taken into account.

Choose the right group size

If the group is too big or too small, problems will arise. It is difficult to attain a critical mass of discussion traffic if the class is too small. On the other hand, if the class is too big, students and staff can drown under the volume of messages.

The ideal group size is approximately twenty students. This is large enough to have a critical mass, but small enough to limit the workload. For larger classes, it is recommended that they be split up into groups.

Separating Discussion Topics

Another way to avoid overload is to separate different discussion topics into individual discussion forums. This is easy to achieve in WebCT, where you can create a forum for each weekly activity.

Breaking the Ice

There is considerable research indicating that students need the opportunity to get to know each other before they will engage wholeheartedly with online discussions. There is an understandable reluctance to commit opinions to the electronic medium, when the audience is unknown.

The most satisfactory approach is for the class to meet face-to-face, before starting online activities. This is not always possible, however. Another approach is for the students to meet by videoconference, but this is also not always possible. Failing this, it is essential to conduct some form of electronic icebreaking activity.

Some possible approaches are:

- posting light-hearted introductory messages,
- the production of 'home pages' by students, if a level of HTML authoring skill can be assumed,
- the use of a synchronous chat session, to simulate a 'conversation'.

Acknowledgements

The various pieces of work linked together in this case study were not conducted in isolation. The nominal author acknowledges the contributions of Eilean Fairholme (Case 1), Joe Luca (Cases 1 and 2) and Romana Pospisil (Staff Development Guide) in the production of material synthesised in this document, and thanks them for their efforts.

References

- Harasim, L., Hiltz, S.R., Teles, L., and Turoff, M. (1995). *Learning Networks - a Field Guide to Teaching and Learning Online*. Cambridge Massachusetts: The MIT Press.
- Laurillard, D. M. (1993). *Rethinking University Teaching: A Framework for the Effective Use of Educational Technology*. London: Routledge.
- Laurillard, D. M. (1994). *Multimedia and the Changing Experience of the Learner*. Paper presented at the Asia Pacific Information Technology in Training and Education Conference, Brisbane, Australia.
- Phillips, R., Fairholme, E., and Luca, J. (1998, November). *Using Email to Improve the Experience of Students doing a Group-based Project Unit*. Paper presented at the 1998 Best Practice Showcase (Showcasing Best Practice at ECU), Perth. Edith Cowan University.
- Phillips, R. A. (1997). *What is the most appropriate way to use the internet for Teaching and Learning?* Paper presented at the 6th Annual Teaching Learning Forum (Learning through Teaching), Murdoch University, Perth, Western Australia.
- Phillips, R. A., and Luca, J. (February 1999). *Developing a groupwork oriented online unit on interactive multimedia project management*. Paper presented at the 8th Annual Teaching Learning Forum, The University of Western Australia, Perth. UWA.
- Phillips, R.A. and Luca, J. (2000). Issues Involved in Developing a Project-based Online Unit which Enhances Teamwork and Collaboration. *Australian Journal of Educational Technology*, 16(2), 147-160 (<http://cleo.murdoch.edu.au/ajet/ajet16/res/phillips.html> accessed 20 November 2000).