

Facilitating web-based staff development in higher education

Graeme Salter

Faculty of Informatics, Science and Technology

University of Western Sydney

Steve Hansen

Centre for Enhancement of Learning and Teaching

University of Western Sydney

Abstract

Web-based staff development may be able to overcome some of the problems inherent in 'traditional' staff development. Teachers, as learners, can work at their own pace, in private if they wish, and material can be covered in a just-in-time fashion targeting the exact need. However, online instruction has the potential to be as ineffective as other poor forms of instruction. With this in mind, a web-based staff development module was developed at the University of Western Sydney based on constructivist learning principles. This paper looks at the rationale for web-based staff development, how constructivist principles were applied in practice and preliminary findings from research into the use of the online module developed.

Introduction

Traditional staff development activities in higher education, such as workshops, are an essential element in any systematic professional development program. However, activities that require 'synchronous' attendance for a period of time do have limitations. For example, they tend to attract the same participants (Zuber-Skerritt, 1992). When an event is voluntary, attendance usually reflects a willingness to improve one's own practice. Because of this, many who attend are already good teachers and not necessarily the most in need of such development. This does not mean that those who fail to attend are not good teachers. There are many barriers to attendance. Probably the most cited barrier is time pressure. Activities that are scheduled require that the staff member is available at that particular time and for that amount of time. Staff are often reluctant to give up large amounts of time, particularly if they have concerns over the relevance of an activity. It is difficult to design a one off activity that is relevant to all, given the wide diversity of needs and levels of competence that participants bring. Many staff have experienced giving up a day only to find that few of their needs were met. Negative experiences like this make it more difficult to attract participants in the future. Where staff do make the effort it is often to a singular event rather than being a part of a coordinated staff development plan. There is often little, if any, follow-up. The ability of simple 'one-shot' workshops to promote lasting change is often questioned (Fowler & Dickie, 1997). Web-based staff development can overcome some of these problems. However, most staff development activities at Australian universities, even in the use of online teaching, are still taught by traditional means (Ellis, O'Reilly, & Debreceeny, 1998).

Initial attempts at Web-based teaching often involve little more than providing large amounts of non-interactive text to read (McNaught, Kenny, Kennedy, & Lord, 1999). However, there are methods to enhance interactivity and collaboration with a view to catering for the needs

of adult learners. In particular, the self-directed nature of Web-based learning suits work-based staff development. The participant can work at their own pace at a time and location that suits them for as long as they want. Web-based resources can be visited many times (Wills, Nouwens, Dixon, & Lefoe, 1997). The hypermedia nature of online material lends itself to a constructivist perspective for organising information. Rather than a linear sequence leading to certain conclusions set by the author, the learner can select the information in the quantity and order they choose and in ways which make sense for them (Fowler & Dickie, 1997).

To be most effective staff development should 'be centred around choices made by teachers' (Cifuentes, Beller, & Portela, 1999). A major factor in resisting change is lack of ownership (Fowler & Dickie, 1997). Allowing staff to move as they wish through a hypermedia environment may create a greater perception of control and ownership. The multimedia nature of the material may also assist in catering for different learning styles.

In addition, top-down activities may not model the desired approach. For example,

"it is surprising.. how often the principle of constructivism is conveyed to teachers in the context of how they should help their students learn, without it being the basis for how the teachers are helped to learn themselves" (Loucks-Horsley et al, 1998)

Most universities are moving towards greater use of online learning. The use of web-based staff development can model good practice in this area. It has been found that teachers who have positive experiences with technology and have adequate support are more likely to integrate technology into their own teaching (Freeman, 1997). To successfully develop skills in online teaching, academics are likely to benefit by actively experiencing them as a learner (Wills et al., 1997).

Case Study

Introduction to Online Teaching

In order to test some of the many assumptions listed in the preceding section an online staff development module 'Introduction to Online Teaching' is currently being trialed at UWS. The purpose of the site is to introduce pedagogical as well as technical aspects of online teaching. On their first entry to the site, participants are asked to fill in the Stages of Concern Questionnaire developed by the Center for Research and Development in Teaching at the University of Texas-Austin, which identify stages of concern about the adoption of an educational innovation. This data can be used to plan unique professional development opportunities that meet the concerns of the participants and provide them with methodologies appropriate for their particular needs (Maney & Brooks, 1998). The data can also be used to measure the progress of teachers in their adoption of the technology.

Concerns are grouped into four dimensions

Dimension	Stage	Expression of Concern
Impact	6. Refocusing	I have some ideas about something that would work even better
	5. Collaboration	How can I relate what I am doing to what others are doing?
	4. Consequence	How is my use affecting learners? How can I refine it to have more impact?
Task	3. Management	I seem to be spending all my time getting resources ready?
Self	2. Personal	How will using it affect me?
	1. Informational	I would like to know more about it.
Unrelated	0. Awareness	I am not concerned about it.

When self and task concerns are largely resolved, the individual can focus on impact concerns. A movement toward Stage 4 Consequence and Stage 5 Collaboration concerns indicates that teachers are ‘beginning to focus more on effective uses of technology and how technology will impact their students and less on the mechanics of using technology’ (Maney & Brooks, 1998).

In addition, there are 3 open-ended questions –

1. Describe how you currently use the web in teaching?
2. How do you expect to use the web in teaching in the near future (1-5 years)
3. In what way(s) can web-based teaching enhance teaching and learning?

Other data to be collected includes logs, email and discussion transcripts and interviews. Use of the site is completely voluntary. The site is open for 12 weeks.

A Constructivist Approach

The constructivist principles adopted include –

Multiple representations of content / Complex learning environment:

Sections on ‘How do I do it’ are based on multiple representations (eg. Online document, downloadable document, slide show and video). Most of the text-based content is in summary or point form. Where there is more information on a point the user can click on the text and a new ‘pop-up’ window with more information appears. As reading large sections of text of a screen is, for many, uncomfortable participants have the option of viewing and printing the content for large sections in PDF (portable document format). There are links to many examples and free or low-cost resources. A consistent navigation system and site map help prevent the learners from getting lost in a ‘sea of content’.

Social Negotiation:

Participants are encouraged to collaborate and discuss issues and ideas with colleagues using a discussion group. The ‘How to’ section suggests that staff may want to “Ask a question, Share a good idea or link, Describe how you use the technology, Describe the frustrations you have found..”

Understanding the Knowledge Construction Process:

By experiencing online education as learners themselves, teachers will have a much greater understanding of what will be required by the students. In particular, the teachers may experience some of the same frustrations typical in online environments, such as technical problems, which interfere with the learning process.

Student-Centred Instruction:

As well as having the freedom to use the module as they wish, contributions from participants are encouraged.

Preliminary results

Interest in web-based staff development was strong. An e-mail inviting expressions of interest attracted nearly 100 replies. At the time of writing the site has only been active for several weeks. Nevertheless, some interesting patterns are emerging. For example, the concerns of most staff using the site are focused on awareness and personal issues.

69 staff (and some invited visitors) have entered the site. Unsurprisingly, the survey on entry is a barrier for many (43). What is surprising is the number of staff willing to fill in the survey to gain access (26), particularly at a time where most staff are either busy getting ready for a semester brought on early due to the Olympics or heavily involved in a major restructure of the University. The compulsory nature of the initial survey is likely to be removed to see if this improves the participation rate.

Over 400 pages have been accessed. Of these 164 have been open for longer than a minute. However, this does not necessarily reflect active engagement as the page may remain open and the timer continuing while that participant has moved on to other activities (or even left the office). Over 100 pages have been opened for 10 seconds or less which is enough time, in most cases, to read the summary information. Only 14 pages have been opened and moved on from very quickly (3 seconds or less)

Apart from the entry page the number of times an individual page has been accessed ranges from 0-25. Those that had been opened more than 10 times include –

Page topic	Count
Lecture notes	25
How to use the site	19
Multimedia	16
Discussion groups	16
Constructivism	14
Assessment	12

The concentration at the moment is on how to post electronic lecture notes. While this in itself is not a bad thing, lecturers will be mistaken if they think this is providing flexible, online education. Therefore, it is pleasing to observe that the section on constructivism is proving relatively popular among those whose discipline is not education. While interest in the other sections may be linked to concerns about practical issues this section is totally theoretical.

Considering the importance of social negotiation to a constructivist perspective, it is of concern that the discussion area has generated little interaction at this stage. This may reflect the voluntary nature of this activity and techniques to enhance participation (such as polite email reminders) may be employed.

Promoting Web-based Staff Development

With regard to technology in teaching, some researchers seem to have an all-or-none attitude and wish to promote a single approach or search for a single answer (Shneiderman, Borkowski, Alavi, & Norman, 1998). There may even be advocates for replacing traditional methods with web-based staff development. The first problem this approach generates is in identifying what exactly is meant by 'traditional'.

"The phrase 'traditional methods' is often used to represent some widely practiced method that presumably has predictable acceptable results. If technology performs better than traditional methods, such questions imply, everyone should use it. A neat picture, but traditional methods doesn't define the higher education that I know and love, nor is it the higher education that research reveals" (Ehrmann, 1995)

'Horse race comparisons' between web-based methods and some non-existent traditional method are not likely to be productive (Marx, Blumenfield, Krajcik, & Soloway, 1998). In addition web-based learning has the potential to be "just as inflexible and inappropriate as any other form of poor instruction. In other words it is not the technology that is important, it is how it is used by the teacher to create new experiences for the learner" (Bennett, Priest, & Macpherson, 1999). Web-based staff development is probably best viewed as a supplement and not a replacement to current practices. Perhaps with this extension to the repertoire a wider audience can be reached and participation rates increased.

Conclusion

The Web offers opportunity to develop learner-centred staff development activities that use and model a constructivist approach to learning which overcome some of the problems associated with traditional staff development activities. However, detailed research of how such sites are actually used in realistic situations is needed. Best practice will only develop over time with increasing experience (Morris, Mitchell, & Bell, 1999).

Much analysis remains to be done in this particular project. One of the main areas of interest in the final evaluation will be the effect of the module on the perception of staff towards online staff development. Of course, the real test will be if participation leads to changed practices that enhance teaching and learning.

Reference List

- Bennett, S., Priest, A.-M., & Macpherson, C. (1999). Learning about online learning: An approach to staff development for university teachers. Australian Journal of Educational Technology, 15(3), 207-221.
- Cifuentes, L., Beller, C., & Portela, J. (1999). Integrating Desktop Videoconferencing into Middle School Classrooms and Teacher Education. International Journal of Educational Telecommunications, 5(1), 79-91.
- Ehrmann, S. (1995). Asking the Right Question: What Does Research Tell Us About Technology and Higher Learning? Change, 27(2), 20-27.
- Ellis, A., O'Reilly, M., & Debreceeny, R. (1998). Staff Development Responses to the Demand for Online Learning and Teaching. Proceedings of the 15th Annual Conference of the

- Australasian Society for Computers in Learning in Tertiary Education (ASCILITE) (pp. 191-201). University of Wollongong: The Printery.
- Fowler, S., & Dickie, B. (1997). Making a Difference: Equipping Teachers for Curriculum Change. (Report No. 2). Commonwealth Department of Employment, Education, Training and Youth Affairs.
- Freeman, M. (1997). Flexibility in access, interaction and assessment: the case for web-based teaching programs. Australian Journal of Educational Technology, 13(1), 23-39.
- Maney, J., & Brooks, D. (1998) Using the Stages of Concern Questionnaire as an Ancillary Tool to Evaluate the Effectiveness of the TEAM Approach [Web Page]. URL http://www.coe.uh.edu/insite/elec_pub/HTML1998/pt_mane.htm.
- Marx, R., Blumenfield, P., Krajcik, J., & Soloway, E. (1998). New Technologies for Teacher Professional Development. Teaching and Teacher Education, 14(1), 33-52.
- McNaught, C., Kenny, J., Kennedy, P., & Lord, R. (1999). Developing and Evaluating a University-wide Online Distributed Learning System: The Experience at RMIT University. Educational Technology & Society, 2(4), 70-81.
- Morris, D., Mitchell, N., & Bell, M. (1999). Student Use of Computer Mediated Communication in an Open University Level 1 Course: Academic or Social? Journal of Interactive Media in Education, 99(2).
- Shneiderman, B., Borkowski, E., Alavi, M., & Norman, K. (1998) Emergent Patterns of Teaching/Learning in Electronic Classrooms [Web Page]. URL <ftp://ftp.cs.umd.edu/pub/hcil/Reports-Abstracts-Bibliography/98-04HTML/98-04.html> [1999, January 26].
- Wills, S., Nouwens, F., Dixon, S., & Lefoe, G. (1997). Teaching at a Distance about Teaching at a Distance: a Resource for Staff Development. Proceedings of the 14th Annual Conference of the Australasian Society for Computers in Learning in Tertiary Education (ASCILITE) Curtin University of Technology: Academic Computing Services.
- Zuber-Skerritt, O. (1992). Action Research in Higher Education: Examples and Reflections. London: Kogan Page.

Contact Details

Name	Graeme Salter
Institution	University of Western Sydney
Phone	(02) 0246 3511
Fax	(02) 0246 3075
Email	g.salter@uws.edu.au