University of Salford
A Greater Manchester University

ILIA
Innovative Learning in Action

Issue Five: Learning Technologies in the Curriculum

Spring/Summer 2006

Education Development Unit

Introduction

Dear Colleagues,

Consideration of the papers and snapshots in this edition of Innovative Learning in Action, focused on learning technology, will provide the reader with insights into a range of excellent and innovative approaches to the application of learning technologies to enhance learning both in the classroom and at a distance. It also provides us with examples of how learning technologies can both stimulate and support partnership with staff and students and collaborative learning and working. This edition is particularly timely given the aim of the University's 2005-2008 Learning Technologies Implementation Plan (LTIP), which is to enhance the quality of, and access to, learning, teaching and assessment by supporting and developing the curriculum through the appropriate and effective use of learning technologies.

The LTIP is designed to help us to reach a situation where the effective use of appropriate learning technologies becomes part of our normal teaching, research and enterprise activities, and enhances access to our programmes by all our students whether they are learning on campus, at a distance, or in the workplace.

The emphasis at the University of Salford has consistently been on the identification and creative application of the appropriate blends of ICT and traditional methods, shaped by pedagogical, rather than technological drivers, and acknowledging and reflecting different academic contexts and professional and vocational requirements. We have some excellent examples of how this has been achieved here, ILIA once again providing us with an opportunity to reflect on practice and student learning, to share experience and hopefully to identify future areas for collaboration in a key area of curriculum development.

Dorothy Oakey
Head of Staff and Curriculum Development
Education Development Unit

Mike James
Learning Technologies Manager
Learning Technologies Centre

‘Communities of Practice’ Online? The case for ‘going Feral’ in Academic Development

Frances Bell
f.bell@salford.ac.uk
Information Systems Institute

Mary Hall
virago1@xtra.co.nz
Self employed e-Learning and web development contractor in Wellington, New Zealand, (student of MEd through the University of Southern Queensland).

Abstract

Learning technologies and the Internet pervade UK higher education, yet if teachers and learners are to use them effectively, both must change their practice. In this paper, the case of an international cross-institutional online discussion is studied with respect to its contribution to academic development. Participants in the discussion were mainly academics and learning technologists. We use theories of community of practice and social networking as lenses to examine academic development that is neither centralised nor within a discipline or departmental setting but may be seen as ‘feral’ by the participants. The paper concludes that at a given time, this can work for some but not all of those who may be interested.

Introduction

Provision of learning technology infrastructures is widespread within UK Higher Education (HE). A Joint Information Systems Committee (JISC) survey conducted in 2003 indicated that 83% of the responding institutions used some kind of virtual learning environment (VLE) (*Study of MLE Activity: Final Report and Case Studies 2005*)[1].

At the University of Salford, the Blackboard VLE has been implemented institution-wide in conjunction with other learning technologies that can be used free-standing or integrated with the VLE.There are however, as with any technological innovation, considerable differences in the extent and the way in which learning technology is used within programmes and modules. A JISC report on embedding learning technologies in UK HE institutions identified that academics need to consider their roles if benefits are to be fully realised.

> While academic staff are often seen as a client group for learning-technology support, they in fact play a crucial role in learning technology development.
>
> (Embedding Learning Technology Institutionally, *Senior Management*, 2003)

VLEs and Managed Learning Environments (MLEs) tend to have an institutional focus, since they use institutional information systems to manage and control access to resources by individuals and groups within an institution. Hence it is much easier for academics to share resources and organise student activities (using a VLE) within the institution rather than across institutions. However, almost all students and staff in UK higher education have access to the Internet, and thus have the potential to communicate online with others (who also have Internet access) beyond institutional boundaries.

Concomitant with academics and students getting to grips with learning technologies and how they can use them within formal education, they are making use of a range of Information and Communication Technologies (ICTs) in their daily lives. In a case of distance learners, for example, multiplexity (niche use of media) was observed:

> Webboard for diffuse class-wide communication; Internet Relay Chat more to named others but still for general communication across the class; and e-mail primarily for intrateam communication (Haythornthwaite, 2001:211).

These media can be under the control of the institution (e.g discussion boards in VLEs), or the student (e.g. personal mobile phone) or both (e.g University email between students or access to Internet Relay Chat via University resources). Since new media and applications are constantly emerging, there is likely to be a range of sophistication of use in the deployment of social and communication technologies within a group of teachers and learners in higher education.

The context for this research is the Higher Education Learning Professionals (HELP) network, an online community of those interested in online collaboration between higher education students from different programmes, universities and countries. This paper examines the case of a scheduled online discussion event between teachers and others interested in the use of online discussion, and specifically its assessment, in higher education. This discussion took place online in January 2006, on the CABWEB portal at *http://www.cabweb.net*, established by the Collaboration Across Borders project.

The paper considers a key issue, that is, if academics need to change their roles as they use new technologies in their work with students and colleagues, and if they need to develop the cognitive and affective skills to work in a multi-disciplinary fashion with ‘new’ roles, such as learning technologists, how can they

do this? And what support do they need? Recent literature in academic development suggests that it is more effective within a disciplinary or departmental setting, yet on the other hand, ICT offers the opportunity to learn from others by online discussion and collaboration which breaches disciplinary and departmental boundaries. In this paper we provide some insights by exploring how a 'non-co-located' group of academics and learning technologists try to make sense of changing their roles in the context of their own and their students' use of ICTs. The online discussion where this occurred was intense and involved a relatively small subset of the HELP Network membership.

Academic development and communities of practice

The University of Salford, like other UK HE institutions, recognises that staff can benefit from guided and shared reflection on their practice as teachers. Various short courses and certificated and accredited in-service programmes, with a significant emphasis on reflective practice, are provided within the institution. Akerlind (2003) raises the possibility that teachers may need to develop a broader understanding of teaching before they can achieve a corresponding broadening of understanding of their own growth and development in the teaching role.

Development as a university teacher was varyingly experienced as an increase in:

- the teacher's comfort with teaching, in terms of feeling more confident as a teacher or teaching becoming less effortful;
- the teacher's knowledge and skills, in terms of expanding content knowledge and teaching materials, and/or an expanding repertoire of teaching strategies;
- learning outcomes for students, in terms of improving students' learning and development.

  (Akerlind, 2003:380).

For new teachers, the use of learning technology is just one of an array of skills that they may need to learn in order to function effectively. For established teachers, the introduction of a new technology may reduce their comfort and confidence in the context of its use, presenting the need for change and development, and provoking a mixture of engagement and resistance.

Centralised staff development provision, particularly short courses for in-service teachers, is common in UK universities yet can be criticised as being abstracted from the everyday realities and the specificity of the disciplinary context. Research has indicated the role of collaborative approaches at a departmental level in changing practice in teaching and learning (Knight & Trowler, 2000; Neumann, Parry & Becher, 2002). Similarly, the concept of 'intellectual sociability' includes dialogue between academics about teaching and research (Rowland, 2002). Exchange of ideas between colleagues has the potential to promote what Weil calls 'systemic learning and inquiry from "within the mess"' (Weil, 1999). Sharing a context allows academics to achieve dialogue grounded in practice.

In their exploration of five rich case studies of practice, Lave & Wenger (1991) point out that abstract representations are often associated with de-contextualization, and that the 'power of abstraction' is situated in the person and culture that make it possible. They identify 'legitimate peripheral participation in 'communities of practice - a set of relations among persons, activity and world over time' - as an engagement in generative social practice. In this sense, a department of academics who collaborate with each other can be seen as a community of practice.

Wenger has further developed the concept of community of practice in relation to learning within organisations, leading to a recent, more loosely constructed definition of 'communities of practice' as groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis" (Wenger, McDermott & Snyder, 2002: 4).

In this more recent literature, communities of practice are usually planned as an intervention by an organisation and often supported by ICT (Wenger, McDermott & Snyder, 2002; Wenger & Snyder, 2000). The original concept of a 'local co-located community of practice' that shares practice in time and space is extended to what Wenger calls a 'distributed community of practice' that 'cannot rely on face-to-face-meetings and interactions as its primary vehicle for connecting members' and thus shares practice in a different, more abstract, way than the subjects of the original research (Wenger, McDermott & Snyde,r 2002: 115; Lave & Wenger, 2002). Since the distributed community of practice tends to operate within the abstract there is the inherent danger that it will come to rely more on reifications, such as pedagogic frameworks, as has been identified in a case of learning technologists' experience on an e-moderating course (Lisewski & Joyce, 2003). Furthermore, Lave, who collaborated with Wenger on the seminal work (Lave & Wenger, 1991), has since expressed concern about the use of the 'community of practice concept' as a model of 'good pedagogy' in top down interventions in educational practice (Lea & Nichol,l 2002: 10 in Lisewski & Joyce, 2003). In effect, communities of practice

carry the risk of reinforcing a reductionist discourse on academic development, typified by terms like 'good practice', 'excellence', 'skill' (Wei,l 1999), rather than providing space for the reflexive engagement with theory informed by own practice that is recommended for academics (Biggs, 1999). Indeed, it may be argued that without links to different contexts, communities of practice also carry the risk of maintaining the status quo and reinforcing resistance to new ideas.

Contextualisation becomes a particular issue in distributed communities of practice where the 'ties' between members may be weaker than in local or co-located communities of practice. Haythornthwaite (2002) argues that the relative strength of a tie is related to how and why people communicate. Strong ties are characterised by frequent exchanges using multiple media. Weak ties, which are often dependent on organisational media for communication, may be lost if the media are changed or removed. Having alternative media under personal control can help ties to survive media failure. While strong ties are important for emotional bonds and confirmation within an individual's private network, weak ties play a part in the dissemination of ideas between private network communities such as communities of practice, thus facilitating information exchange between networks of strong ties (Haythornthwaite, 2002). In effect, those who maintain membership of multiple communities can in this way act as what Wenger calls 'knowledge brokers'. It is crucial to consider the way in which information is exchanged, in order to avoid the 'boundary object' being communicated like a reification, that is, lacking the all important contextual information that will make it useful to the receiving community of practice (Wenger, McDermott & Snyder, 2002). Furthermore, Haythornthwaite (2002) notes that for an individual, the maintenance of weak ties is not without cost:

> The lower the overhead in terms of technical know-how or social exposure, the easier it is for individuals to use that medium to activate and maintain weak ties.

Notwithstanding the nature of the ties developed within co-located and distributed communities of practice, it is clear that the opportunity to reflect on experience and to negotiate meaning in a shared setting provides a central underpinning for the role of communities of practice in supporting academic development. Reflection can be traced back to Socrates' use of dialogue, asking students questions that expose errors in order to improve their reasoning processes. Much more recently, Schön (1983) introduced the idea of the reflective practitioner (this could be student or teacher) who will engage in both reflection-in-action, 'thinking on their feet', and reflection-on-action, done after the encounter. Reflection-in-action foregrounds 'repertoire' that is, the inquirer's collection of ideas, actions, images that they can draw on quickly in doing.

> As [inquirers] frame the problem of the situation, they determine the features to which they will attend, the order they will attempt to impose on the situation, the directions in which they will try to change it. In this process, they identify both the ends to be sought and the means to be employed. (Schön 1983: 165)

Repertoire can also be used as an object of reflection later, during reflection-on-action. However, the process of reflection-on-action frequently embraces reflexivity which is a classic means of connecting theory and practice (where the practice for staff could be development of teaching and learning activities, or for students, work-based learning or project work within the course) placing the focus on the process of learning. Critical reflection can be individual or take place within a group dialogue, (Boud, Keogh, & Walker, 1985), but in either case it is demanding of those who engage in it, and is a skill that students and teachers need to develop over time in order to enhance learning and practice.

CABWEB – a context for this case study

The CABWEB portal proclaims itself to be for students and teachers interested in international collaboration online. A feature of this portal is that it hosts discussions between students (usually facilitated by staff), discussions between staff, and some discussions generally open to both students and staff. At the time of the discussion event reported here, the organisation of the portal was as in Figure 1, a conceptual model developed in April 2004 that has informed the subsequent development of the CABWEB portal using Moodle Open Source software, see http://moodle.org .

There has been a significant level of student activity on CABWEB. Between November 2003 and March 2006, 1921 students engaged in 28 international collaborative activities in collaboration spaces on the CABWEB portal or previous CAB discussion boards. 84.7% agreed or strongly agreed that their participation was beneficial, citing specific benefits such as cultural exchange, language learning, development of critical, reflective and evaluation skills, creativity and inspiration and help with coursework. However, student collaborations tend to be short-term, for a variety of reasons discussed in Whatley & Bell 2003 and Whatley et

al. 2005, and of 1427 participants enrolled on 4 March 2006, only 190 had been active in the previous 45 days.

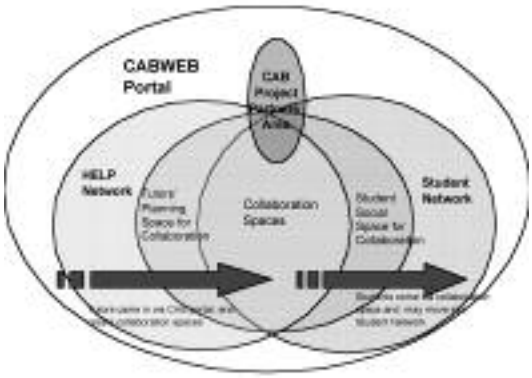

Figure 1 - CABWEB Conceptual Model

HELP was launched in January 2005, and has grown steadily since then. The event entitled "Discussing Assessment of Online Discussion" was the fourth discussion in an ongoing series on HELP, detailed in Table 1. There has also been intermittent discussion in the Social Forum (a permanent forum). The archives of these forums have been stored on HELP, see http://www.cabweb.net/portal/course/view.php?id=7. Guests who agree to the Site Policy can read all messages and resources in HELP, but only registered members of CABWEB can post messages to the discussion forums and use the other services provided. Self-registration on CABWEB and self-enrolment on HELP are in operation. Those enrolled on HELP receive low volume news mailings relating to events and developments, and can subscribe themselves to any forum for which they wish to receive email reminders of postings.

Table 1 - HELP Discussion Events Jan 2005- April 2006

Date	Discussion Event	Facilitator
Jan/Feb 2005	Ethos Discussion	Frances Bell, UK
March 2005	The role of teachers and communication in virtual seminars and environments	Frank Thissen, Germany
April 2005	Rock'n'Roles (also involving students)	Gina Stephenson, USA
Jan/Feb 2006	Discussing Assessment of Online Discussion	Frances Bell, UK
March 2006	Student peer review activities discussion	Danuta Zakrzewska, Poland Janice Whatley, UK
April 2006	To school, or not to school: is that the question?	Jan Visser, France

Launching and Profiling the 'Discussing Assessment of Online Discussion' event

Frances Bell was the facilitator for the discussion event "Discussing Assessment of Online Discussion" that ran from Monday 23 January until Sunday 5 February 2006. On 15 January, this event was announced to the HELP network via the News forum with the following message:

Things have been rather quiet on the HELP Network while we have been completing CAB project outputs. On January 23, our new schedule of discussions will start with this discussion on Assessment of Online Discussion. We do hope that you existing members of HELP will join in, and we will be inviting new members to join us. If you want to discuss anything in the mean time, please use the HELP Social Forum. The (quite short) paper to read before this discussion is Assessment of online discussion. I will open the discussion on 23 Jan with a post that should arrive in your mail box. Thereafter you can unsubscribe from the forum if you wish. You may also wish to set your profile to receive a daily digest of messages. If you would like to host a discussion in future please contact me at f.bell@salford.ac.uk, and we can agree a place in the schedule. Looking forward to seeing you in the discussion.

At the same time, a 'trigger' paper for the discussion event 'Aligning assessment, activity and outcomes in online student discussion' (provided at Appendix A) was posted for participants to read in advance of the discussion. The paper was uploaded to CABWEB and linked via an entry in the HELP Resources glossary, a resource which can be read by all and written to by enrolled participants. A similar message was posted on ALT-M, Association of Learning Technology members list and the University of Salford LTRN list (Learning and Teaching Research Network).

Data available for analysis included activity logs for the forum and other HELP activities and resources; the content of the discussion postings; post-event online questionnaire completed by 17 respondents; and private communication between the facilitator and several participants. During this event 96 participants were enrolled on the HELP network, some of whom were already members but many of whom came for the first time in response to the publicity. Unlike in previous and past HELP discussion events, the forum in which the discussion took place was set up as 'opt out', in that all HELP network participants were subscribed initially but could unsubscribe at any time. There were also 'guest' accesses by people who did not choose to enrol. 24 participants posted to the social forum in the period between publicity and the conclusion of the event.

30 participants posted to the actual discussion, contributing 118 posts over the 2 week period. Participants came from Europe, USA and Australia, and included PhD students, lecturers, schoolteachers, learning technologists and others. The full discussion can be found at CABWEB by going to the HELP network and looking for the topic entitled Past Discussions on HELP. The facilitator opened the discussion by asking participants to share their experiences with assessing or being assessed in online discussion - the highs, the lows, good/bad practice.

The discussion started at a great pace with over one third of posts in the first three days. Participants showed a willingness to share ideas and experiences from their practice. Not unusually in threaded discussions, it was difficult for participants to maintain a coherent topic for a thread as similar issues cropped up in different places. One week into the discussion, the discussion took an interesting turn, instigated by Mary Hall's post that started:

Now this question of why students get excited about learning that isn't just about credit is one that's dear to my heart. The answer, I believe, is that although as practitioners we tend to regard learning as a "tame" activity, in fact in its natural form, it is quite feral. Curriculum, credit etc are concepts that relate to teaching activity, rather than learning perse - in fact, for many students they may constitute barriers to genuine 'deep' learning by defining boundaries that the student might not perceive otherwise (!)

This post provoked 25 responses, and was subsequently split off into a new thread. Mary said that feral learning is the kind we are all born with, have an instinctive capacity for, and is holistic, student-led, seamless and a-curricular. The discussion was rich and varied with many different views expressed and examples provided. It was allowed to tail off a few days after its allotted two weeks, and the facilitator posted a summary (see Appendix B), closed the forum to new postings, and moved it to the archive topic in HELP.

Situated learning for students, academics and learning technologists

Early Unsubscribers, Learners by Onlooking and Active Posters

Analysis of the CABWEB activity data has revealed an interesting category of participants that can be termed early unsubscribers. In the Moodle environment, unless a participant has disabled email or set a digest option (to receive postings daily), they will receive email copies of each posting 30 minutes after it was posted. Since for this forum, all current members of HELP were initially subscribed, those who were not particularly interested in the topic must have been rather surprised by the 44 posts that occurred within the first three days of the discussion. If they had not set a daily digest option, these posts may have seemed like an intrusion in their mail boxes, what Haythornthwaite (2002) refers to as an increased social exposure that inhibits the maintenance of weak ties. Emails of postings contain clickable links to the portal, including one to unsubscribe from the forum and 19 of the 25 participants who chose to unsubscribe did so in the first three days of the discussion. One of the 19 had enrolled recently (presumably in response to the invitation) and only two had actually visited the forum before unsubscribing. This tends to suggest that rather than being disappointed by the content of a discussion in which they were interested, they simply did not wish to participate this time. By choosing to unsubscribe from the forum and remain enrolled on HELP (so that they would still get reminders in future) they were exhibiting a 'niche' use of media. Effectively, they were maintaining their weak links within HELP in a cost-effective way by reducing their social exposure.

The other 17 of these 19 remain members of HELP at the time of writing, but only two of them have re-visited HELP in the interim.

Because participants can stay in touch with the discussion by reading emails of postings, it is not possible to isolate the behaviour pejoratively called lurking or more positively called learning by onlooking - a phrase probably coined by Steve Draper http://www.psy.gla.ac.uk/~steve/LandL.html otherwise known as vicarious learning - simply learning from inspecting activity logs. However, we can infer the occurrence of this behaviour from a significant minority who were regular viewers, yet posted rarely or not all, and private communication with a few participants who told us that they stored the emails for later perusal. Indeed one response to the question about 'the best thing about the discussion' was 'Did not have to do anything :)'. It is also interesting to note that there have been 160 views of the discussion since it closed, providing further evidence that the discussion itself has provided a resource for more than those who actually posted to it..

Figure 2 shows the activity of those participants who posted messages (excluding the moderator) by the number of messages they posted. Posters to the discussion fell into two groups: those who posted only once (9 in number), and a second group (14 in number) referred to here as active posters. In this second group, although the average number of postings was about 6, there was quite a variation in activity with a couple of very active posters. Active posters' messages were typically fairly lengthy, dialogic with other posters and referring to their own experiences or other resources from the Internet and print literature. Being an active poster carried significant overheads of time and concentration but seems to have been satisfying and rewarding for members of the core active posters group, and also for a few learners by onlooking.

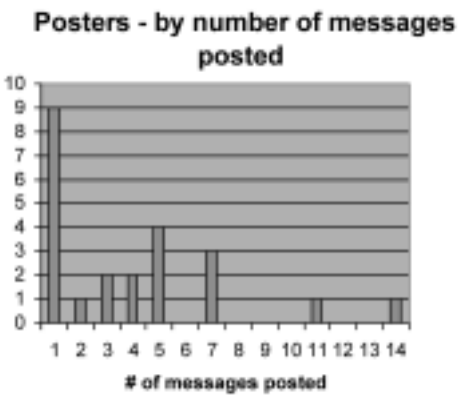

Figure 2: Number of messages posted

When asked to choose the statement that best describes their participation in the event, survey respondents answered as in Table 2. Bearing in mind that the early unsubscriber group are unlikely to have received the message reminding them to complete the survey, the survey results tend to confirm the categories of early unsubscribers, learners by onlooking, and active posters observed from analysis of the log data.

Table 2: Statement describing respondent's participation

Choose the statement that best describes your participation in the event

Never participated		(0)
Read first few messages then did not participate	5.9%	(1)
Read occasionally throughout two weeks, did not post	29.4%	(5)
Read regularly, did not post		(0)
Read regularly, posted once	17.6%	(3)
Active reader and poster	47.1%	(8)
TOTAL	100.0%	17

'Distributed' or 'Local' Community of Practice?

It was originally envisaged that the HELP network would be a community of practice for tutors using CABWEB for organising student collaborations but the growth patterns of student collaborations and the HELP network have followed separate, loosely linked trajectories. In the discussion featured in this paper only eight of the 86 participants and three of the 24 posters had been involved in student collaborations on CABWEB. Evidence suggests that each time a HELP discussion event is publicised new members emerge and most of them maintain weak ties by remaining enrolled on HELP and receiving low volume news mailings. 24 HELP members (of whom 20 were new) responded to the request, included in the invitation to this event, to introduce themselves in the Social forum prior to the event commencing. It appears that a (different) minority of members participate in each new discussion event with a few participating on a regular basis. Whilst it is clear that the HELP network and this discussion forum provided 'resources' for active posters and learners by onlooking, the key issue in terms of academic development is did participants engage in such a way as to constitute a community of practice as characterised by the literature?

Certainly, with a very few exceptions, participants are neither 'co-located' nor have they engaged in student collaborations on CABWEB. However, all are engaged in, or at least interested in, learning and teaching online. Their shared practice may in fact be learning more about this specifically and this in itself may represent context or 'situatedness':

> Instead it [situatedness of activity] took on the proportions of a general theoretical perspective; the basis of claims about the relational character of knowledge and learning, about the negotiated character of meaning, and about the concerned (engaged, dilemma-driven) nature of learning activity for the people involved. That perspective meant that there is no activity that is not situated.
>
> (Lave & Wenger, 2002)

Considering the discussion event within the framework of the concept of situatedness, as articulated by Lave and Wenger (2002), participants were negotiating meaning, were engaged, and were addressing dilemmas. On these grounds it can be claimed that the HELP network is a community of practice, albeit with members maintaining weak ties in the main - ties characteristic of the distributed community of practice. Moreover, the activity in which these academics and learning technologists were engaging is analogous to activities in which they may wish their students to engage – discussing and collaborating online with peers from across the world. Thus academics and learning technologists were engaging in reflection on and in their practice of learning and teaching, simultaneously sharing and increasing their repertoire.

Technological Convergence, Feral Learning and Communities of Practice

The issue of feral learning is what re-invigorated the second week of the discussion event, moving away on a tangent from the original topic of assessment of online discussion. The first published reference to the concept of "feral learning", appears to be a single throw-away line in Ted Nunan's 1996 paper (Nunan 1996) that has since been cited widely (32 citations on *http://scholar.google.com*). The idea of feral learning is also present in a number of papers authored about this time by Dr. Roy Lundin of Queensland University of Technology, (Lundin 1998a, 1998b).

Although Nunan's is the first published reference, several of Lundin's papers attempt to flesh out the concept. However it seems likely that someone else actually coined the phrase. According to Lundin:

> Given the convergence of technologies and the development of universal communications and data bases, it is becoming possible for learners of all ages to initiate their own educational pathways and learn what they want, when they want, where they want; the ideal of open learning. A university lecturer, when marking her students' papers, found references to writings by key people in the field, but she had not yet read these articles. When she asked the students where they came from, they replied: 'The Internet!' She dubbed this 'feral learning'. (Lundin, 1997)

> Increased technological options… will make it possible for adults to tap learning just-in-time from sources anywhere in the world to meet life and work needs as they arise. This type of virtual or 'feral' learning will not necessarily have any overall sequence or plan and educational institutions will be challenged in terms of learners fronting up for recognition of prior learning. The learner, whether professional adult or young child will be able to say: 'I am my school' or 'I am my university'. Lundin (1999)

To Lundin 'feral learning' was synonymous with 'virtual learning' – by going online, students could choose to broaden their reference base rather than constraining their research to the recommended references given by their course leader. There is also a sense of bemusement among academics when they speak of their feral learner students - a slight sense of 'Who'd of thunk it?' and of this feral learning leaning towards undisciplined research, one foot on the slippery slope towards off-task or at least unproductive time wasting. All of this points - even at this relatively early stage - to the shift in power from course leader to student that the Internet has promoted (as an idea at least). Lundin's explanation of the way the term was coined contains a clear subtext that the idea of students reading articles that have not been recommended or even read by the course leader is unexpected, maybe even a bit perverse. However, the move from 'I am at university' to 'I am my university' will be a complex societal change rather than a simple consequence of the diffusion of the Internet and learning technologies.

The implicit assumption, that the rational student is motivated primarily by gaining course credits rather than a personal desire for mastery, was explored in the HELP discussion. Some participants gave evidence of students being motivated by assessment but there was also criticism of compulsion as motivation for learning. The need to find other ways to support and provoke motivation and independence has implications for academics, as they learn to work with learning

technology, and with those who support them and their students in the use of learning technology.

Table 4: How event affects their practice

Which statement(s) best describe the links between the discussion and your practice (choose all that apply)?

I brought ideas/resources from my practice to the discussion	41.2%	(7)
Some discussion postings provoked me to reflect on my practice	76.5%	(13)
Some discussion postings gave me new ideas to use in my practice	52.9%	(9)
I have made contacts with whom I will explore ideas outside HELP discussion	23.5%	(4)
The discussion will not change my practice	11.8%	(2)
I found ideas/resources on HELP (apart from this discussion) that I will use in my practice	17.6%	(3)
I invited colleagues/contacts to join HELP discussion	17.6%	(3)

Our survey findings (see Table 3) show that engagement with this discussion event did influence participants to reflect on and change their practice. This tends to confirm that HELP is operating as a distributed community of practice for academics and learning technologists from different disciplines – as diverse as Criminology, Ophthalmology, English, Information Systems, Construction, Learning and Educational Technology, History, Psychology and others.

The richness of the dialogue shows that meaningful discussion on using learning technology in HE can cut across disciplines, as is confirmed by this post:

I've only had a brief peek and our subject areas are different - I'm a criminologist - but it seems that we are following similar routes in working with the technology and exploring how it can best work for students.

What is not clear is what limitations, if any, are imposed by the cross-disciplinary and distributed nature of the community of practice. There has been a core group of HELP members who have participated since its launch in January 2005 but for many, their association began as CAB project partners. As new people join CABWEB, it remains to be seen how the community will develop, and whether or not it will survive.

The following message was posted as a response to an educational technologist's contribution of a web site to support students and staff in making effective use of online discussion

Your site looks great and I particularly like the Gilly Salmon guide to students on what they can expect from online communication. Could I please use it? Let me know what citation I should add to acknowledge it as your work.

The post indicates the quality of the referred site, and reinforces the possibility of engagement with the 'knowledge' within the community, particularly the discussion forum, both contemporaneously with the discussion, and retrospectively by visitors to the archived forum. However, it is the case that, across the networks and collaboration spaces of CABWEB, consistently forums are the most accessed of all resources and activities.

Reifications and Knowledge Brokers

The trigger paper 'Aligning assessment, activity and outcomes in online student discussion' (Appendix A) can be seen as a reification of its author's practice, informed by the literature, including print and Internet sources. Although there were 35 accesses by enrolled participants and 28 guest accesses to the HELP Resources entry point where the resources for the discussion event were stored, only 13 enrolled participants and three guests actually opened the full paper (of course we have no way of knowing how many of these actually read it). This seeming lack of engagement with the original trigger could be the outcome of lack of interest or technical problems (e.g. users may have pop ups blocked on their browser). In any event, it is clear that the intended trigger for the discussion had limited impact yet dialogue was sustained throughout the two weeks. Although the HELP Resources (including some added-in responses to the discussion) were referenced by the facilitator, only 9 participants visited these, and no-one contributed to the resource. Participants had been encouraged in the opening message to give examples of 'good' and 'bad' practice which, according to Weil (1999), might have been interpreted as 'reinforcing a reductionist discourse' but this seems to have been avoided.The first response to the opening message described a current cross-institutional project, including the following description of the assessment arrangements

Each academic will take primary responsibility for monitoring approximately 10 discussion groups. This monitoring involves checking that students are posting messages appropriately but should not require intervention unless problems arise. The students are required to submit a reflective assessment of their participation and copies of the 2 best threads (they have to decide and explain why they feel these are the best threads).

The students are given a copy of the assessment criteria in advance of the project starting and this helped last year in being transparent about how they would be assesed. Of course, some students failed to take heed of this advice - what can you do!?

This provoked the response:

Interesting project. Could you tell us what the assessment criteria were?

The first participant then shared her assessment criteria. Introduced as part of a dialogue, these criteria were both more grounded and more accessible to participants than those that appeared as codified knowledge in the trigger paper (see Appendix A). Participants were much more interested in exchanging and discussing examples from their practice and research, than they were in reading the paper.

A successful approach adopted by one participant was not giving an example in this slightly teasing message that prompted five direct replies and a thread with 29 posts in total.

Standards/grade descriptors use in assessment of discussion contributions

by xxxxx - Monday, 23 January 2006, 03:00 AM

Now you will be disappointed, because I am not offering an example of doing this . . . but rather asking who has and how did it go?

I know of some examples. The only situation in which I am directly involved in making judgements about online discussion contributions is still having some flaws ironed out, so isn't a useful example at the moment.

An example from the trigger paper did eventually attract some discussion when it was cut and paste into a message but why was it seemingly irrelevant to the discussion as a trigger? The reason why the facilitator had chosen the topic was the assessment rubric discussed in the paper had attracted significant interest in a similar exchange in a different forum two years previously. It appears then that it is not necessarily the content of the codified knowledge in the trigger paper that is the problem but rather its role in and relationship to the dialogue.

In effect, active posters were acting as 'knowledge brokers' who were bringing knowledge from elsewhere to the community but they were able to contextualise it for others within the dialogue. Furthermore, the subject being discussed – learning using the Internet – can be seen as the practice in which these active posters were engaging. For example, in bringing in this idea of feral learning that was new to the group, Mary Hall acted as a knowledge broker, rewarding the network for the weak link she had maintained without visiting from March 2005 until January 2006, since when she has maintained regular contact.

Comparing Tables 2 and 3 we can see that 76.5% (n=13) of respondents found that discussion postings provoked them to reflect on their practice, significantly more than the 47.1% (n=8) who described themselves as active posters. This is borne out by the postings which were rich with examples from practice and linked to the discussion, such as (three different contributors):

I tried evaluating discussions and the contributions made about 6 years ago. It was a nightmare especially as the course had about 45 students on it. We tried to assess individual contributions and also contribution to the thread in question. It became very difficult or I should say impossible to manage. As a result I now ask for a reflective and analytical commentary on any discussion, which I have found is a very good way of promoting use of a discussion forum but it also encourages students to read other responses and think about them.

My students often consider their international homestays and study abroad experiences to be especially rich learning experiences, and I suspect it may be for this [feral learning] very reason.

Although there are quite clear real benefits for the students in terms of gaining contact with German students, having access to grassroots information etc., in preparation for their placements and year abroad it seems they have very little incentive to participate unless presumably their contribution is tied to assessment.

Conclusions and Further Research

Based on analysis of survey responses and activity logs, we have identified three typical behaviours of participants in HELP that allow us to understand how weak links and strong links between participants can benefit individuals and the community of practice. The identification of early unsubscribers has provoked examination of the most appropriate configuration of the forum for a discussion event, the publicity methods and timing. Haythornthwaite (2002) identifies that is easier for individuals to maintain weak ties with low overheads in technical know-how or social exposure. The configuration chosen for the discussion event forum in this case, where all HELP members

were subscribed initially was low in terms of technical know-how but proved to be high in social exposure for a significant number of participants. The higher level of participation (in terms of number of posters) for this event as compared with previous and subsequent discussions where subscribers had to 'opt in' to subscribe to the forum indicates that this 'opt out' configuration has positive and negative impacts. It may capitalise on weak links to promote participation by placing the first post from the forum in all HELP members mail boxes, along with a link to click if they wish to unsubscribe. We have some evidence to suggest that participants can find it difficult to navigate CABWEB and HELP (for example activity logs in the days immediately after publicity that show participants who get to CABWEB front page but no further). On the other hand, participants may prefer to elect to join a discussion, in response to an invitation. We need to undertake further research to determine how we can minimise social exposure without placing undue technical demands on participants.

Although early unsubscribers may have a particular relevance in this discussion, the other two behaviours are more generally relevant. Active posters are clearly essential to the health of an online discussion, providing activity during the event with postings that can become a permanent resource. Learners by onlooking can be seen as weakly linked in that their communication is limited to 'listening' but they do play an important role as potential active posters either within HELP or in another community. As these are behaviours rather than ways of categorising individuals, we can think of participants as Janus-like figures, active poster looking one way and learning by onlooking in the opposite direction. If these participants can change directions over different discussion events, we can achieve active discussions without domination by a small unchanging group of participants. Under what conditions this happens is a subject for further research.

Feral learning suggests learning that has escaped from domesticity, gone beyond the pale. If we think of the pale as the boundary of the community of practice, then academics who traverse online communities and networks engaging in feral learning can be seen as knowledge brokers when they return to domesticity. Furthermore, reflecting on such practice will reveal the potential of feral learning for students. Knowledge brokers take knowledge from practice abroad as well as bringing it home. This discussion event benefited from the knowledge brokership of its many new active posters. Dialogue provided a more acceptable home for reifications from practice than the resource and glossary areas within HELP.

Returning to the questions that we asked in the introduction, it is clear that this discussion event did offer opportunities for academics to learn more about a particular use of learning technology (for critical reflection via online discussion). The richness and depth of the discussion points to reflexive engagement of theory with practice, and the survey results tend to suggest that this was a satisfying and productive experience for participants, especially active posters. This was an example of academic development taking place outside a departmental setting. The discussion event at HELP constituted a community of practice, and being international and cross-institutional allowed for the propagation of knowledge across the boundaries of co-located communities of practice.

Feral is OK and is in the eye of the community.

Acknowledgements

We wish to acknowledge the contributions of HELP network members, particularly those who enriched the discussion event studied here, contacted us personally or completed surveys; the funding provided by Socrates- Minerva for the CAB project (110681-CP-1-2003-1-UK-MINERVA-M); and the Moodle open source software provided by one of the best distributed communities of practice we know, the Moodle community at http://moodle.org .

References

Akerlind, G. S. (2003), 'Growing and Developing as a University Teacher--Variation in Meaning', *Studies in Higher Education*, 28 (4): 375-90.

Biggs, J. (1999), *Teaching for Quality Learning at University*, Open University Press, Buckingham.

Carliner, S. (2005), Course Management Systems Versus Learning Management Systems, American Society for Training & Development, Available at: <http://www.learningcircuits.org/2005/nov2005/carliner.htm>.

Embedding Learning Technology Institutionally : Snr Mgt, (2003), Joint Information Systems Committee, Available at: <http://www.jisc.ac.uk/index.cfm?name=pub_smbp18embeddinglearningtech>.

Haythornthwaite, C. (2001), 'Exploring multiplexity: Social network structures in a computer-supported distance learning class', *Information Society*, 17 (3): 211-26.

---- (2002), 'Strong, weak, and latent ties and the impact of new media', *Information Society*, 18 (5): 385-401.

Knight, P. T. & Trowler, P. R. (2000), 'Department-level cultures and the improvement of learning and teaching', *Studies in Higher Education*, 25 (1): 69-83.

Lave, J. & Wenger, E. (1991), *Situated Learning: Legitimate peripheral participation*, Learning in Doing: Social, Cognitive, and Computational Perspectives, Cambridge University Press, Cambridge, UK.

---- (2002), 'Legitimate peripheral participation in communities of practice', in *Distributed Learning: Social and Cultural Approaches to Practice*, eds. M. R. Lea & K. Nicoll, Routledge Farmer Press, London.

Lea, M. R. & Nicholl, K. (2002), *Distributed Learning: Social and Cultural Approaches to Practice*, Routledge Farmer Press, London.

Lisewski, B. & Joyce, P. (2003), 'Examining the five stage e-moderating model: deSIGned and emergent practice in the learning technology profession', *Association for Learning Technology Journal*, ALT-J, 11 (1).

Lundin, R. (1997), 'Human Factors and Interactive Communications Technologies', *Canadian Journal of Learning and Technology*, 26 (2)

---- (1998)a, Feral Learning: Being Unreal in a Virtual Education World, paper presented to Learning Technologies '98, Dolphin Heads Beach Resort.

---- (1998)b, *Flexible Delivery of Continuing Professional Education: Models, Issues and Trends*, Distance Learning Center, University of Saskatchewan, Available at: <http://www.usask.ca/dlc/Context.html>.

Neumann, R., Parry, S. & Becher, T. (2002), 'Teaching and Learning in their Disciplinary Contexts: a conceptual analysis', *Studies in Higher Education*, 27 (4): 405-17.

Nunan, E. (1996), Flexible delivery: *What is it and why is it a part of current educational debate?* Conference Proceedings of Higher Education Research and Development Society of Australasia: Different Approaches: Theory and Practice in Higher Education, Perth, Western Australia., Available at: <http://www.lgu.ac.uk/deliberations/flex.learning/nunan_fr.html>.

Rowland, S. (2002), 'Overcoming Fragmentation in Professional Life: The Challenge for Academic Development', *Higher Education Quarterly*, 56 (1): 52-64.

Schön, D. (1983), 'The Reflective Practitioner - How Professionals think in Action'.

Study of MLE Activity: *Final Report and Case Studies*, (2005), Joint Information Systems Committee, Available at: <http://www.jisc.ac.uk/project_mle_activity.html>.

Weil, S. (1999), 'Re-creating universities for 'beyond the stable state': From 'Dearingesque' systematic control to post-Dearing systemic learning and inquiry', *Systems Research and Behavioral Science*, 16 (2): 171-90.

Wenger, E., McDermott, R. & Snyder, W. (2002), *Cultivating Communities of Practice*, Harvard Business School Press, Boston, Massachusetts.

Wenger, E. C. & Snyder, W. M. (2000), 'Communities of practice: The organizational frontier', *Harvard Business Review*, 78 (1): 139-+.

Whatley, J. & Bell, F. (2003), 'Discussion Across Borders: Benefits for Collaborative Learning', *Educational Media International*, 40 (1-2): 139-52, March-June 2003.

Whatley, J., Bell, F., Shaylor, J., Zaitseva, E. & Zakrzewska, D. (2005), CAB - Collaboration Across Borders: Peer Evaluation for Collaborative Learning, paper presented to InSITE (Informing Science + IT Education), Flagstaff, Arizona, eds. E. Cohen & B. Boothroyd, Informing Science Institute.

Appendix A – Trigger Paper for Discussion Event

Aligning assessment, activity and outcomes in online student discussion

Or making it useful and bearable for student and tutor

Frances Bell, Information Systems Institute, University of Salford, http://www.isi.salford.ac.uk/staff/fb

Introduction

How can we set authentic and meaningful online student activities that can deliver desired learning outcomes for students and be assessed without overwhelming the tutor?

In designing online learning activities for students, we have the same educational concerns as in face to face settings but need to be aware of the implications of changes in students' interactions with each other and with their tutors. Online learning presents both opportunities and possible difficulties. This short paper is intended as a catalyst for a two week discussion on CABWEB HELP. We look at three examples of assessment of online discussion as a starting point for answer the question above, a dialogue that will be continued in our online discussion on CABWEB, HELP.

Some background reading and ideas

Biggs advocates the concept of constructive alignment in teaching and learning, where assessment, learning outcomes and learning activities are aligned (Biggs, 1999). Constructive alignment is based on a constructivist approach to teaching and learning that recognises that learners construct their own learning by actively constructing meaning rather than learning "facts".

A summary of constructive alignment is presented at http://legacywww.coventry.ac.uk/legacy/ched/links/Teaching/Biggs.htm .

There are many good examples and discussion of assessment of online learning to be found on the Internet, e.g. http://cde.athabascau.ca/online_book/ch11.html#three

This paper gives some good examples of what works and what doesn't by considering a feminist pedagogy http://ifets.ieee.org/periodical/vol_3_2002/campbell.html

A benefit claimed for online discussion is its potential to enable critical thinking within a community of inquiry, see http://communitiesofinquiry.com/documents/CTinTextEnvFinal.pdf .

Online discussions, for example within communities of practice, can be vehicles for knowledge sharing, see http://www.ejkm.com/volume-1/volume1-issue-2/issue2-art18.htm

Three Different Approaches

In this section, we look at different approaches to assessment (there will be others) that represent a variety in methods of assessment, in who assesses, and in what is assessed.

Assessing the fact of contribution – teacher or semi-automated

Since there is evidence that participation in online discussion is a valuable experience for students, many tutors use the simple method of giving marks for postings, in the hope that once students try it, they will continue. This can be effective in getting them started but can backfire if students adopt an instrumental approach to 'getting the marks', as reported in http://ifets.ieee.org/periodical/vol_3_2002/campbell.html.

Other measures have been used in this semi-automated method of assessment:

"We focus on the number of posted messages, length of messages and number of responses that a post elicits from classmates and/or TA or instructor. We also have explored an additional measure that takes into account the contribution content, i.e., the technical terms that the students used during the discussions." (Kim & Beal, 2006) http://www.isi.edu/~jihie/papers/Kim-AERA-2006.pdf. The use of software tools is attractive for large classes where Kim et al argue that a tutor's time is better spent on other interactions with students. However, it can be argued that teacher presence in assessment of activity is encouraging to students.

Teacher assessment of the fact and quality of contribution

In my assessment of student online discussion, I started by using a method that I had adopted in assessment of face to face discussion. I used a simple coding scheme to assess the quality of student contributions, and recorded student attendance at seminars (as an additional measure of their participation). This was then converted into a mark, using a contribution threshold to discourage domination of the discussion by students keen to maximise their marks. When I adapted this method for online discussion, I used four criteria Frequency of Reading, Quality of Postings, Attribution of References, and Evidence of Collaboration. Here is a link to the background to this case, and here is a link to the student instructions and assessment rubric. When used with Masters students on different modules, it was successful in promoting knowledge-sharing. However, this benefit came at a fairly high cost in terms of tutor time, assessment being a tedious and time-consuming activity. A few students resented the time taken but most participated enthusiastically.

Student Assessment of the fact and quality of contribution

In order to retain the student benefits, without the tutor sinking under the burden of assessing each posting, I handed the assessment of a student's participation over to the student, to be presented to the tutor as evidence to support claims made in a student's reflective report (which were themselves assessed by the tutor), see student instructions and rubric. This approach was equally effective in the promotion of knowledge-sharing, but with a manageable assessment load for the tutor. It does rely on student willingness and capacity to understand the scheme and to engage in self-reflection, and thus may work better with postgraduates than with undergraduates.

Peer assessment can also be employed, with students evaluating and commenting on each other's contributions. I have turned on the ratings scales in our HELP forum, so that you can experiment with that if you wish.

Discussion

I am relying on you to engage in discussion so that we can explore these ideas further. Some questions that we might wish to answer include:

What experiences have we had of the assessment of online discussion?

Should we use assessment to coerce students into using online discussion?

What are students' fears and concerns about online discussion? And are these valid and reasonable?

How can online discussion, and its assessment, fit with other module learning activities in a process of constructive alignment?

Our online discussion of these and other questions related to Assessment of Online Discussion will take place on the HELP network at http://www.cabweb.net. If you have not already joined, you can create an account at the log in page, or start by reading the Information for First Time Visitors on the Main Menu. Please mail E.Zaitseva@salford.ac.uk in case of any problems.

References

Biggs, J. (1999). *Teaching for Quality Learning at University*. Buckingham: Open University Press.

Kim, J., & Beal, C. (2006). *Turning quantity into quality*: Supporting automatic assessment of on-line discussion contributions. Paper presented at the American Educational Research Association (AERA 2006).

Appendix B - Summary of Discussion posted in forum 13 Feb 2006

Introduction

This is a summary of the event 'Assessment of Online Discussion' held on the HELP network at http://www.cabweb.net 23/01/2006-5/02/2006

The discussion opened with Helen Jones sharing her experiences of an international project, and the assessment criteria used there.

Assessment and Standards

Christine Clifford started this thread by raising questions about the Why? the what? and against what? of assessment.

The issues of engagement and 'real' dialogue were raised and ideas on how students could be supported in trying to achieve such dialogue.

Helen Wozniak told us about her approach based on Salmon's 5 stage model, including several links to papers and resources.

Other ideas included the benefits of reflective commentaries and student determination of assessment criteria.

Standards/grade descriptors use in assessment of discussion contributions

Mary Jane Mahony started this thread by asking for others' experiences of this. Participants posted interesting and varied examples that were compared and critiqued. Understanding student behaviours was a theme , and David Dowdle proposed some categories:

"Early Responders' – want to get in first, often without thinking their point(s) through or reading further, after the 'kudos';

'In-Betweenies' – take their time, carry out background reading, reflect, develop thoughts and post when they are ready. Read responses, reflect, refine original position if thought necessary, etc, etc.

'Delayed Responders' – read as many earlier responses as they can, pick up on useful citations, strong arguments, perceptive criticisms, etc. and re-work/mould them into something that looks good to the untrained eye but perhaps does not add a lot to the discussion;".

Quality vs quantity and how to use grade criteria without distorting student engagement and the experience of all were themes that recurred through several threads.

Students Assessing their own and others' posts

Mary Hall linked student peer and self-assessment to constructivist pedagogy, and used the example of students choosing their "two best" postings and reflective elements (both also mentioned elsewhere). Helen Wozniak then linked this to her use of Salmon's model, from which there was a discussion on the nature of the development of discussion, the role of social discussion and the value of stages to conceptualise these. This flowed into an exploration of identity and anonymity, in distance and blended learning settings. Lesli Smith contributed her experiences of using Moodle for qualitative scaling in student peer assessment of discussion and identified the role of discussions such as this one in establishing software requirements. She also told us of her use of anonymised examples for the benefit of future students. David Dowdle concluded the thread with a scenario for assessing student reviews of the discussion, instead of the postings themselves.

Without Assessment

Debra Wagener shared a problem she had about a student collaboration that proved to be inactive and that led on to an interesting discussion about pragmatic approaches to motivation. Greg Salyer told us how he rejected assessment as a motivator of discussion, preferring to link assignments (discussion, learning journals, Wikis), with assessment of an activity following in a later activity. The tensions between using assessment as a motivator and assessment devaluing the quality of participation were evident in the postings.

Feral learning

This was a very fruitful thread. Mary Hall introduced us to the concept of feral learning, see her blog at http://my_learning_log.blogspot.com/2004/10/new-pedagogy-feral-learning.html which comes top of google for feral learning BTW.

Mary told us that feral learning is the kind we are all born with an instinctive capacity for, and is

- holistic
- student-led
- seamless
- a-curricular

The idea that learning sprang form the learner chimed with many participants who offered examples of independent (or feral) learning; linguistical role of portfolios; student use of instant messaging for language learning. There was an interesting exchange about the role, fixedness and expression of learning outcomes that explored how feral learning might be encouraged/discouraged. Jan Visser posted a very interesting contribution that discussed the benefits of escaping from the domestication of formal learning systems, whilst recognising such systems can still have place. He stressed the gap that can exist between achievement of high grades and learning where learners can transcend themselves, and lauded Karl Donert's willingness to take risks in the cause of stimulating creativity in students. (Stephen Downes differentiates feral learning from other informal learning on his blog entry on theory for e-learning). Several participants posted on the role, if any, of 'school' and teachers in feral learning. If learning is to be emancipatory and transformative for learners, do teachers have a role in this, and if so, what?

Summary

The discussion was rich and varied with many different views expressed and examples provided. It raised several contradictions and questions:

- assessment can motivate learners to engage in valuable learning activities but can also constrain and distract if learners become totally focused on 'getting the grades'
- learning outcomes can be a measure of learning but can/should they be prescribed in advance or emerge from the learning activity?
- Emancipated transformative learning is about the learner not the teachers – so what, if anything can teachers do to promote such learning?

Thanks to all participants for a lively, fascinating discussion.

Audio Lectures in Finance: Use, Value and Development Cost

Roland Fox

r.p.fox@salford.ac.uk

School of Accounting, Economics and Management Science (AEMS)

Roger Pearson

r.pearson@salford.ac.uk

Curriculum Development, Faculty of Business and Informatics

Abstract

This paper reports on the use of audio lectures made available to a class of 293 second year undergraduate students enrolled on a business degree module entitled Financial Planning and Control (FPC). Low development costs in terms of time and money are a feature of this initiative.

Introduction

In the area of accounting and finance there are surprisingly few articles reflecting on the experience of developing multimedia in virtual learning environments (VLEs). It seems reasonable to infer that such material is not common as part of a blended learning approach even in e-learning environments. One barrier that is evident in the literature is the cost of development. Here an alternative approach is offered based on Shannon and Weaver's (1949) communication model and the software development concept of "good enough" (Bach 1995: 2003). Armed with these concepts, the paper shows by example that large amounts of useful content can be developed quickly and easily.

The paper is divided into four sections, the first reviews the existing literature in the finance and accounting area; the second outlines the audio lecture content development. The third section analyses the value of the material produced and the final section discusses the results.

Literature review

It is becoming evident that the siren voices on the future of technology in education, and in accounting in particular, are very far from coming true. The major structural changes predicted by Hague (1991) have not occurred. Teaching has not been revolutionised by the new technology. Rather, a philosophy of "blended" learning has arisen. Though not a clearly defined concept (Oliver and Trigwell, 2005; Oblinger et al, 2001) the Open University (OU) provides some evidence of current trends in that of 450 courses offered in 2005 more than half were web-enhanced (internet encouraged), 158 were web-focused and 23 web-intensive (total online delivery and support) (Hoare, 2005). E-learning works alongside more traditional modes of delivery as evidenced by a recent OECD report (2005) which found that fewer than 10% of e-learning courses were fully online and by far the most common use was to supplement classroom teaching – again, the blended approach.

For over 20 years, the accounting profession has been encouraging greater use of technology in subject delivery (AAA, 1985, Marriot et al, 2004). The rapid spread of Blackboard and WebCT has made any delivery of the material to the student via a number of media a readily available resource (Bryant and Hunton, 2000). The old complaints about cost (Williams, 1991) are no longer valid. Some have questioned the significance of the development claiming that it is no more than 'mere vehicles that deliver instruction' (Clark, 1983). There are studies to support such claims at least between differing methods of IT delivery (Smeaton and Keogh, 1999). Others have questioned the value of trying to evaluate delivery distinguished only by the particular technological product (Gros and Spector, 1994). Yet it is recognized that there are a number of potential advantages to using more advanced products such as audio and video (multimedia). The analysis is not new. Students it is claimed shift their learning strategy with such material, and that the benefits are not equal amongst students (Kierwa et a,l 1991). The time allocated to subjects can be tailored to students more readily. The lecturer does not have to worry about the student who is having difficulties and is less likely to have to delay the majority of the class to help a minority if that minority can resort to review material (Tomic, 1993). The quality of time spent delivering is thereby improved (Shultz, 1989). Although few would disagree with these advantages, the development of on line learning has been much slower than expectations.

A series of notable failures illustrate the difficulties of e-learning development. The e-University in the UK was closed in 2004 having lost £50million and attracted only 900 students. AllLearn, a venture set up by Oxford University, Yale and Stanford failed in 2006 having also not attracted enough students. NYU Online, Fathom (Columbia University and the London School of Economics) are further instances. High costs and a lack of demand has significantly held back development.

In academic research papers the simple, if rather crude, methodology has been to try to encourage use by demonstrating that VLE's variously defined enhance student performance or at least are received

well by students. The results are sometimes very strong (Fordham, 1996) but always the more traditional modes of delivery receive strong advocacy (Gagen and Shepard, 2001; Ponzurick et al, 2000) with some exceptions (Russell 1999). A worrying feature of such studies is the time devoted to preparing the material Dunbar (2004: 341) reports: 'I did not track my time for the planning part of the process, but I estimate that I spent at least 10 – 15 hours per week for the spring semester working on transforming the face to face class to an online class.' And Fordham (1996: 39) notes:

Video can be superior to the lecture environment in many respects. The presentation can be prepared in a studio. Studio sound control and quality is often superior to acoustics in lecture halls and classrooms. Pre-recording allows for "re-takes" which eliminate misstatements and unnecessary pauses. The tape can be free of distractions found in classroom settings. The finished tape can incorporate animation and special effects which can more clearly convey a complete idea than can chalk or still transparencies. Music and other enhancements can be used to better delineate and demarcate sections or idea transitions…

Fordham then notes that 16 hours were spent editing 24 segments of 6 minutes each!! Such efforts are fine if one's research is education, but not otherwise!The cost of development is never really addressed in journal articles. In some respects the academic paper process is to blame. Poor results are not attractive, so why should the researcher save time and money and risk rejection. Developing a course of the highest standards and arguing that this is a "genesis" (Dunbar, 2004) or that evidence is being collected about an aspect of development is a safer option. Generally, approaches are taken that avoid the issue of wider development beyond the research 'laboratory'. In practice, however, development can only be described as faltering. Yet to anyone engaged in 'Imagineering' the future in the early 90's would surely have predicted that lecturers would have by now been producing a wealth of good multimedia material (audio and video) to exploit the benefits outlined in the literature and that the cost of such development would be very low and an obvious saving to the lecturer in time and effort. The conundrum is that this situation is by and large true in terms of the software possibilities but is not actually taking place.

The research mentality is not the only source of frustration. In the authors' institution good practice originally included using an actor to read material. As with other universities keen to monitor quality, special approval procedures were put in place to evaluate e-learning material under the watchful eye of specialists. Internal funds were allocated to develop such material; external funds have been won to be used for the same purpose. The result in the accounting and finance area has been a dearth of content development. Anecdotally, the experience is not unique. Funding, far from helping the process, creates a barrier as the message is that to produce the material requires expert knowledge not possessed by the ordinary lecturer. In economic terms it creates an artificially high entry cost. In practice, the cost is much lower. Software is now more developed. HTML pages of good quality can be created by packages such as Course Genie very easily. Audio can be created using free downloads such as Audacity with no technical knowledge other than the ability to use a cassette recorder. Video is still a bit more demanding but will clearly soon become within the grasp of the motivated lecturer. But insistence on 'high standards' still makes content development very difficult for what is still a craft product aligned to a specific module.

Questioning of the concept of high standards is rare but does exist. Notably James Bach (1995; 2003) in the context of software development has coined the term 'good enough' to attack the idealistic stance that he describes as follows: 'Software quality is a simple concept at least in the textbooks. Just determine your requirements, and systematically assure that your requirements are achieved. Assure that the project is fully staffed and has adequate time to do its work. Assure that the quality assurance process is present in every phase of the development process, from requirements definition to final testing. Oh and remember that it's absolutely critical that management be committed to quality on the unquestioned faith that it is always worth whatever it will cost. Otherwise, forget the whole thing'. In terms of software development he describes the goal as 'to reach an acceptable level of risk. At that point, quality is automatically good enough' (Bach 2003: 3). The argument is that that quality cannot be determined outside its immediate context. He notes that highly successful software packages were marketed with known bugs. But as he notes 'it isn't the number of bugs that matters, it's the effect of each bug' (Bach 2003: 5) if it does not matter, the quality is not affected.

In context, the use of audio is an act of communication between the lecturer and student on a one to one basis. The Shannon and Weaver model (1949) is one of the most

widely accepted representations and will serve the purpose of describing this particular context in generalisable terms. The framework can be applied by substituting the following terms in the general model in Figure 1:

Information source = lecturer information set

Transmitter = lecturer

Signal = recording

Noise = source equivocation of the signal (lack of clarity by lecturer) / interference through poor transmitters or receivers (poor understanding by student)

Destination = student knowledge

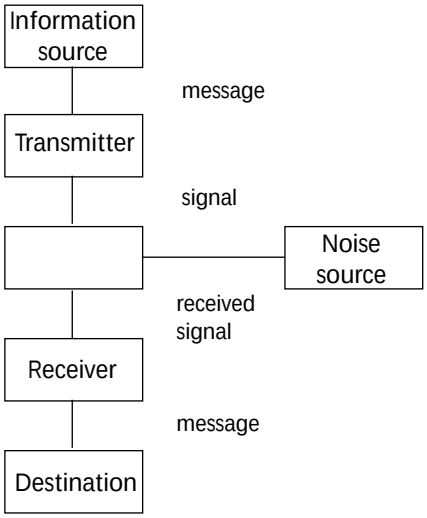

Figure 1: The Shannon and Weaver communication model

Students can be characterised as inefficient receivers. Repeating oneself on an audio can both reduce the equivocation of the message (if different terms are used in the repetition of the message) and at the same time overcome the noisy receiver by repeating the message. Pauses, coughs digressions can all help the noisy receiver if the students inattention coincides with such events none of the message is lost. The stop and replay button also helps the student to improve the communication. The recording pauses, coughs etc are the equivalent of the bugs in Bach's context, only here, rather than being benign, they can actually help the process. What Fordham (1996) was spending hours editing, would probably have been harmless if left in. Similarly, Dunbar (2004) applies a battery of software tools that is daunting to all but the specialist – one strongly suspects that an inferior but simpler package would have been good enough. In this study, the good enough approach was put into practice. Audio was prepared with very limited editing, using simple software on a home PC for the FPC module. The question is: is 'good enough' good enough?

Test outline

The style adopted in developing the audio for the module in this research was founded on the experience of developing audio for a complete lecture course on international finance(available at http://www.aems.salford.ac.uk/elearning/ international_finance/index.php) As the material was fully reproduced in the lectures, the university quality procedures did not apply. Nevertheless, in pursuit of some abstract idea of quality, editing and retakes were used extensively. It was only when following up the work in questionnaires to students and in conversation (not reported here) that it became clear that the students' concept of quality did not coincide with many of the time consuming editing processes. In 2005 the exercise was repeated for the FPC module, only this time all the editing was severely curtailed. Audio was almost always first takes. Interruptions, coughs, corrections were almost always left in. The judgement was that these elements are at worst harmless, and as the model clearly suggests, there is good reason to suspect that communication may have actually been helped. The consequent economy of effort enabled the development of a complete product that otherwise would have been impossible to achieve.

Audio files were recorded for 163 slides of about 10 minutes each, a total of about 27 hours. Editing time was probably no more than about 3 hours making a total of 30 hours. Fordham (1996), one of the few commentators to note such details, developed video of 24 segments of 3 to 6 minutes each a total of about 2 hours. This then took 16 hours of editing. There is no reason to believe that the editing process is that much more efficient today than when the paper was written – it is not an especially technical process. Applying this ratio to the current product implies a further 216 hours of editing or 5 weeks of full time work by one or more staff. Editing audio may be slightly easier, but in general terms these approximate calculations suggest that aspiring to some general notion of quality would have taken 9 times longer at least. The product would not have been developed. As there is no reason to suggest that these calculations are anything other than general to the problem of developing content, there is the strong suspicion that such possibly unnecessary costs may well be a major factor in the generally slow development of content.

The FPC module is a compulsory element of the second year of the Business and Management degree at Salford University. It was delivered in the first semester of 2005 to a total of 203 students. The audio material was released to the students via Blackboard and usage monitored by means of the Blackboard system. For technical reasons, the material was only released at the half way point of the module. Towards the end of the module delivery a total of 31 students requested CD copies, these were

handed out at the end of the term before the Christmas holidays. One of the difficulties in conducting experiments in education is that they are for the most part not conducted in the laboratory but are live. It would be unethical to disadvantage students for the sake of experiment, but clearly, usage figures would be affected by distributing CDs. At the end of the module, after the exam results were known, a feedback questionnaire was distributed (see appendix 1) by e-mail and an anonymous Blackboard Discussion Board was set up. A total of 2 students responded via the anonymous site and 19 responses were received from e-mails - a response rate of less than 10%. The value of a large response is that inferences can be made about the group as a whole and from that point to the wider education community. In this study this can be done by means of the usage figures, the value of the questionnaire responses was the qualitative feedback. Responses by the students who did respond can be used as an indicator of widely held opinions but not the group as a whole.

Valuation of audio content

Usage for the group as a whole is given in figure 2. A visit means listening to any number of pages from the module in one sitting. Thus for about 2/3rds of the group (up to 200) usage can be described as light and for 29 of the group, or 10%, usage is at or above 20 times and is reasonably heavy. The average number of visits by the group as a whole was 8.7, the average of those who requested CD's was 16.3, the heavy user, right hand side, of the graph must therefore be thought of as something of an underestimate.

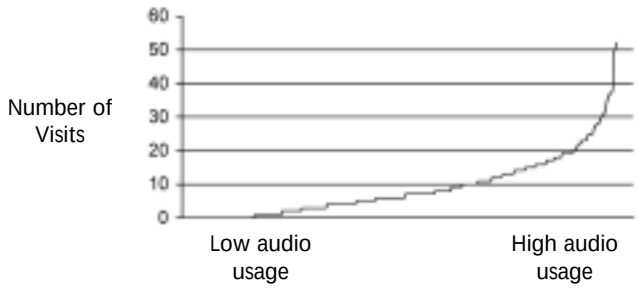

Figure 2: Usage of audio by students

The interesting aspect of the graph is the relatively high number of light to non users of the material. Some students clearly adapted their learning style radically to the new availability, but a large number of students did not even sample the material (see Marriot et al, 2004 for a survey of information and communications technology usage in accounting and finance).

A question that most of the literature studies address is whether there is a material benefit to students who used the resource. The overall correlation coefficient between usage and scores in the exam (which counted as 100% of assessment) was 0.26, a relatively high and significant result at the 95% confidence level. Looking at the performance of the students ordered by exam score (Figure 3), it is clear that a number of non users performed very well in the exam (lower line). But overall, it is clear that the higher level users performed better and were less likely to fail. On the high performing side, higher performance was achieved by those who made about 11 visits with a slight tailing off afterwards. As the literature notes, students adopt different learning styles and there is some evidence of this happening here. The data is not strong, but there is the suggestion that students coping well with the course made a number of selective visits. Students having difficulties but able to manage their learning, made more use of the support material and avoided failure. Whereas students who had a poor understanding and poor learning management, made little use of the audio and failed. Individual feedback reported below lends further support.

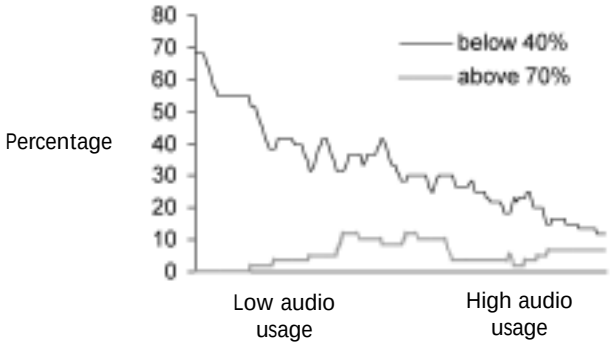

Figure 3: Percentage of students achieving an exam mark of below 40% (upper line) and above 70% (lower line) based on a moving average of 60 students ordered from low to high usage.

An alternative interpretation of the performance-usage relationship is that usage is a proxy measure of commitment. High marks are related to usage merely because they reflect a committed student rather than effective material. Existing analysis has in part suggested this relationship in proposing that there is a subset of weak students who are able to manage their learning and avoid failure. One would expect such management skills to extend across modules and a similar relationship to exist elsewhere. But this does not mean that the material is ineffective, merely that separation of the audio from other effects is difficult. Limited separation can be achieved by testing for partial correlation between FPC scores and audio usage whilst controlling for the correlation between audio usage and non FPC exam scores in the same semester. The partial correlation was 0.09 and significant at the 90% level. Thus the relationship remains significant but reduced. This does not change the original conclusion that the relationship was there but not strong as a general phenomenon across the whole sample.

Further supporting evidence of the value of the material is from the usage figures. The material was fully addressed in lectures and was not in any way added to in the audio. No pressure was put on students to use the audio and students were not told that their usage was being monitored. Actual use was in effect a kind of vote of usefulness as there was no apparent motive for a student to visit the site more than a couple of times unless the student felt that there was some value in doing so.

Feedback is also much used in the literature to evaluate software. As has been noted in reviewing the literature, the Hawthorne or experimental effect is rarely addressed and seems possibly significant from the description of the delivery of much of the material. Here feedback was only taken after the exam results were known to the student (possibly accounting for the low response rate). The responses were generally completed with varying degrees of conscientiousness. Interestingly they fit the model of communication (Figure 1) extremely well. Question 2 and 6 elicited the fullest responses:

Q6. comment is as follows:

Q6. Any other comments?

Answer: *Because I was revising with the audio files I was able to score 66% on my FPC exam. Most of the people I met after the exam who did not listen to the audio had difficulties in the exam and some of them did not even pass.*

Also:

Q6. Any other comments?

Answer: *I found the audio lectures to be very helpful, and I Use blackboard a lot, so the more information avaliable there the better. I find it hard to remember lectures as sometimes it can be up to 3 hrs of someone talking at you. So being able to go back to material you may have forgotten missed, is very helpful, and really helped me when i was revising for my exams. Thanks!*

This was a reply from a student who never listened to the audio but scored 83%:

Q2. What was the reason for your level of usage in Q1?

Answer: *I felt that there was sufficient material in the course documents and I attended all lectures so felt that I did not need to listen to the audio. If I had missed any lectures then I think I would have used the audio to catch up on what I had missed.*

Evidence on the blended approach was also evident:

Q4. List up to 3 aspects you liked about the audio and 3 aspects you disliked about the audio.

Answer: *The comfort of being able to use them at home, to pick up on points you may have missed in the lecture, to help revise and to be able to listen as many times as you like to get a better understanding of the FPC module. I can honestly say there was nothing bad about the audio lectures they are there if you want to use them and if you don't want to use them you do not have to.*

and

Q3. How helpful were the audio files you listened to?

Answer: *they were helpful especially if u missed something or didn't understand it was good to be able to go back and listen.*

Some clearly felt that it was a better fit with their own abilities:

Q2. What was the reason for your level of usage in Q?

Answer: *This is because for me, information stays in my memory for longer and in more detail when I hear it and read it which is what I did with the audio lectures and the lecture slides respectively. Also if you don't understand certain points made in the lecture when you first hear it, you can go back to that particular point using your mp3 player and listen to it again, which I found very useful. You can also pause the audio lectures to make notes about the points just made, meaning that you don't miss any of the content of the points made afterwards, which happens as a*

result of you making notes about the previous points. It's mainly because of these reasons I used the audio lectures frequently, and found them to be quite convenient.

Students do not protest if audio is not there but some clearly appreciate its presence on a course. Frequent usage and comments as quoted above testify to this reaction.

Discussion and conclusion

The somewhat controversial thought offered here is that funding has not helped content development in finance. Over-elaborate editing and pursuit of an abstract notion of quality has made content artificially expensive. The material developed for this study totalled 27 hours with at most 3 hours of editing. It was provided without funding using the real world concept of "good enough". The valuation showed that students used the material; there was evidence that benefit was experienced in the exam room and questionnaire responses after the exam supported the development. Of course one would like stronger evidence in every respect; but the material was part of what was already a well developed support package. Comments from the students, though few in number, nevertheless indicate that audio has a distinctive role in a blended learning package. This was achieved using a fraction of the resources that are generally reported in the accounting and finance literature.

References

American Accounting Association (AAA) (1985) *Integrating the Computer into the Managerial / Cost Curriculum: A resource Manual*, Sarasota, Fl: AAA

Bach, J. (1997) '*Good Enough Quality: Beyond the Buzzword' IEEE Computer Magazine*, 30 (8): 96-98

Bach, J. (2003) *The challenge of "Good Enough" Software*, http://www.satisfice.com/articles/gooden2.pdf, April 2006.

Bryant, S. M. and Hunton, J.E. (2000) The use of technology in the delivery of instruction: implications for educators and education researchers, *Issues in Accounting Education*, 15 (2): 129 – 162.

Clark, R.E. (1983) Reconsidering research on learning from media *Review of Educational Research*, 52 (4): 445 – 459.

Dunbar, A. (2004) Genesis of an on-line course, *Issues in Accounting Education*, 19 (3): 321 – 343.

Fordham, D.R. (1996) Freeing class time: empirical evidence on the benefits of using our of class video segments in lieu of in class reviews, *Issues in Accounting Education*, 11 (1): 37 – 48.

Gagne, M., and M. Shepherd (2001) A comparison between a distance and a traditional graduate accounting class, T.H.E. Journal (April): 58 – 64.

Gros, B. and Spector, M. (1994) Evaluating automated instructional design systems: a complex problem, *Educational Technology*, 34(5): 37 – 46.

Hague, D. (1991) *Beyond Universities: A New Republic of the Intellect*, Hobart Paper 115, London: Institute of Economic Affairs.

Hoare, S. (2005) 'Open Challenge' Manchester *Guardian Weekly Distance Learning Section* May 20th – 26th, 172 (22): 35.

Kierwa K. A., R.E. Mayer, M. Christensen, S. Kim and N. Risch (1991) Effects of repetition on recall and note-taking: Strategies for learning from lectures, *Journal of Educational Psychology* (March): 120 – 123.

Marriot, N., Marriot, P. and Selwyn, N. (2004) Accounting undergraduates changing use of ICT and their views on using the Internet in Higher Education – a research note, *Accounting Education: An International Journal, 13, Supplement* 1: 117-130.

Oblinger, D. G., C.A. Barone and B.L. Hawkins (2005) *Distributed Education and its challenges: an overview* Washington D.C. American Council on Education.

OECD (2005) *E-Learning in Tertiary Education: Where Do We Stand?* Centre for Educational Research and Innovation (CERI)

Oliver, M. and K. Trigwell (2005). Can "Blended Learning" Be Redeemed? E-learning 2 (1): 17-2

Ponzurick, T.G., R. Francea and C.M. Logar (2000) Delivering graduate marketing education: *An analysis of face to face versus distance education*, Journal of Marketing Education, (December): 180 – 187.

Russell, T. (2003) *The no significant Difference Phenomenon* 5th edn, Montgomery, AL: The Instructional Telecommunications Council.

Shannon, C.E., & Weaver, W. (1949). *The mathematical theory of communication*. Urbana: University of Illinois Press.

Shultz, Jr., J.J.(1989) The Bedford Committee Report: Prospects for implementation, *Issues in Accounting Education*, (Spring): 218 – 221.

Smeaton and Keogh, G. (1999) An analysis of the use of virtual delivery of undergraduate lectures Computers and Education, 32: 83 – 94.

Tomic, W. (1993) *Effective Teaching Practices*, Heerlen (The Netherlands), The Open University.

Williams, D. (1991) The challenge of change in accounting education , *lssues in Accounting Education*, (Spring) : 126 – 133.

Appendix 1 Student questionnaire

Q1. Did you listen to the audio?

a. frequently

b. sometimes

c. rarely

d. never

Q2. What was the reason for your level of usage in Q1?

Answer:

Q3. How helpful were the audio files you listened to?

Answer:

Q4. List up to 3 aspects you liked about the audio and 3 aspects you disliked about the audio.

Answer:

Q5. More generally, if you could advise staff preparing material for your level 3 studies (or next semester for HND students) rank the following from 1 to 5 where 1 is for the most important activity and 5 is for the least important activity.

(think of an "average" delivery; in no particular order)

rank: improving module manuals

rank: preparing better lecture slides (PowerPoint or Acetates)

rank: making more material available on Blackboard

rank: preparing audio files for the whole or the difficult parts of the course

rank: creating more in class tests to measure progress (i.e. tests that do count towards your final mark)

Q6. Any other comments?

Blending 'SkillSoft' into the Higher Education Curriculum

Elaine Ferneley

E.Ferneley@salford.ac.uk

Aleksej Heinze

A.Heinze@salford.ac.uk

Information Systems Institute

Introduction

This short paper reports on a 'SkillSoft Pilot Project' conducted in the Information Systems Institute, University of Salford in 2004-05. 'SkillSoft' is one of the providers of interactive online learning content modules. These modules were used to facilitate a blend of student learning by supplementing and in some cases replacing conventional face to face sessions.

The 'SkillSoft' package was piloted with undergraduate students taking the Systems Analysis and Design module on a part time degree and postgraduate students taking the Knowledge Management module. The rationale for deploying 'SkillSoft' was to give students more flexibility with the time and location of their learning. Potentially they could engage with the material in the University, at home, or at work during their lunch break. The pilot evaluation included interviews and focus groups with lecturers and students involved with the module. Key issues from this feedback are reported below and some of the students' views are included in the appendix.

Technical issues

There were a number of technical challenges that were experienced by the students.

The actual running of the software is very intuitive but it relies on the student's computer having the latest Java plug-ins. This is not a problem on a machine that one has control over, for example you can simply download these for free from the Internet and there is a diagnostic tool that can be used to troubleshoot some of the technical problems (http://support.skillsoft.com/customer/SPJava.htm). However, it is more challenging if the computer is at work or in the University and the user has no administrator rights. Some computers, especially the ones at work, might not allow people to install Java plug-ins for security reasons.

The main cause of technical problems was an inappropriate internet Browser type/ version. The browsers supported by 'SkillSoft' are 'Microsoft Internet Explorer' version 4.01 with 'Service Pack 2' and upwards, and 'Netscape' versions 4.06 - 4.8, 6.2, 7.0, 7.1. Some users were trying to access the content via an 'AOL' Browser or 'Mozilla Firefox', neither of which are supported by 'SkillSoft'.

Further complications arose as some students were trying to access 'SkillSoft' from their work or home computers that did not allow the running of Java Virtual Machine. This resulted in some users having to disable their firewalls and/ or having to set up a trusted IP address for the SkillSoft server.

Blending of 'SkillSoft' material

Integrating or 'blending' the 'SkillSoft' content was difficult. The two main areas of concern are assessment and the material available.

For the undergraduate students, there were two assignments that utilised the software, the first one totally relied on the content and the built-in testing questions that comprised 12 multiple answer questions and was weighted for 10% of the marks. The rationale here was to get students to use 'SkillSoft' and get it to work on their computers. The second assignment (20% weighting, 60 questions) integrated content from a core textbook, module handouts and 'SkillSoft'. The questions used for testing the students' knowledge were integrated from various sources including 'SkillSoft', however answering these questions was possible without the use of the package.

Although 'SkillSoft' includes questions for students to assess their understanding of certain topics, the answers are not recorded in a way enables the lecturer to view them. Therefore these questions had to be transferred individually into 'Blackboard', which was a laborious and time consuming activity. Because transfer of questions from 'SkillSoft' into 'Blackboard Assignment Manager' relied on a manual 'copy and paste' process, some errors occurred and resulted in confusion. This meant that students had to login to 'SkillSoft', engage with the material and then login to 'Blackboard' Virtual Learning Environment and complete the test that would be recorded and used for assessment.

The first assignment resulted in a high number of students receiving marks above 70%, but the results of the

second one were more widely spread. The number of questions and the fact that these questions were either identical to the self-test questions inside 'SkillSoft' or questions that relied on other content, explain the results.

Other problems of 'blending' the 'SkillSoft' material were related to the level of complexity. Some of the material was inappropriate for a degree level student, since a proportion of it was very basic and did not fit into the content of the academic module. Additionally, there is already a lot of content available to the lecturers that can be used by students. The existing material is in the form of handouts, website links and websites that support core text books. Text books often have existing e-learning support where students can take multiple choice questions based on the chapters that they have read.

Students' views

In the undergraduate student focus group, feedback about the learning using 'SkillSoft' was mixed. Some students had already come across the package in their professional lives and were comfortable and complimentary about it, however, others were not impressed saying that the learning achieved using 'SkillSoft' was negligible.

The main issue raised by Masters' students was the simplicity of content for Masters level and even for undergraduate students. There was a feeling of prescription and that there was no encouragement of critical thinking. On the other hand, it was noted that there has been a great deal of thought put into maintaining students' interest in the topic and progressing through material.

Several students commented on the aspect of e-learning, which removes the need for the lecturer and supports learning at a distance. Despite the advantages listed such as the flexibility of content delivery, savings in petrol and doing the course in any location, there was a feeling that students had signed up for a course in a "traditional" style and therefore removing the lecturer input would have had a detrimental effect on their learning. Overall there was a feeling that the use of 'SkillSoft' as a supplement is appropriate for some lectures.

The integration of 'SkillSoft' material into the curriculum was also perceived as a problem by the students. They felt that it was not clear how much of the content was supported by the lecturers and if it was co-ordinated with the rest of the course. Students also reflected on the thought that 'SkillSoft' could potentially be taken as a standard and utilised by several universities, they all felt that this was undesirable since the identity and ethos of the individual University would be lost.

Lecturers' views

In addition to the issues of blending content described above, lecturers were also concerned about the lack of an appropriate tracking mechanism to see how the student interacted with the material. This meant the actual academic value as perceived by the lecturers was minimal.

Conclusions

Overall, 'SkillSoft' in its current form is very limited in its use for the module we have experimented with for the following three reasons:

1. There are a number of technical access issues that need to be resolved if 'SkillSoft' were integrated with 'Blackboard'.

2. The issue of module marks re-entry into 'Blackboard' is causing an unnecessary administrative overhead and there is limited opportunity for lecturers to track the individual student's progress.

3. Despite the identical naming of the module topics, the actual content is quite different to other sources. There are also difficulties of integrating or "blending" the 'SkillSoft' content with the existing material.

After all, the current form of 'SkillSoft' offered is not going to be utilised by the Systems Analysis and Design module.

There were some discussions about extracting the 'SkillSoft' content and integrating it with 'Blackboard' VLE, which would eliminate or at least minimise the above three issues in the following ways:

1. Access would be administered centrally via 'Blackboard', which provides a stable and reliable Virtual Learning Environment relative to 'SkillSof't.

2. There would be no need to re-enter the questions into 'Blackboard' since these would be automatically part of it.

3. There would be more flexibility regarding which section could be included in 'Blackboard' and which could be left out if they were not as relevant.

We believe that the provision of 'large' learning content modules does not offer an attractive blending option for Higher Education. Further work can be conducted to evaluate the option for an easy 'pick and mix' of several self-contained modules that can be blended in the Virtual Learning Environment.

Appendix

Here is a representative sample of 5 Masters students who raised some of the frequently mentioned issues:

Student 1:

Having checked the Knowledge Management virtual lecture on Tuesday, the following thoughts occurred;

It might be better to do it with the sound off and just treat it as a purely visual as the woman's voice begins to grate after a while

For me it felt like a sales video of a product someone wanted me to buy.

I felt it was patronising.

I thought it repetitive and simplistic.

I also found it to be a bit evangelistic and lacking in any sort of objectivity.

I also found it slightly authoritarian and preachy.

On the plus side, something like this would be of huge value to someone like me for SOME of the lectures but I would be hugely reluctant to see the University purchase this as I think the educational quality and experience is vastly inferior to a lecture situation. This package seems to have no facility for feedback or clarification - which may be why it is simplistic. Politically, I can see that purchasing this would allow the University to position itself in the International Distance Learning market with local alliances through franchises etc."

Some accounts of a student who is predominantly positive about the 'SkillSoft' experience:

Student 2:

"On the whole I am positive about this, as it enables me to work when I want to from home, but I agree that its role should be limited to support rather than as a replacement.

The content's fine, and the speed was fine for me. I thought that the test notification is just plain wrong. I ended up taking the test before going through the material! That needs sorting. The computerised female Stephen Hawking from California really annoyed me too! Also the Americanization of words is not too clever, what on earth is System-AT-IZE? Is that really English?

One aspect that I would like to understand is how much the lecturer knows about what I have done on this virtual course. Do they know that I have only spent 45 mins on it? Do they know that I haven't done all 4 sections only the first? (Well, so far, I will do the others HONEST). Do they know what marks I have got?

I would also echo the other chaps contribution that I don't feel like I am getting value for money unless I am having a 'proper' lecture. Also, I like taking time off work to do my course and meet other part-time students socially. If the course could be done over the web, then I would loose out on all that.

In conclusion, on the whole I like it. Last year I did a 6 month Astronomy course via distance learning, and that was very similar, although it didn't have the audio or the tests (just Q and A). It also didn't have the Big Brother feel of the University knowing exactly what I am doing!

Just completed the 2nd chapter. I'm liking it more now. Not the content so much (it's too much of a sales pitch style, and I don't feel like students are the target audience) as the virtual learning. The main improvement is that it's much more structured over just going away and reading photocopied papers. It seems a lot of thought has gone into varying how I interact with it, in order to keep my attention.

Another thought I had was about how long this resource would be available for? If it were a standard lecture, then I would have taken notes and I would be able to keep them for as long as I want (i.e. refer to them after the course has finished). With the virtual lecture though, I imagine I will only be able to access the course for the rest of this semester.

I had a couple of other thoughts too:

1) Has anyone tried this from more than one PC? Does it remember where you are up to, or is the status written locally? If we were making more use of this, I can see me wanting to do parts at home and at work. I imagine people using PCs in the labs might have the same problem.

2) Referencing this material in an assignment is a bit tricky. If this were a PDF lecture then you could do a search for a section you wanted to reference, but with this virtual lecture you would have to go in and out of many screens to find what you want. Also, you can't just refer to a page either!"

Here is another comment that illustrates the many frustrated students that experience technical problems:

Student 3:

"ok...found it... playing it... keeps crashing on me... will somebody tell the designers of this program to rethink it onto another platform?!... presentations (actually anything) done in java will eat up the processor power... hence it keeps crashing on the University's (not well known for their processing speed) computers!

... at this rate,I'll be lucky if i don't start collecting my pension before I complete this thing!..."

Technical and strategic issues raised by implementation of 'SkillSoft' in the University of Salford:

Student 4:
"My feedback on the use of the virtual medium is not positive, as I've spent several hours trying to resolve technical issues and still haven't even managed to load the lecture. I've run through the online Skillsoft test site and everything passes OK. The popup blocker and firewalls are both configured to allow access (and relunctantly I even tried turning them off altogether), but still no joy. I've also tried (lecturer's) advice regarding uninstalling/reinstalling the Java Runtime etc. - also no success.

I wish to point out that I know this is no fault of (lecturer), indeed I've enjoyed the lectures so far, so my concern is that lSl/University strategies might unnecessarily be tarnishing the good reputation of the course. It's this that makes me think that (strategically at least) the lSl/University might need to appreciate that bespoke firewall/popup configurations for Java applets are more hassle than they're worth (our department at (other institution) have come to the exact same conclusion). The alternative I'd suggest is HTTP-based applications that (in-turn) don't need special rules in firewalls. Mind you - was there really anything wrong with a normal lecture anyway? ("if it isn't broken, don't fix it").

I also concur with the other points on this discussion forum regarding the concept/nature of online material. In general I believe that the online medium should be used to SUPPORT traditional teaching and learning, it is not a substitute for it. I can't for example, ask an online lecture any questions at the exact point a topic is raised/introduced. Neither can I seek clarification or add my own views to any discussion at such a point. I hope that decision-makers for the "increased online material" policy take heed from the feedback on this site and re-evaluate the appropriateness/practicality of the policy at a qualitative and operational level."

Some typical concluding remarks:

Student 5:
"... So, to conclude... I don't think I gained a lot out of that KM lecture, and I would much rather have been in university engaging in a more meaningful, open lecture. For me, the primary use for SkillSoft would lie in its potential to SUPPORT a module, but I doubt if it could really effectively replace any part of the lecturer's role. However, if it's being used as a means of support, why not use what we already have (i.e. Blackboard) as a means of achieving the same thing. It might not be perfect, but then, SkillSoft is far from that too!"

ESMOS: Enhancing Student Mobility using Online Support

Helen Keegan
H.Keegan@salford.ac.uk

School of Computing, Science and Engineering

ESMOS - Enhancing Student Mobility through Online Support - is a project partnership of 6 Universities from the UK, Italy, Austria, Lithuania, Poland and Bulgaria. The 2 year project started in January 2004 and is funded by the SOCRATES Programme/Minerva Action, which seeks to promote European co-operation in the field of Information and Communication Technology (ICT) and Open and Distance Learning (ODL) in education. The combined aims of the ESMOS partnership are to develop, evaluate and model the usage of Virtual Learning Environments and online technologies to support students in mobility situations throughout the EU.

During the first year of the 2 year project the ESMOS partnership has explored current practice in support for international exchange and work placement students, particularly investigating how technology is being utilised to support students. It has also examined the factors that affect students on exchange or placement and has identified problems with meeting student mobility numbers in the UK and other countries. All partners have collaborated on in-depth needs analyses of those involved in mobility activities, and have published a report based on interviews with academic and support staff, and the analysis of online questionnaires which were made available to mobility students throughout Europe. The results of previous phases have informed the Methodological Development, which has been split into 3 levels: conceptual, operational, and technological. The conceptual level has been based on principals of online support of learning in mobility situations in the frame of the constructivist paradigm, exploring the concepts of knowledge, teaching and learning. Categories of support have been defined through considering characteristics of the international student exchange/placement as a new learning situation. In order to develop the operational level of the methodology the partnership has devised a typology of online support before, during and after the exchange/placement using tools for prioritising different types of support and planning support actions. The technological level of the methodology is an identification of the technical functionalities required to support mobility students, and has been developed in generic terms in order for each partner institution to implement it with respect to their own infrastructure and technologies.

The methodological development has enabled the whole partnership to share a common terminology for support activities, splitting the generic term "support" into seven categories that have been analysed and structured in detail. The methodology is intended both for internal use within the project, informing the VLE IT Support Model and Protocols Development, and also for external use outside the partnership, to help those who are developing support structures.

The main output of the project is the application and dissemination of a model that has been effectively evaluated, producing a series of best practice/case studies. It will then validate the methodology and the final product, developing guidelines for effective support, using the technology, for students undertaking international exchanges and placements and disseminate the project outputs to European Universities participating in Socrates ERASMUS and Leonardo da Vinci mobility programmes, as well as the network of partners within the project partnership. The main target groups will be student tutors and academics, HE students participating in placements and student mobility programmes in the enlarged European region and placement tutors in the placement organisations at departmental, faculty and University level.

If you would like to find out more about ESMOS, or participate in the project please contact h.keegan@salford.ac.uk.

Reflections on an intervention to Motivate Student Learning through in-semester Online Assessment

Elizabeth M Laws
e.m.laws@salford.ac.uk

School of Computing, Science and Engineering

Introduction

In my experience engineering degree programmes are relatively demanding in terms of class contact hours which are typically up to a factor of two greater than many equivalent arts based courses. The predominant teaching strategy involves lectures and tutorials which usually take on the form of problem solving sessions and laboratory work. This commitment of time taken together with the necessary study required to complete assignments and coursework means that a consistently, steady work pattern is generally a prerequisite of success.

In my role as a lecturer in engineering I have found that increasingly academic ability needs to be supplemented by motivation, effort and a structured work ethic. Furthermore, anecdotal evidence suggests that many students cannot manage their learning without significant levels of support, guidance and direction, particularly at levels 0 and 1. This may in part be attributed to the teaching methods that students have been exposed to earlier in their education which appear to be increasingly prescriptive. However, difficulties are often exacerbated by financial pressures which require an increasing proportion of the student body to undertake part-time work with unsocial working hours often disrupting attendance at classes. A vicious circle can ensue whereby inability to manage learning serves to de-motivate and lack of motivation in turn further reduces the ability to manage study, possibly leading ultimately to failure and/or withdrawal.

In Laws 2002; 2003 and 2004 I explain how I have used a variety of approaches to present material to students utilising a range of methods in an effort to support and motivate students. I have extensively used the Blackboard Virtual Learning Environment (VLE) to provide electronic access to lecture material and tutorial questions (with solutions provided later). Since 2003 I have presented recorded lectures on Blackboard. Whilst these interventions have generally been well received by students it seems that wiithout a positive inducement or requirement for engaging with the VLE there is still a minority who choose not to avail themselves of VLE support. Seemingly a proportion of these simply prefer face to face delivery methods and 'live' class contact. Rather than being switched on by technology they appear to be switched off. I feel that these students are disadvantaged, in that they then do not for example, benefit from the solutions to tutorial questions and the extra materials delivered electronically. Thus I have set out to determine a means of encouraging the reluctant.
In the academic year 2004-5 as a pilot exercise, I changed the assessment strrategy for two level 1 modules so that 20% of the module mark was allocated to four on-line tests set and taken in 'Blackboard'. I hoped that this would be a sufficient spur to encourage all students to use 'Blackboard'. More significantly perhaps, I also hoped that students would be motivated to work steadily throughout the semester in regular preparation for the on-line assessments (which concentrated on key aspects of module content) and that this would in turn, prove useful in preparation for the end of semester examination.

Piloting On-Line Assessments in Engineering Thermodynamics and Fluid Mechanics at level 1

For the semester 1 module Engineering Thermodynamics I constructed four tests focusing on:

- Basic concepts e.g. closed, open system, flow and non-flow processes and the first law of thermodynamic
- The steady flow energy equation and some applications
- The perfect gas and applications to flow and non-flow processes and gas mixtures
- Steam cycles and the second law

I tried to ensure that each assessment included a balanced mix of questions allowing students to demonstrate basic knowledge and understanding and questions involving mathematical manipulation, application and detailed calculations. I carefully considered the visual impact of the tests and where possible included diagrams and figures to facilitate learning. For each assessment the questions were added to a question pool of (totaling 20 in all) and individual students were allocated a random mix of five to complete in a one hour time slot. The actual assessments were made live at a pre-determined time and the students took them under supervised conditions.

The results from the pilot were encouraging since the majority of students attended on each occasion and the average mark achieved for each test was around 55% with a standard deviation in each case of around 9%. The spread of marks in each test ranged between 20% and 100%. Overall of the 39 students taking

the module (each required to take 4 tests) only eight tests were missed and of the 144 tests taken only eight marks were below 40%.

Students who achieved less than 40% in any individual test were given the opportunity to take the test again at a later date with the proviso that marks would be capped at 40%. Of course steps were taken to ensure that resit candidates would not see questions identical to the original set drawn from the pool. This opportunity was designed to encourage students to maintain effort and work harder if they were having difficulties and to ensure that the assessments did not adversely affect individual progression to the next level (requiring a minimum overall mark of 40% in all modules). In the first test three students chose to re-sit whilst two who could have re-taken chose not to do so having achieved a mark of 30%. A similar pattern emerged in subsequent tests.

The principle of the online assessments was extended in semester II to the Fluid Mechanics module. In addition to the students who had taken the Engineering Thermodynamics module in the previous semester, this module included a cohort of Civil Engineering students for whom the approach was totally new.

The four topics tested for were:

- Pressure measurement
- Forces on Submerged Surfaces
- Application of Bernoulli's Equation and the Momentum Equation
- Dimensional Analysis and losses in pipe systems.

As in Engineering Thermodynamics the tests were taken at set times and in defined supervised locations. However because of the larger number of students involved two testing sessions were required on each occasion putting pressure on both staff resources and room availability. Once again the students engaged well with the on-line assessments and a positive effect on student learning may be inferred from an overall improvement in student exam marks in this module.

Extending On-line Assessments to Aerofluid Dynamics at level 2

Having considered the pilot to be a relative success I planned to extend the use of on-line assessments to level 2 BEng/MEng cohorts for the academic year 2005-6. I considered introducing the assessments to the parallel BSc cohort at both levels 1 and 2, but decided against it in the light of concerns about managing the testing of so many students. Subsequently as the start of the first semester approached I realised that it was impractical to require the students to undertake the assessments at specified times and places, (the method used in 2004-5). This was because at both levels 1 and 2 some of the students involved were on Pilot Studies programmes which took groups of them out every day for flying sessions and it was impossible to identify any times when tests could be organised. Thus tests were made live on selected days, (notified in advance to the students) and an individual student could choose to take the test any time on that day. Since the students could have access to course materials at the time of taking the test I had to carefully consider the nature of the questions asked. I continued to use a question pool and restricted initial feedback to an overall mark. This was to ensure that those having undergone the assessment could not relay comments to others who had yet to take a test and may have been confronted with the same question.

Once all students had taken the assessment more detailed feedback was made available. Furthermore, to introduce a measure of 'policing' I split the cohort into four different groups and each student was e-mailed the day before the test with a password to enable them to access their assessment. In general this method of testing worked well – there were occasional difficulties with the 'Blackboard' server going down or a test being timed out whilst some students were mid-test but these were overcome by simply re-setting the test and enabling the student to start again (with a different set of questions).

Students' reactions to online assessment and impact on attendance at timetabled classes: preliminary insights

In trying to persuade colleagues to use learning technologies to supplement and enhance their teaching a fairly common concern appears to be that provision of materials that students can access remotely inadvertently encourages them to miss classes with an attendant adverse impact on opportunities for learning. In my experience however, this is not the case.

In order to try to gauge the impact of the use of learning technologies, as outlined, on student engagement with face-to-face sessions I have tried to carefully monitor attendance at timetabled classes. The results from the 2004-5 pilot initially suggested that a variety of media in teaching had encouraged students to attend classes.

Student attendance at timetabled classes was similarly monitored in 2005-6 at levels 1 and 2. As outlined earlier, there were two distinct streams BEng/MEng and BSc all of whom were supplied with course

materials via 'Blackboard' but only the former group underwent 20% of their module assessment based on online testing throughout the semester. Preliminary findings from the monitoring exercise suggest that 65% (24 of a total of 37 students) of the B. Eng/M. Eng cohort taking the Engineering Thermodynamics module attended 70% or more of the timetabled classes. The equivalent figure for the B.Sc. cohort is 42% (13 of a total of 31). Preliminary results for the Aerofluid Dynamics module are more striking with 28 of a total of 37 (76%) attending 70% or more of timetabled classes, as compared with three out of 15 (20%) for the B.Sc. cohort. These preliminary findings therefore suggest that, whilst it is not possible to positively correlate the use of 'Blackboard' assessments with face-to-face contact in any systematic way, there is little to suggest any negative influence. These very tentative findings are corroborated by data regarding 'Blackboard' access. For the level 1 B. Eng./M. Eng. cohort, 1,959 of the accesses were associated with assessments, the number of accesses excluding assessments was 2,914. Adjusting for the number of students in each stream average accesses of Blackboard for this cohort was 78.7 the equivalent figure for the B. Sc. being 39. For the level 2 B. Eng. /M. Eng cohort 1,482 of the accesses were associated with assessment, the number of accesses excluding assessment being 2,175. Again adjusting the figures for the number of students in each stream, the B. Eng. / M. Eng. students registered average accesses to 'Blackboard' of 58.8 whilst for the B. Sc. stream the equivalent was 36.3. Thus for both level 1 and level 2 students more use has been made of the support material available through 'Blackboard' for assessment purposes.

Initial student reaction to online assessment has been gauged by a questionnaire circulated to students during and at the end of the semester and by analysis of Module Evaluation Questionnaires (MEQs). The questionnaire survey for the Engineering Thermodynamics module (level 1) in 2004-5 was completed by 29 students. 93% (n=27) found the module 'very demanding' or 'demanding' but 83% (n=24) also found that the materials provided via 'Blackboard' were 'very useful' or 'useful' and 72% (n=21) agreed or strongly agreed with the statement 'In terms of the 'Blackboard' assessments staged throughout the module which account for 20% of the module mark, have you found that they have encouraged you to study this material on a regular basis?' The module evaluation questionnaires completed by 24 students have shown that 63% (n=15) would recommend the module to a friend and 10 students singled out the 'Blackboard' tests as a 'like' in the module. Again preliminary results for 2005-6 are more striking with 18 of a total of 21 (86%) students being 'satisfied', 'very satisfied' or 'extremely satisfied' with the module and 71% (n=15) willing to recommend the module to a friend. Interestingly, similar to findings from the questionnaire survey of the 2004-5 cohorts, whilst nine students recorded the 'Blackboard' tests as a 'like' in their evaluation nine also felt that the module was 'difficult'.

Module Evaluation Questionnaires for the level 2 Aerofluid Mechanics module in 2005-6, which included online assessment, have been analysed. In all 26 students completed the MEQ and 21 (81%) claimed to be 'extremely satisfied', 'very satisfied' or 'satisfied' with the module. 20 students (77%) also felt that they would recommend the module to a friend, whilst 16 students identified the 'Blackboard' tests as a 'like' in the module.

Conclusions

This work – in – progress tentatively suggests that providing learning resources via a VLE and combining them with regular in-semester assessments that are taken online, and contribute to the overall module mark may contribute towards a learning environment which encourages students to work steadily throughout the semester to achieve learning objectives. In comparison with a parallel stream for which on-line assessments were not used the cohorts with on-line assessments demonstrated an increased engagement with both the 'Blackboard' material and face-to-face timetabled sessions. The corollary of this is that the 'Blackboard' tests may have fuelled students' interest and motivation for study. Further research will explore this proposition in more depth and seek to determine the influence of in-semester online assessment on end of module student performance.

Acknowledgements

The author is grateful to the Teaching and Learning Committee of the University of Salford for the award of two Teaching Quality Improvement grants which have supported some of the developments described here. The contribution of S.D.Allison is also acknowledged in this work.

References

Laws, E.M. (2002) A Pilot Programme into the Use of Blackboard to Support the Teaching of Engineering Undergraduates, International Conference on Engineering Education UMIST September, 2002.

Laws, E.M, (2003) An Evaluation of the Use of Blackboard to Support the Teaching of Engineering Students. Education for Capability University of Salford, September, 2003Laws, E.M, (2004) Innovation in Engineering Education International Conference on Engineering Education and Research "Progress Through Partnership"© 2004 V_B-TUO, Ostrava, ISSN 1562-358
Blackboard
http://www.Blackboard.com

Reflections on the use of an Online Focus Group to develop Practice in Undergraduate Supervision

Wendy Munro
W.Munro@salford.ac.uk

School of Health Care Professions

Introduction

An online focus group on Blackboard was used as part of an Action Research project to gain a staff perspective on undergraduate dissertation supervision in the Physiotherapy Directorate in addition to staff and student questionnaires. This article provides a critical analysis of the use of an on line focus group for this purpose.

Rationale for the use of an on line focus group

Focus groups are a method of exploring people's knowledge and experience through discussion where individuals can comment on each others experiences and points of view through group interaction (Kitzinger 1995, Stewart and Williams, 2005). Although less commonly used in academic research, an online method was used for the following reasons:

- Short timescale of the project
- Convenience of transcripts of data being readily available on Blackboard.
- Staff practised at using discussion boards within their teaching
- Asynchronous discussion allows access for staff from anywhere at any time
- Facility to include more staff in the discussion

Method

All staff involved in undergraduate dissertation supervision were enrolled on the discussion board. Participants were provided with an information sheet meeting ethical requirements and informed consent was given through active participation in the discussion forum. The forum extended for a two week period, during which threads of discussion gained from themes from the questionnaires were posted. Participants were able to add anonymous postings and further threads of discussion as desired. The researcher acted as both participant and moderator of the discussion as typical of an Action Research approach.

Discussion

54% of staff took part, with 70% of those who had returned the initial questionnaire being involved in the discussion. This was a good response rate considering contextual factors such as annual leave and staff being involved in the assessment period. Larger group sizes are possible and have been found to be more successful in allowing multiple topics to be discussed (Robson in Bloor et al 2001) and less likely to dwindle off than smaller groups (Stewart and Williams 2005).Despite the group size, the discussion was more limited in the second week. Suggestions for this are:

- contextual factors
- the timing of addition of the threads
- lack of enthusiasm

However, 41 messages were posted with a substantially higher number of readings (532 in total) suggesting messages were re-read and read by participants who did not post messages themselves.

Criticisms of online focus groups have been:

- lack of spontaneity of discussion
- loss of body language
- limited depth of discussion (Litosselti, 2003)

This lack of spontaneity may have advantages in that contributions are formed, considered and well articulated (Bloor et al 2001). One participant commented 'it's all a bit intense - I need to consider what I want to say before I write it down', suggesting this may be the case. There was however evidence of a social nature of conversation with the use of humour and conversational language. It has been suggested that online interaction cuts down the boundaries and allows people to divulge more about themselves (Stewart and Williams 2005). One participant commented 'am I being too honest here?'

Practical difficulties using this method were encountered in moderation. This may have been due to the inexperience of the researcher rather than the method but included:

- multiple questions leading to sequential answers at times rather than discussion
- providing too much information from the questionnaire back to the participants timing of adding the threads inability to question more deeply due to asynchronous format

Conclusion

The use of the online focus group gained a good response from staff and has achieved its objective in getting staff to reflect on their own experiences and develop an action plan. Despite disadvantages of the discussion tailing off and occasional loss of threads, there is an accurate record of discussion with detailed considered comments. Lessons have been learnt with regard to developing this technique further to be used as a valuable means to professional development.

References

Bloor, M., Frankland, J.,Thomas, M., Robson, K., (2001), *Focus Groups in Social Research*, Sage Publications, London, Thousand Oaks, New Delhi

Kitzinger, K., (1995), Qualitative Research; Introducing focus groups, *BMJ*, Vol. 311, pp. 299-302

Litosseliti, L., (2003), *Using Focus Groups in Research*, Continuum, London, New York

Stewart, K., Williams, M., (2005), Researching online populations: the use of online focus groups for social research, *Qualitative Research*, Sage Publications, London, Thousand Oaks, New Delhi

The Internationalisation of Higher Education: The Culture-Quality Balance in Virtual Learning Environments, a work-in-progress.

K.M. Robinson
k.m.robinson@salford.ac.uk

Informatics Research Institute Salford

Introduction

While international exchanges in the field of education have long been promoted on cultural, political and economic grounds, most countries within the OECD are increasingly viewing them as tradeable activity reflecting the market-orientated, commercial approach to the internationalisation of higher education. It is anticipated that this commercial approach will assume increasing global significance in the future (Larsen and Vincent-Lancrin, 2002; Van-Damme, 2002). E-learning is one dimension of today's International Trade in Higher Education Services, characterized by the employment of Information and Communication Technologies (ICTs) including the World Wide Web and satellite technology, to deliver academic services. Developments in ICT have in turn, spawned new forms and conceptualisations of the learning environment largely in the shape of the Virtual Learning Environment (VLE). The extent to which universities deploy VLEs may be represented as a continuum as depicted in Figure 1.

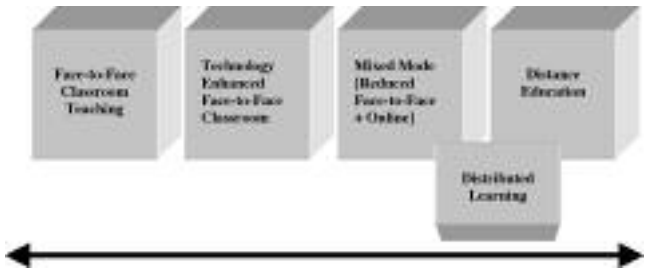

Figure 1: Continuum of On-line Learning Applications (Bates, 2001:22)

[1]OECD: Organization for Economic Co-operation and Development

[2]Under the GATS [General Agreement on Trade Services] classification, the International Trade in Higher Education Services is divided into four "modes of delivery": cross-border supply of educational services [online learning, distance education, video-conferencing, etc.]; consumption abroad [international student mobility]; foreign investment by educational institutions [the establishment of branch campuses in foreign countries]; and movement of natural persons [international teacher mobility]. [Van-Damme, 2002; Larsen and Vincent-Lancrin, 2002]

Traditional mode universities use ICTs to enhance teaching and learning in the classroom whereas dual-mode universities offer both campus-based and distance education programmes. Moving along the continuum single-mode or dedicated Open Universities use print-based distance teaching and broadcasting media to "reach out to students who cannot gain access to conventional universities" (Bates, 2001:21). Finally, virtual universities offer absolute distance education courses entirely on-line, perhaps the ultimate in distributed learning.

An individual Higher Education Institution's position on the continuum will in part be determined by teaching and learning strategy that informs the goals for e-learning. However, whilst maintaining an outward orientation driving supply beyond the confines of the campus Higher Education Institutions (HEIs) also, as part of their learning and teaching strategies encourage the physical movement of international students toward their campuses, based on a "demand-pull" model. One of the main benefits to the institutions is that they receive unsubsidized fees, which international students pay. Thus the benefits of e-learning and international student mobility coincide with the technological opportunities of e-commerce and the Internet in the educational environment, which represent responses to the globalization phenomenon. Whilst many institutions across the globe seek survival in a competitive market by maximising opportunities in this area there is very little in-depth research that addresses the human and cultural implications of online learning. Walsham [2001] calls for more in-depth interpretive research to interrogate the implications of ICTs in multicultural contexts, that expose human issues such as perceptions and feelings, and cultural norms and values.

Aims and Objectives

The aim of this work in progress is to explore how online tools and web support within VLEs can integrate cultural elements in their design in order to derive functional requirements that will enrich the learning experience of postgraduate students. As a starting point the research will examine the ways in which artefacts are arranged and used within the VLE and will go on to describe the ways in which students of different cultural backgrounds interact with the VLE in the context of their learning. Ultimately the research will seek to determine the impact of the VLE on students' perception of quality of their online learning experience.

Review of the Literature

There is a general consensus in the literature that e-learning promises a wide range of benefits

to all its stakeholders, since it enables teaching and learning to take place 24 hours a day, 7 days a week within a borderless environment. Currently, there is a rapidly expanding market of people around the world who want tertiary-level education that gives them an economic edge and makes them key players in an internationally competitive sector that is increasingly becoming higher education (Tiffin and Rajasingham, 1999). Thus it is argued that rapid growth in e-learning is primarily the result of the demand for flexible forms of education and the willingness of HEIs to supply that flexibility.

Whilst the internationalization of higher education has enabled public universities to enter the global market to supply post-secondary education services it has also done much to develop international student mobility (Larsen and Vincent-Lancrin, 2002; Van Damme, 2002) The characteristic common to both e-learning and students leaving their home country to study abroad is that both options go beyond national, geographic and cultural borders. However, whereas e-learning brings educational services to students wherever they are geographically located, international students physically travel across geographic borders to receive educational services from universities of their preference. It is ironic that although Internet-based delivery makes access to learning potentially easier for students who previously are unable to accept the disruption of physical relocation increasingly students are travelling to universities in other countries to earn their qualifications (O'Donoghue et al, 2001; Hewling, 2005).,The benefits of e-learning thus appear to be paradoxical. Nonetheless, both e-learning and international student mobility have created a dynamic cross- and inter-cultural approach to higher education. In either case, this means that "the cultural backgrounds of students learning together is increasingly diverse" (Hewling, 2005).

It is clear that online communication presents challenges to students and educators, because it is intercultural and it is mediated by technology (Bell and Zaitseva, 2005). One potentially constraining factor is that students of different nationalities and ethnic backgrounds possess differences in language, culture and historical sensitivity, all of which makes meaning difficult to communicate at a distance ((Buchanan and Huczynski, 2004: 358: Verduin and Clark, 1991). Another complexity is that diversity not only exists among cultures, but also within cultures. Students of the same society, for instance, may share common norms and values, but have their own set of beliefs and values. Thus each student will interact with the VLE in a manner unique to his/her own experience and understanding and inner beliefs. As such, there are implications for the ways in which artefacts within the VLE are arranged; how students of different cultural backgrounds use these technologies in their learning and the impact which the VLE may have on students' perception of quality of their online learning experience.

Despite the best intentions with which HEIs may develop and apply quality assurance policies to their e-learning initiatives, it is the student who "determines whether or not quality has been achieved in its totality" (Lewis and Smith, 1994:28). The criteria which a student may use to determine the quality of his/her online experience may not be shared by another student of the same culture, let alone by a student of a different cultural background. This raises a very important question for the research: How Can Culture and Quality be balanced in the VLE to Enrich and Bring Value to the Students' Learning Experience?

A Research Design for exploring the Culture-Quality Balance

An interpretive case study approach is appropriate for the study since it offers a means of investigating and clarifying the Culture-Quality-VLE phenomenon within its real-life context (Yin, 2003). Relevant literature for the study will be drawn from major themes in e-learning; quality; culture; and human-centred systems design. Gilly Salmon's (2000) Five-step Model of Online Teaching and Learning along with the constructivist theory of learning will be employed as frameworks for reflecting on how students access, adjust and socialize within the VLE, and for examining what students 'do' in their online learning activities in order to construct and present knowledge. The theories will later serve as an evaluative framework for examining the implications for the quality of students' online learning experience.

Two sets of empirical data, drawn largely from case studies of two universities in two different geographical hemispheres – the University of Salford, UK and the University of Technology, Jamaica – will be reviewed and analyzed. Data will be generated from a purposive sample of local and international postgraduate students from each of the universities who have enrolled in campus-based programmes and are pursuing their Masters Degree. These students will be interviewed to capture rich, qualitative data on two important social issues – Culture and Quality – as it is lived, experienced and understood by them in the VLE. Other data for the study will be garnered from questionnaires; document analysis of student projects and course materials; content postings from VLE activities (e.g. discussion board); classroom observations; instructor diaries; and

interviews with relevant staff members (e.g. module leaders).

The field study commenced at the University of Salford in November 2005. Based on Salmon's (2000) five-step model of teaching and learning online through Computer-mediated Communication (CMC), postgraduate students were required to use the university's Blackboard VLE resource to participate in online activities subsequent to being introduced to the technology and meeting their classmates face-to-face. A similar procedure will be undertaken at UTECH in August 2006.

Significance of the Study and Expected Contributions

This research will provide sound information to all the stakeholders – students, educators and institutions – that will supplement other sources in making informed decisions based on an evaluation of the interplay between learning and technology.

Although this research focuses on the ways in which cultural differences may challenge students' respective learning norms and influence their perception of quality in VLEs, its primary purpose is to explore how online tools and web support within VLEs can integrate cultural elements in order to derive functional requirements that will enrich the learning experiences of students. Information garnered from the study will help to identify loopholes that may exist within the VLE and to examine their impact on learning. The creation of new knowledge will help to provide possible recommendations and/or solutions for improving the quality of the learning experience in virtual education. It will also help to allay concerns surrounding quality within the virtual classroom.

The research will give students, the main customers, a chance to voice their priorities and concerns regarding quality within e-learning, thus providing rich insight and understanding to educators and higher education institutions of some of the factors which influence students' perception of quality. This in turn, will provide the basis for exploring online and web-based tools that will support and enhance students' online learning experience.

Conclusion

E-learning and international student mobility are two dimensions of today's International Trade in Higher Education. While both strategies have their respective advantages, collectively, they also have human, social and cultural implications as they both go beyond national, geographic and cultural borders. The most pressing concerns are how cultural differences may impact on students' interaction with the VLE and their perception of quality. The issue of quality does not refer only to the education itself, but also to the ways in which artefacts within the VLE are arranged and how students of different cultural backgrounds use these technologies. One significant intended outcome of this study is to derive student-centred functional requirements, by exploring online tools and web support within VLEs that can integrate cultural elements. From the overall study the researcher hopes to gain a richer understanding of quality as viewed by the postgraduate students and the various aspects of culture which surfaced during their interactions with the VLE.

Acknowlegements

I would like to acknowledge the contribution of Frances Bell, Information Systems Institute, to this work in progress as supervisor of the research.

References

Bates, T. (2001) National Strategies for E-Learning in Post-Secondary Education and Training.

Bell, F. & Zaitseva, E. (2005) ''Only Connect': Complexities in International Student Communication', *E-Learning*, 2 (4) : 342-55.

Buchanan, D. and Huczynski, A. (2004) *Organizational Behaviour: An Introductory Text*. 5th Edition. Prentice Hall International: UK.

Hewling, A. (2005) Culture in the Online Class: Using Message Analysis to Look Beyond Nationality-Based Frames of Reference. *Journal of Computer-Mediated Communication;* 11:1; article 16. [Online] Available from: http://jcmc.indiana.edu/vol11/issue1/hewling.html (Accessed: 3rd February, 2006)

Lewis, R.G. and Smith, D.H. (Eds.), 1994, *Total Quality in Higher Education*, Florida: St Lucie Press).

O'Donoghue, J., Singh, G. and Dorward, L. (2001) Virtual Education in Universities: A Technological Imperative. *British Journal of Educational Technology;* 32(5): 511-523.

Tiffin, J. and Rajasingham, L.([1999) In Search of the Virtual Class: Education in an Information Society. Routledge: London

Van Damme, Dirk (2002) Trends and Models in International Quality Assurance in Higher Education in Relation to Trade in Education, *Higher Education Management and Policy Journal;* 14 (3): 93-136.

Verduin, J. (Jr) and Clark, T. (1991) *Distance Education: The Foundations of Effective Practice*. Jossey-Bass Publishers

Walsham, Geoff (2001) *Making a World of Difference: IT in a Global* Context. John Wiley and Sons Ltd.

Yin, R.K. (2003) *Case Study Research: Design and Methods,* Third Edition, Thousand Oaks, CA: Sage Publications.

Achieving Learning Outcomes in Distance Learning Education: Planning a Multidisciplinary Review

Monty Sutrisna
M.Sutrisna@Salford.ac.uk

School of Construction & Property Management

The Education sector in the UK has witnessed the shift of teaching and learning from a more traditional approach to so-called 'outcomes based learning'. The shift has been considered gradual from the approaches that emphasised the 'input' such as the educational objectives (Tyler, 1949) and instructional objectives (Mager, 1962; Popham et al., 1969) to an approach that emphasised the 'output' of the learning process, i.e. the learning outcomes (Otter, 1989; 1992; Allan, 1996). By proposing a shift of attention from structures and methods of course delivery towards what is actually learned, the learning outcomes approach provides potential advantages for higher education in terms of increased flexibility, quality, and learner motivation as this approach, it is argued, makes it easier to consider alternative ways of achieving an outcome by recognising that people learn in different ways, places and times, and at different paces (Otter, 1992).

Intended to provide a higher degree of flexibility in education, distance learning courses have been offered by various educational institutions as early as a hundred years ago by correspondences (Valentine, 2002). The theory of independent study (Moore, 1973), has strengthened the more contemporary development of distance learning in education. The communication and information technology revolution has supported the further development of distance learning in order to widen access to education, to raise the quality of the learning experience, and to underpin widespread reform (Perraton, 2004). As many higher education institutions (HEIs) are feeling the pressure to control their costs, improve quality of instruction, focus on customer needs, and respond to competitive pressure the advent of advanced communication and information technology has been perceived as the answer, prompting HEIs to 'jump-on-the-bandwagon'.

Whilst potential barriers to and problems surrounding distance learning have been articulated in many studies (Keegan, 1986; Sweet 1986; Knapper, 1988; Sheets, 1992; Bates, 1995; Greenberg, 1998; Inman and Kerwin, 1999), little attention seems to have been given to the strategies applied by different HEIs to achieving the learning outcomes in their distance learning courses. Distance learning as a mode of education has been considered pedagogically different from and cannot be perceived as a substitute for ordinary classroom or face-to-face instruction (Holmberg, 1989). Thus, strategies based on sound pedagogical principles need to be formulated and implemented for distance education in order to achieve intended learning outcomes.

In response to the preceding discussion, an investigation has been set within the University of Salford to shed light on the matter. This ongoing investigation involves lecturers from five different schools, aiming to explore the different strategies applied by their respective schools to deliver their distance learning courses. Three perspectives of the relevant stakeholders, namely the Institution, Lecturer, and Student, are being used as the unifying themes. The investigation does not intend to compare and contrast, but rather to explore the different strategies implemented with regard to different contexts, in comparison with insights gained from a synthesis of the relevant literature in learning and higher education. The primary aim of this investigation is to highlight good practice and identify gaps and potential problems, this process underpinning the formulation of generic proposals for improvement and enhancement of the learning experience. The relative merits of the proposals will be tested by referring them back to the contexts of the five schools, liaising with the principal stakeholders of the process to identify potential obstacles in the implementation of the proposals, leading ultimately to the refinement and revision of the proposals. The methodology applied in this investigation is also expected to provide a platform for further research to inform practice in the field. At the time of preparing this article, the investigation was in the phase of analysis and formulation of proposal for improvement. The outcomes of the investigation will be disseminated in subsequent publications.

Acknowledgements

The author wishes to acknowledge other members of the investigation team as follows: Christine Parker, Douglas Ford, Richard Bell, and Sarah Nicholson. The investigation is a part of coursework for the PG Certificate in Higher Education Practice and Research offered by the Education Development Unit, University of Salford, UK.

References

Alan, J. (1996) Learning Outcomes in Higher Education, *Studies in Higher Education*, 21(1): 93-108.

Bates, T. (1995) Technology: *Open Learning and distance education* (New York, Routledge).

Greenberg, G. (1998) Distance education technologies: best practices for K-12 settings, *IEEE Technology and Society Magazine*, Winter: 36-40.

Holmberg, B. (1989) The concept, basic character, and development potentials of distance education, *Distance Education*, 10(1): 127-135.

Inman, E. and Kerwin, M. (1999) Instructor and student attitudes toward distance learning, *Community College Journal of Research & Practice*, 23(6): 581-592.

Keegan, D. (1986) *The Foundations of Distance Education* (London, Croom Helm).

Knapper, C. (1988) Lifelong Learning and Distance Education, *American Journal of Distance Education*, 2(1): 63-72.

Mager, R. (1962) *Preparing Instructional Objectives*, revised 2nd ed. (Belmont, David Lake Publisher).

Moore, M. (1973) Towards a theory of independent learning and teaching, *Journal of Higher Education*, 44: 661-679.

Otter, S. (1989) *Understanding Learning Outcomes* (UDACE, London).

Otter, S. (1992) *Learning Outcomes in Higher Education* (UDACE, London).

Perraton, H. (2004) Choosing Technologies for Education, in: Perraton, H. and Lentell, H. (Eds.) *Policy for Open and Distance Learning* (London, Routledge Farmer).

Popham, J., Eisner, E., Sullivan, H., and Tyler, L. (1969) *Instructional Objectives* (Washington, American Educational Research Association).

Sheets, M. F. (1992) Characteristics of Adult Education Students and factors Which Determined Course Completion: A Review, *New Horizon in Adult Education*, 6(1): 3-18.

Sweet, R. (1986) Student Drop-out in Distance Education: An Application of Tinto's Model, *Distance Education*, 7: 201-213.

Tyler, R. (1949) *Basic Principles of Curriculum Instruction* (Chicago, University of Chicago Press).

Valentine, D. (2002) Distance Learning: Promises, Problems, and Possibilities, *Online Journal of Distance Learning Administration*, 5(3).

Literature review on Distance Learning and Educational & Learning Theories

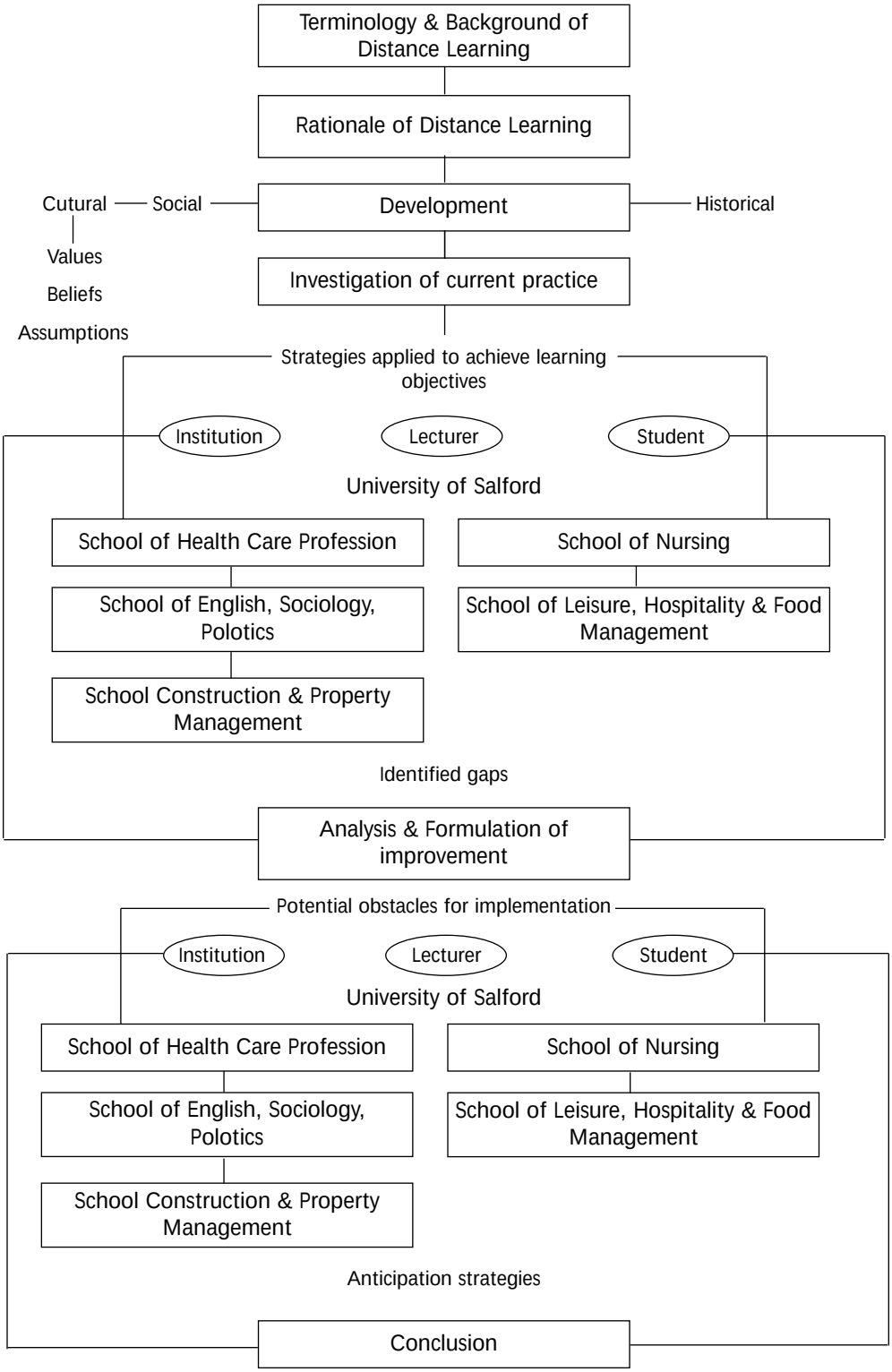

Figure 1. The investigation process of strategies in achieving learning outcomes in distance learning

CAB – Collaboration Across Borders

Janice Whatley
j.e.whatley@salford.ac.uk

Information Systems Institute

The CAB project ran from November 2003 to November 2005, supported by funding from the European Socrates - Minerva action. The project team was a partnership between researchers from five countries in Europe, who have enjoyed learning about collaboration between student groups, and in working together have developed a long-term research community. Although the CAB Project has concluded, the resulting Internet site is very much alive, and open for use by tutors and students.

One of the main outcomes from this research has been the development of the CABWEB Portal, as an area for providing spaces for collaborations, both between tutors and students. Tutors can meet other tutors with similar interests, with the specific aim of designing a collaborative learning activity that their students can engage in together with students from another educational establishment, either in the UK or elsewhere in Europe or the world.

We are pleased to invite you to take a look at the CABWEB Portal, and think about the possibility of a student collaborative activity for your students. There are a number of online resources to help you to design a collaborative activity, such as examples of previous activities and guidelines for running a successful activity. You may also like to join in the JILID community, a private space for tutors and students, where there are regular discussions on intercultural aspects of learning and the design of educational media.

Through the two years of the project nearly 2000 students have engaged in online collaborative activities, and from our research we note that about 85% of these agreed that their participation in the online activity was beneficial to them in some way. In particular they said that the activity enhanced cultural exchange, helped with language learning, enabled developing critical evaluation skills and generally helped them in their coursework. These initial collaborative activities have not been without their difficulties, but we have used the feedback to inform our guidance for tutors in the online resources provided, so that tutors new to CABWEB will have the benefit of our experiences.

Many of the online collaborative activities hosted to date have been concerned with peer review or evaluation of other students' web pages or program code. Some examples are as follows:

- Students from a UK university produced multimedia presentations, which were evaluated by students from Germany and Poland, in order to provide feedback on the effectiveness of communicating a message using different multimedia tools.
- Students from Poland wrote JAVA code, which was tested and commented upon by students from Spain and the UK, in terms of the user interface.
- Students from Salford produced prototypes of teaching systems, which were evaluated by students from Spain, Poland or The Netherlands, either as users, educationalists or multimedia specialists.

The wealth of experience from these activities has informed several research papers, many of which are available on the CABWEB Portal. The CAB Project has successfully created a neutral space for student collaborative activities, and for their tutors to meet to design these activities. Why not join in the success, and become a part of the wider network of tutors and students collaborating across borders.

Notes