

Evaluating CHAT Seminars within a WebCT Networked Learning Environment

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Abstract

An evaluation of a taught module "Learning and the New technologies" within a Post-Graduate Master of Education course "IT and Multimedia" is reported. The evaluation forms a case study of the use of Information and Communication Technology (ICT) to provide learning support for part-time, full-time and (potentially) distant students. Students on the course are mainly teachers learning for continuing professional development. A Virtual Learning Environment (VLE) was developed using WebCT and use of the environment was evaluated in relation to the quality of work produced by students and the nature of their interaction through the ICT tools. CHAT seminars discussed issues arising out of students' reading of set papers. These provided a reflective discussion forum to engage in Exploratory Dialogue. The evaluation of student use of the VLE raised the issue of how to increase the participation of some students in on-line CHAT and group-work. Further issues included how to structure courses to meet the needs of full-time, part-time and distant students with different needs.

Introduction

Why Networked Learning? The student base is changing - those wanting to take post-graduate courses are no longer only recent graduates - they are diverse in prior knowledge and experience. Increasingly, students need to balance work and family commitments with the demands of learning new skills (McCombs, 1991). As a consequence Educational Institutions must respond rapidly and flexibly to meet students' needs.

"Britain towards 2010 published by the Department of Trade and Industry says students no longer need to be resident at universities...The document dismissed objections about face to face interaction between student and teacher - for most students it does not happen under traditional methods - and lifestyle". (Donald MacLeod reporting in the Guardian HE, 25th January 2000).

The argument is that, using ICT, flexibility can be provided for students living and working at locations distant from the University. However, to be effective ICT must meet requirements of quality. How do we meet these requirements given constraints (largely financial) which inhibit face to face teaching? We not only need courses that deliver informative content but also develop practical ICT skills, critical thinking skills and stimulate students to become autonomous learners.

A Design Grounded in Learning Theory

Theories of learning suggest deep conceptual understanding and the development of intellectual skills require active, constructive tasks (Piaget, 1970), that provide scope for verbal interaction (Vygotskii, 1978). Collaborative Learning exposes students to new information and alternative perspectives encouraging them to reflect on and revise conceptions (Blaye, Light, Joiner & Sheldon 1991; Littleton & Light, 1998). Exploratory talk (inquiring, explaining and justifying) is particularly beneficial for these purposes (Mercer and Wegerif, 1999). From the above discussion any Learning Environment should provide opportunity for:

- **Acquisition** - new knowledge needs to be acquired through exposure to new information.
- **Articulation** - students need to test acquisition through interaction with peers and tutor.
- **Application** - to develop skills, knowledge must be applied in constructive tasks.
- **Assessment** - students need constructive feedback if they are to set and re-set learning goals.

Applying these criteria to the design of Networked Learning we have developed the following pedagogical approach (Barker & Pilkington, 2000):

- **Acquisition** - students can learn at their own pace through access to on-line notes. These replace lecture notes enabling more articulation and application in face to face time.
- **Articulation** - Computer Mediated Communication (CMC) CHAT and Bulletin Board tools can supplement face to face sessions (and for distant students replace face to face tutorials). Through these tools students can increase their interaction with peers and tutor.
- **Application** - using CMC tools, and Web-Based Group-Space(s) students can apply knowledge by collaborating together to construct a resource (an authentic design task).
- **Assessment** - formative feedback can be given via CMC at various levels through a mixture of tutor set tasks/quizzes and peer or tutor comments via CHAT Bulletin Board or e-mail.

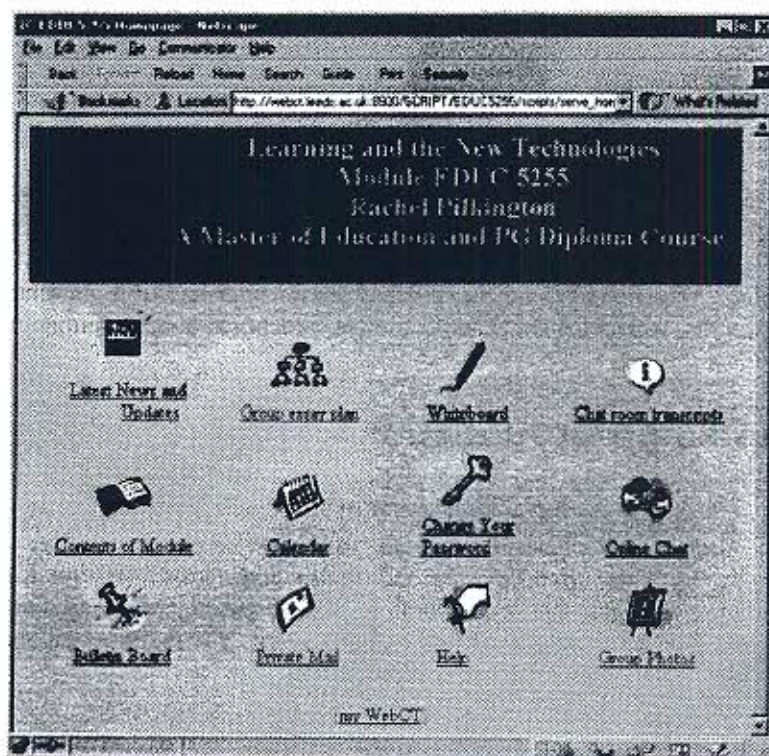


Figure 1. The WebCT Module Home Page

The IT and Multimedia Course

Based on the above framework, our approach has been to design a Virtual Learning Environment (VLE) using WebCT's CMC and World Wide Web (WWW) Tools (Figure 1 shows the home page with icons through which CHAT, Bulletin Board and Course Content are accessed). The course aimed to develop an understanding of the implications of learning theory for the design of computer-based learning. The evaluated module ran for 12 weeks. It consisted of 22 face to face hours and 11 remote on-line CHAT seminars. On-line course material replaced lectures.

The tutor and 2 demonstrators taught the module and there were 20 registered students (1998). Half the students were part-time and half full-time students. Most (15/20) were teachers with an existing role in teaching ICT. Full-time students were mainly International Students for whom English was a second language but who were resident in Leeds to study. In contrast all part-time students were Home students, but many travelled considerable distances to Leeds.

Lecture notes and Slides were uploaded into WebCT. Lecture Notes were plain text with hyperlinks to glossary definitions. Slides were downloadable as Power Point mixed media presentations. Having the course material on-line enabled *acquisition* to take place at a distance, as a self-paced and individual activity. The emphasis was on giving maximum opportunity for *articulation* and *application* in face to face time.

On-Line CHAT Seminars

CHAT seminars were held weekly prior to the face to face session to discuss issues arising out of students' reading of set reading. These evening seminars were tutor-led and content oriented, enabling the tutor to check the understanding of key concepts. Figure 2 illustrates a reconstruction of part of an on-line seminar. (Student names have been changed.)

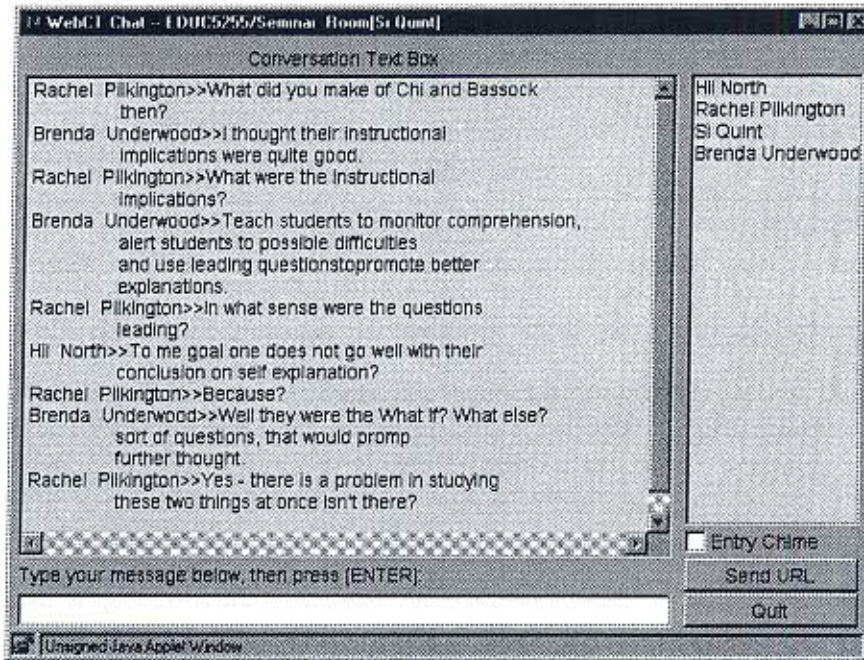


Figure 2. Reconstruction of a CHAT dialogue

Practical design issues were made authentic by involving students in collaborative group-work to produce their own web resource. Students worked in small groups of 5 or 6 and chose their group members and the topic of their resource. Within WebCT, private forums (Bulletin Boards) were set up to help group members to collaborate. Students presented their completed resource to the rest of the class and peer-reviewed each other's work on the Bulletin Board. Tutor and demonstrators rated each resource on criteria of management of the collaboration, quality and coherence of the presentation, and relevance and originality of its content. This assessment did not count directly towards students' final grades.

The Evaluation of the Module

The evaluation of the module examines the use of the Virtual Classroom and looked at:

- Student responses on course feedback questionnaires.
- Student participation in on-line CHAT seminars on course reading.
- The quality and the quantity of the discourse produced by students and tutor in the on-line CHAT (See Pilkington, Treasure-Jones & Kneser, 1999 for details of the analysis method).
- Student group-work scores.
- Student written assignment scores. These were final essay assignment grades.

Overall Impressions

Fifteen out of twenty students returned an evaluation questionnaire. Overall, 80% of those giving a response rated the course quality as good to very good. Some students were supportive of the collaborative group-work and wished that assessment had been based on this, others saw problems in working at a distance. Part-timers did not value the on-line CHAT seminars as much as full-time (mainly) International Students.

Participation in CHAT Seminars

From questionnaires, the main reasons for non-participation in the CHAT seminars was difficulty in accessing the CHAT from home. Six students did not participate in the CHAT at all. Of these, five were part-time Home students. These difficulties also affected part-time students' approach to group-work. Group-work scores showed a significant positive correlation with number of weeks they attended the CHAT (Spearman rank correlation $r_s = 0.74$, $N = 20$, $p < 0.01$). This result needs to be treated with caution since each individual in the group is allocated the same grade based on rating the resource of the group. However, it supports the impression (from talking to students) that part-time Home students, frustrated by not having time to manage group-work, adopted a more co-operative than collaborative approach which proved less satisfying and less productive. Similarly, due to difficulty in scheduling time, most Home students showed little use of the CHAT. However, two Home students proved the exception to this rule producing 89% of all Home student's turns. No International student (all full-timers) failed to participate at all; International Students showed a higher level of participation (though turn length was shorter).

Looking at the quality of the participation, the proportion of on-topic Exploratory Dialogue (see Pilkington, Treasure-Jones & Kneser op cit.) was a constant 45% for International and Home students alike. The two dominant Home students produced a higher ratio of this type of talk than other students did (25% of the total number of such moves). However, the tutor accounted for 54% of such moves.

Inclusive Dialogue

The on-line CHAT was a strongly tutor-led discussion. From a total of 9831 words and 664 turns over eight analysed seminars the tutor produced 46% of words and 37% of turns. Three students, 1 full-time International Student and 2 Home students accounted for another 37% of words and 43% of turns between them - leaving just 17% of the word total to the remaining students. This raises the issue of how the CHAT could be made more inclusive.

The Role of Assessment

There was a positive relationship between participation in the CHAT and a good mark in the group-work. However, students who made no use of the on-line CHAT were not less likely to produce a well-written assignment. Since it is the written assignment (and not the group-work mark) that contributes to the final mark, there was no assessment-based incentive to participate in CHAT or group-work.

Issues Raised

Differences in use of the VLE between Home (mainly part-time) and International (all full-time) students emerged. Some students (mainly part-timers) had problems attending the 6-7.00 p.m. time-slot for the evening CHAT. This year, two CHAT seminar slots, a lunchtime slot and an evening slot were provided. This doubled the tutor's seminar hours but also doubled part-timers' participation in seminars. However, difficulties in scheduling meetings (on-line or face to face) continues to affect part-time students' approach to group-work. Full-time students had fewer difficulties in scheduling meetings than part-timers. In the group-work this year, two International Distance Students were able to schedule lunchtime CHAT and Bulletin Board discussions with full-time campus-based students enabling them to collaborate in group-work. This suggests that (at least for part-time students) pressure of time and not the functionality of the tools is a more limiting factor for Collaborative Learning. That two students failed to submit a written assignment and several students required extensions due to work or family problems further suggests that time to study was a more important factor for part-time students.

There was no positive relationship between written assignment mark and participation in CHAT seminars. However, this is probably true only for students able to frame an argument on the topic. Participating in the CHAT may have assisted students starting from a lower level of knowledge or inexperienced in academic argument in English. From the questionnaires, full-time International students tended to value the CHAT more (even those who were silent) and were also more likely to read CHAT transcripts posted the next day. It was difficult for some students to keep up (in real time) with discussion in a second language. The transcripts provided an opportunity for students to check their understanding.

The on-line CHAT seminars on set reading were strongly tutor-led. Based on previous research, CMC tools are poorly used unless the tutor actively facilitates discussion (Rohfeld & Himestra, 1995, p.91). From the dialogue analysis (Pilkington, Treasure-Jones & Kneser, 1999) the tutor interacting with two or three active students was effective in modelling Exploratory Dialogue. However, the analysis revealed a need to encourage more inclusive participation. The value of differing roles for the tutor (explaining, inquiring, encouraging) and the ideal balance between these is now the subject of further work.

Summative assessment might motivate more active participation in CHAT and group-work. Should all students be *required* to take part in such work? If skills such as oral debate design and team working (skills acquired and applied through participation in CHAT and group-work) are valued then the answer is, probably, yes.

All students benefited from some aspects of the Virtual Learning Environment. Part-time and Distance Students benefited from open and flexible access to course material and those who chose to participate in CHAT seminars benefited from not having to travel to meetings. Full-time International students benefited from flexible access to written transcripts of tutorial discussion as well as text-based lectures.

The VLE is being piloted with a small number of Distance Students this year. First impressions are that CHAT and Bulletin Board tools have not fully met these students' need for a sense of presence. One student suggested video-conferencing so that they could really *meet* their fellow students. Kahl & Cropley (1986) suggest Distance Students feel more 'isolated' than face-to-face students and experience lower levels of self-confidence as a result. This can lead them to drop out. Students who commented on this, rated face-to-face contact above CHAT and CHAT above Bulletin Board in giving them a sense of presence.

Conclusions

Problems encountered on this pilot programme suggest the technology is not the most limiting factor in delivering quality education via E-Universities. Students must first have adequate access to the technology, sufficient time to study and sufficient common time to work collaboratively. The work for tutors in attempting to maintain quality whilst adopting distance techniques is increased. However, all students benefited from some aspects of the extra flexibility provided by the VLE. Based on loss of presence and lower participation in seminar and group-work by part-time and Distance Students, concerns about Distance Learning that involves reduced interaction (between students or between teacher and student) appear well founded. Good practice in Distance Learning must involve finding ever better ways to compensate for loss of face to face contact.

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