

# Synchronous On-line Tutorials for Staff Development?

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## ABSTRACT

Academic staff often find it difficult to attend staff development courses. Lack of time and other factors no doubt contribute to this recurrent problem. The aim of this project was to develop, implement and assess the value of synchronous on-line tutorials to encourage a distributed staff-community to engage with e-learning. The project also investigated practical approaches to integrate a range of commonly available 'e-learning tools' (including Internet Explorer, Blackboard, NetMeeting, Word and Windows Media Player) to support these synchronous on-line tutorials. Learning technologists, staff developers, and teaching staff at Southampton, Winchester, Reading and Bournemouth refined and tested the tools and approaches 'off-line', and then piloted and evaluated the use of the tools in real-life, on-line tutorials. The project concluded that it is possible to use synchronous on-line tutorials to engage small groups of staff in discussion about the learning technologies. It is also possible to engage staff in collaborative working in this way. A range of problems and limitations were encountered, not all of which were solved or reduced as partners in the project gained experience of the synchronous on-line tutorial.

## Keywords

Synchronous online tutorials, staff development, virtual classroom,

## INTRODUCTION

Many higher education institutions are undergoing change to introduce and develop eLearning and using programmes of staff development to support this process. A prime consideration is to develop staff skills and readiness to support students in an on-line setting. The processes, however, are not straightforward. Although many staff see the need for development, the traditional problems of finding time for staff development, and matching time available to opportunities, are limiting staff involvement. There is a related and expanding interest and research literature in the area of on-line support for staff development (Mackenzie and Staley, 2000; Milligan, 1999; Stokes, 2000; Sharp and Bailey, 1998; Shephard et al, 2003). This particularly applies to staff development for eLearning. Staff and institutions are seeking the traditional benefits of distance learning combined with the potential benefits of e-learning to 'deliver' this highly ambitious change.

A long-standing staff development approach is to facilitate face-to face collaborative learning in workshops. There is a lot in common between this approach and that adopted by teaching staff in their own 'innovative small group tutorials' with their students. There is also significant current interest in synchronous online communication for learner support (see Lobel, Neubauer & Swedburg, 2002; and Slack, Beer, Armit and Green, 2003). The key research question is: can this form of learner-support be recreated in an on-line, synchronous, at-a-distance setting for staff development?

The aim of this project was to develop, implement and assess the value of synchronous on-line tutorials to encourage a distributed staff community to engage with e-learning. The project's objectives were to design a course 'learning environment', making use of resources including text and video; to allow participants to take part in on-line discussion and possibly maintain visual/audio contact with the tutor; to refine and test the use of these approaches and tools within the context of the on-line tutorial; and to pilot and evaluate the use of these approaches and tools in real-life, on-line settings, using partners in the four institutions as participants and tutors. The project was supported financially by ESCALATE (The Learning and Teaching Support Network Centre for education; [www.escalate.ac.uk](http://www.escalate.ac.uk)).

## THE LEARNING ENVIRONMENT AND ONLINE TUTORIALS

The project adopted Blackboard's Virtual Classroom as the main online tool for these tutorials. The Virtual Classroom allows facilitator and participants to communicate in real time by typing and sending messages. It also allows the use of a shared whiteboard and a shared browser. In addition, the project made use of Blackboard's asynchronous discussion board as a pre- and post-tutorial forum. Partners also spent considerable time setting up and exploring the use of NetMeeting before the tutorials. It was hoped that the facilitator of each tutorial would be able to NetMeet individually with each participant before, and during, each tutorial, to deal with any problems. The following four tutorials were prepared, each by a single project partner, who facilitated the tutorial and evaluated its operation and outcomes. Other partners became the participants in tutorials they were not facilitating. The project was designed so that the whole group could learn from, and build on, the experience of each tutorial. A key element of the tutorials was the production of a 'lessons learned' report to pass on experience to the next tutorial facilitator.

Tutorial	Title	Aim	Intended outcomes - participants will be able to:
1	Factors that limit the use of ICT to support student learning in UK HE.	To undertake a synchronous discussion on the issues that limit the use of ICT to support student learning in UK HE.	Demonstrate their own critical awareness of the use of ICT to support student learning in UK HE.  <i>Demonstrate involvement in online discussion &amp; online negotiation about these issues.</i>
2	Use of ICT to support widening participation	To consider how the SLTN* might explore the use of ICT to support widening participation. (* Southern Learning Technology Network; a regional sub-group of the Association for Learning Technology).	Raise their awareness of possible strategies for using ICT to support wider participation. Critically engage with pedagogical & practical issues. Identify ways in which the SLTN might collaborate to use ICT to meet specific WP needs.
3	Teaching strategies for e-learning.	To consider pedagogical strategies & implications for learning & teaching through ICT.	Critically review current practices in online learning & teaching. Analyse educational interactions associated with the creation & use of web-based learning scenarios. Consider opportunities for selecting appropriate mixes of educational technologies to meet specific curriculum design issues
4	Simulation: online student assessment	To consider online student assessment & experience an online simulation task	Outline & critically review current practices in online assessment in one academic context. Make recommendations for the use of online assessment in one context. Describe the experience of an online simulation.

## RESEARCH METHODOLOGY AND EVALUATION APPROACH

An action research approach was adopted by the group as a means of experiencing, analysing and improving the practice of online synchronous tutorials (Kember, 2000). This methodological stance was based on the acknowledgement of the online tutorial as a "social practice susceptible of improvement" with the project proceeding through a spiral of cycles of planning, acting, observing and reflecting (Carr and Kemmis, 1986). Following Carr and Kemmis, each tutorial activity was "systematically and self-critically implemented and interrelated", with each of the partners taking responsibility as participant or facilitator for the practice developing in each of the tutorials through working collaboratively and sharing reflections on the activity and processes (1986:165-166). Each tutorial represented an event which participants and facilitator experienced and reflected upon. Each facilitator acted as a participant observer, collecting information and building perceptions through their experiences of participating in, and facilitating, the online tutorials. Participants responded to the

experience of each tutorial and contributed to the development of new strategies for the delivery of subsequent ones. Learning points were identified for application to subsequent iterations of the online tutorial.

Each facilitator undertook a comprehensive evaluation of the progress and results of their own online tutorial. The evaluations employed a range of tools and processes, using combinations of the following:

- Text messages in the asynchronous online discussion board established on Blackboard before and after each tutorial. The pre-tutorial discussion enabled the facilitator to provide information about the tutorial, to set work and assign roles, and to answer early questions from the participants. After each tutorial, the post-tutorial discussion board was used for the facilitator and participants to post, and discuss their perceptions of, and reflections on, the progress of each tutorial.
- Session transcripts from the archives established on Blackboard to contain full transcripts of the online tutorial. These were used to analyse the discussion that took place and also to provide simple statistics such as the number of messages and the word count of each message.
- Participant perceptions recorded on a short email questionnaire for one tutorial.
- Comments and feedback from participants on the draft evaluation of each tutorial circulated by the facilitator.

The findings from each tutorial provided a series of mini case studies intended to present a holistic and meaningful description and analysis of the tutorial experience (Yin, 2003). These tutorial evaluations were analysed to identify substantial and recurrent themes reported in this paper. The credibility of this approach rests on the transparency of the experiences, observations and reflections developed and recorded within a shared and open online learning environment. Though the record does not necessarily identify every nuance of the activities and experiences shared, the finding and conclusions of this project are verifiable by reference to the session transcripts, discussion board messages, and individual tutorial evaluations. Participant verification was also sought by each facilitator, when evaluating their own sessions, by means of a post-tutorial discussion-board debrief and sharing of individual tutorial evaluations for comment and verification (Cohen, Manion and Morrison 2000).

## KEY OBSERVATIONS

The following key issues arose during the tutorials:

**Technical problems:** We had problems with network bandwidth, firewalls, speed of interaction and more than one ‘crashed’ computer. Technical problems were generally reduced when we decided to dispense with NetMeeting and the Virtual Classroom’s shared browser.

**Practical IT skills and limitations of the technology:** Virtual Classroom’s whiteboard caused particular difficulties for facilitators and participants. Some participants felt that Blackboard itself introduced the need for particular, non-intuitive and unfamiliar, technical skills. However, problems with the whiteboard experienced in Tutorial 1 were largely solved in time for Tutorial 2, via ‘out-of-tutorial’ collaboration. As a result, partners “appeared to be more comfortable with the technology in the second tutorial. All participants were able to input and move text, and the use of the whiteboard was smoother, leading to a more fruitful interplay between it and the discussion.” (Tutorial 2 evaluation). The learning environment adopted for these tutorials imposed additional limitations. Users found the archiving process non-intuitive and lacking in prompts. It also proved difficult to edit text on the whiteboard and impossible to paste text to it. Although facilitators did learn to anticipate these restrictions, there is no doubt that they limited the productivity of the tutorials. Typing speed was a limiting factor for all participants throughout the project.

**Facilitation skills:** The synchronous tutorial emphasised the need for good facilitation. Without it, we noted a tendency for discussion to deviate rapidly. It became evident that facilitators needed to maintain good timing, provide periodic summaries and separate comments about process and the technology from those on the topic of the tutorial.

**Synchronisation in discussions:** We found that online, real-time discussions frequently lacked synchronisation between question and answers in discussion threads. By the time one participant had thought of a response and then typed it, the discussion had often moved on.

**Depth and quality of debate:** Project partners discovered early on that typed responses need to be short and rapid, if they were to contribute usefully to a fast-moving discussion. We noted the challenge of ensuring such responses exhibit appropriate depth and consideration.

**Synchronous, text-only communication:** We increased our awareness that text on its own does not convey as much information as verbal and non-verbal interaction in face-to-face discussion. Although partners knew this already, the tutorials provided experience of the extent of the limitations in a synchronous setting. In a face-to-face discussion, the current speaker is able to hold the attention of the 'audience' using a variety of verbal and non-verbal skills which do apply at a distance whilst the 'speaker' is typing.

**Time commitments:** It became apparent that preparing an online tutorial may take more time than preparing a conventional one. Blending synchronous and asynchronous discussion tends to add to the time required.

**Wide range of learning resources and learning approaches:** We recognised the significant potential of online synchronous tutorials to support innovative learning approaches, by encouraging the use of other learning resources made available through contributory technologies.

## DISCUSSION

The project described here piloted the concept of the synchronous online tutorial for staff development with a small group of educational developers and academic staff with an interest in eLearning and online communication. Although there are many models of eLearning and Distance Learning this project is most akin to that described as Model A – the Distributed Classroom by the University of Maryland Institute for Distance Education (USM, 1997). In the distributed classroom staff and students maintain their traditional roles and class sessions involve synchronous communication where students and staff are required to be in a particular place at a particular time. The 'place' in this case is, of course, a virtual classroom. The significant comparator is asynchronous online communication.

The project also relates strongly to two additional overlapping concepts in higher education. The class here is not a conventional lecture but a tutorial. Although definitions of the tutorial differ, the essential features that are most often included are 'small group discussions' where there is a degree of assumed 'equality between tutor and student' and the 'need for some preparation'. These are never occasions for transmitting information. The other concept relates strongly to staff development. These tutorials attempt to replace the traditional staff development workshop but re-emphasise the broad equality and experiential approach on which workshops are based (Kelly, 2003). The literature supports the need for these online tutorials to provide a range of important opportunities for them to be successful: they need to enable interaction between all involved; they need to help develop communities of learners and they need to provide individuals with opportunities to process their experiences using reflection, generalisation and experimentation. These broad concepts develop from group-development theories, the social construction of knowledge, work on the maintenance of developing communities (Wenger, 2000; Ganawardena, Lowe and Anderson, 1997) and on aspects of Kolb's Experiential Learning Theory (Kolb 1984).

The project and its constituent tutorials were also designed on pragmatic grounds. All partners have had experience of over-ambitious technology-supported development projects. The tutorials' intended outcomes were initially relatively unambitious and designed to progressively become more challenging as participants benefited from the experience of early tutorials. Possibly as a direct consequence, evaluations showed that in general we achieved the intended outcomes. We concluded that synchronous online tutorials could allow rapid interchange of ideas, generate enthusiastic discussion involving all participants, achieve a reasonable level of professional engagement, and recreate elements of face-to-face discussion. All this while encouraging attendance and participation by fixing a set time for a meeting and limiting the time scale of the discussion. There are, therefore, certainly some positive indications that synchronous online tutorials could support staff development in the future. Perhaps a significant failing of the project was its inability to assess how good the learning was. Evaluations showed that most outcomes were achieved, but, in common with many other staff development activities, no substantial attempt was made to discover the quality of participant learning. It is interesting to note that other research with undergraduate students benefited from evaluation using final assessments and published learning outcomes, along with transcripts from peer-to-peer synchronous communication sessions, and came to even more positive conclusions (Slack et al 2003).

There were many challenges. We had network problems brought on by the bandwidth demands of synchronous activity as described by Welsh (1997) and by Laurillard (2002). The tutorials demonstrated that even using popular software there was still the need for participants to learn a range of new skills, echoing the experiences of Shotsberger (1997) and Eastmond (1995). We found the tutorials difficult to facilitate and like Palloff and Pratt recognised that one of the difficult challenges of conducting synchronous meetings is to "facilitate in such a way that all "voices" are heard" (1999:47).

### **Synchronisation in discussion**

The issue of synchronisation in the discussions during these tutorials was a problem for project members and one that did not really find resolution. Participants in the discussion cannot easily contribute to and follow a thread because by the time they have typed a message and sent it, the discussion has moved on. The real-time, text-only communication facility proved to be one of the most significant limiting factors in managing the facilitation process and participation, with one participant suggesting you "are voiceless here unless you are a very quick writer", reflecting earlier comments by Palloff and Pratt (1999), who concluded that the fastest typists were equivalent to the loudest voice in face-to-face discussions. Evaluations suggested that practice might make the problems less severe in some cases; but practice on its own would not overcome them. We experimented with various protocols to control this trend but it did remain a frustration. Research in the past has also identified this as a problem. For example, Palloff and Pratt suggest: "...members can become confused and overloaded if guidelines for participation are not established at the start (1999: 47-48). Other research in this area identifies other approaches. The Open University's synchronous groupware Lyceum provides communication by voice as well as by text and includes a 'request to speak tool' (Rapanotti and Hall, 2000; Tosunoglu Blake, Rapanotti and Griffiths, 2002). Evaluation by students has been very positive but "...tutors found the experience quite taxing due to the multiplicity of actions allowed within the system ... " (Tosunoglu Blake, Rapanotti and Griffiths, 2002:2). It is interesting to note that what is interpreted here as a problem, is seen by others as a significant advantage of synchronous online discussion. Lobel, Neubauer and Swedburg, 2002 describe extensive use of real-time synchronous activity with large numbers of students. These authors observe that online real-time, instantaneous interactions are 'parallel' in nature:

*"In a 'face-to-face' interaction, interpersonal communication is 'serial'. It is considered impolite and distracting for two people, never mind twenty, to opine all at once. In the real-time synchronous online environment, communication is 'parallel'. Twenty students can, and did post within the same minute, generating enormous amounts of free flowing relevant personal reflections, reactions and comments to weave a solid web of interpersonal communication lines. Since the eClass topic and the learning process depended on appropriate self-disclosure and feedback, member acceptance grew rapidly, the group goals were understood and supported by all, the tasks were accomplished, and students reported high levels of satisfaction with the outcome."* (Lobel et al. 2002: 9).

### **Addressing the limitations of text-only communication**

Text on its own does not convey as much information as verbal and non-verbal interaction in face-to-face discussion. Project partners knew this already but these tutorials provided experience of the extent of the limitations in a synchronous setting outlined above. It is interesting to note that even with the addition of audio capabilities to online synchronous communication, participants still miss visual cues. Tosunoglu Blake et al (2002) evaluated the use of Lyceum and identified the need for extra effort to be applied to communicate clearly, particularly when using humour. Other research reinforces the need for typed emoticons. Lobel et al (2002) identify more than 30 emoticons used in their work. A study by Burnett (2003) into the use of synchronous online chat by distance students suggests that the role of the tutor is crucial. Using interaction analysis, Burnett explores tutor behaviour in online chat and concludes that many of the most effective tutor moves capitalise on the features of online chat, rather than trying to suppress them. These may include summarising and waiting moves; using devices, such as naming and brackets, to maintain multiple strands; allowing participants to pursue their own thought-processes and engage with several issues simultaneously; and using textual features, instead of paralinguistic cues, to encourage students' contributions. Burnett asserts that tutors hoping to encourage appropriate activity in online environments may need to adopt new sets of behaviour. These behaviours should capitalise on the particular characteristics of on-line environments, rather than the transposition of behaviours from face-to-face contexts. This has implications for online tutor training.

### **Quality of communication**

As outline above, project partners discovered early on that typed responses need to be short, and quickly given. However, short, rapid responses are generally not in-depth and considered and indeed there was a sustained lack of perceived depth to the synchronous discussions. The technology, based entirely on typed text, imposed significant restrictions on the nature of discussion and on the input that each contributor could make. Poor typing skills can limit contributions severely. One evaluation suggested that "Lack of depth to discussion.... raised important questions for the facilitator about the capacity of synchronous tutorials to support higher order activity" (Tutorial 2 evaluation). This comment resonates well with Palloff & Pratt, who found that the synchronous discussion "rarely allows for productive discussion or participation and frequently disintegrates

into simple one-line contributions of minimal depth" (1999:47). It may be that the use of audio communication to supplement typing would help here but it is also notable that other research has not identified this tendency to short messages as a problem. Lobel et al (2002), in their online synchronous discussions, found an average of 22 words per message in an hour of discussion. Typically they saw 250 messages posted each hour with an average of 10 posts per student per hour. They have made extensive analyses of communication patterns but intend to carry out future word analysis to identify other characteristics such as the expression of feelings. In our own study, messages were generally of a similar length with as many as 250 messages posted each hour. Although most messages were short, and perhaps rushed, the nature of the interactions is probably closer to that achieved in face-to-face discussions than that achieved by asynchronous discussions that take place over extended periods. The synchronous online tutorials generated enthusiastic discussion involving all participants. One participant reported, "I came away from this session feeling I had had a mental workout" while another reported that the experience "felt like a tutorial". Slack et al (2003) went further than this in concluding that synchronous communication and on-line meetings between course participants can support deep learning.

### **Learning resources and approaches to learner-support**

Facilitators became more ambitious about the range of learning resources recommended and used before and during the tutorials. The range of online resources used included online articles, websites of learning materials, audio and video sequences, multimedia simulations and asynchronous pre-session discussions. The selection of resources used in Tutorial 3 elicited the comment: "I certainly felt that having the resources at my finger tips was a huge asset. On several occasions I opened the applications to test something out prior to making a comment. Try doing that face-to-face in a conventional tutorial!" Nevertheless, Alexander and Boud (2001:9) suggest some of the best examples of online learning draw their inspiration from face-to-face experiential learning events. These include online debates and the use of simulations and role-plays for learning. Our own approaches to learner support also became more innovative, culminating in an online role-playing simulation in Tutorial 4. The evaluation for this tutorial suggested "Discussing in a simulation role may be easier/more natural in a virtual environment than a f2f one". In a face-to-face environment, roles may be more likely to break down, especially where group members know each other. This is supported by Alexander and Boud D (2001) who comment on the high degree of anonymity in this environment and by Lobel et al (2002) who talk about individuals in synchronous online interactions being "disencumbered" of 'physicality' that enables them to maintain a perception of a 'privacy zone'." They argue that this "privacy zone" gives the individual greater permission to speak.

### **Some comparisons**

In a staff development setting, the natural comparator for these synchronous tutorials is the face-to-face workshop. Although asynchronous discussions are not unheard of in staff development they have not yet become the norm in our institutions. It is unlikely that synchronous tutorials could ever replace the subtlety and sophistication of a face-to-face workshop, where one is possible. But it may be that the ability of synchronous online tutorials to encourage attendance and participation by fixing a set time for a meeting, at a distance, and to allow rapid interchange of ideas could be attractive in some circumstances. The balance may well be tipped in favour of the online experience where an intended outcome is to encourage greater involvement in the exploration of learning technologies.

In more general settings the natural comparator for these synchronous tutorials is the asynchronous online discussion. While asynchronous discussions allow maximum time flexibility for participants, this is lost in a synchronous setting. Against this, synchronous tutorials allow a lot of interchange to occur quickly. Asynchronous discussions allow facilitator and participants to make considered, in-depth comments, statements and replies. Our experience of synchronous online tutorials suggests that they may not lend themselves to this easily. These comparisons were also supported by Shotsberger (2000:54), who made the case for synchronous communication as being "fast-paced", "dynamic", and with "a natural informality" compared with asynchronous communication, which is "well-reasoned" and "non-spontaneous". Mason compared asynchronous and synchronous delivery and, helpfully, identified equally compelling advantages to both (Mason, 1998).

## CONCLUSIONS

Synchronous online tutorials can allow rapid interchange of ideas, generate enthusiastic discussion involving all participants, achieve a reasonable level of professional engagement, and recreate elements of face-to-face discussion. All this can take place where attendance and participation are encouraged by fixing a set time for a meeting and limiting the time scale of the discussion. There are certainly some positive indications that synchronous online tutorials could support staff development in the future.

However full success of online synchronous tutorials may depend on the use of other contributory technologies, such as PDF documents, Web pages, media sequences and asynchronous discussions, and the readiness of participants to engage with these in advance of the tutorial. Participants in this project felt that the preparation and thinking in advance was as important as the interchange of ideas within the tutorials themselves; but this probably applies to all tutorials. Overall, synchronous online tutorials may provide a further tool for staff development, but it would be easy to underestimate the level of commitment required by participants to make them work.

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