

# Training virtual management teachers

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- Abstract
- Introduction
- Planning for Virtual Management Teaching
  - stage 1 access
  - stage 2 induction and socialisation
  - stage 3 seeking information, finding new pathways
  - stage 4 interaction
  - stage 5 autonomy
- Participation Level and Evaluation of the Software by the Tutors at the end of their On Line Training
- CMC for Management Learning
- Summary of observations of the Tutors in Training within the On Line Programme
- Costs and comparisons
- B800 use of CMC
- On Line Monitoring of the Quality of the Virtual Management Teaching
- Phase two of the mba tutors' training
- Conclusions
- References

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## Abstract

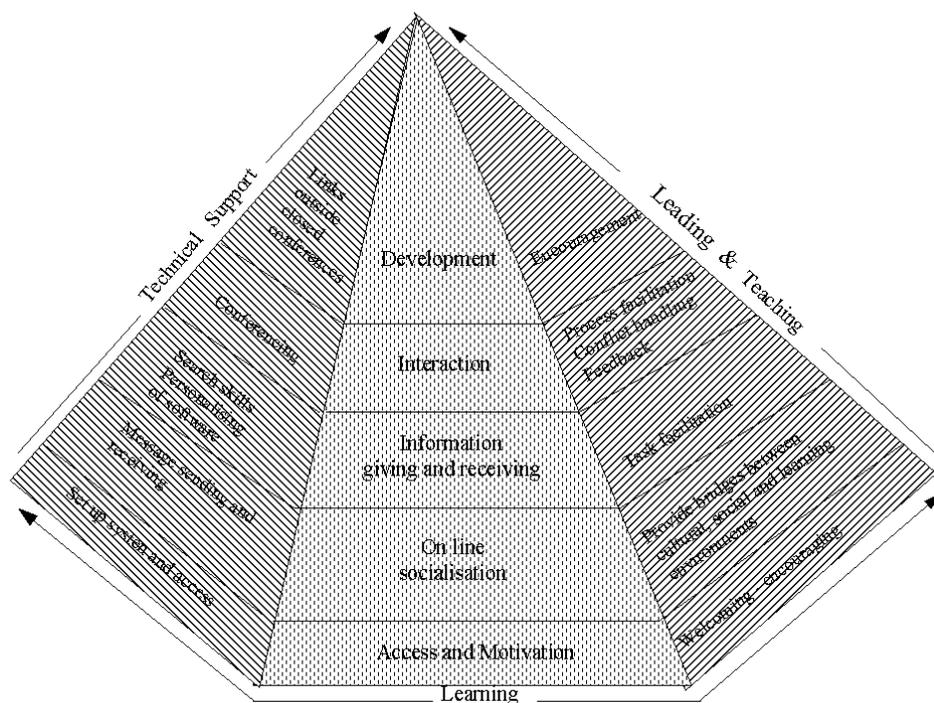
This paper has outlined a 5-stage model for the development of competence in on-line computer conferencing. The model was tested in an action-research setting - an on-line training programme for a cohort of Open University Business School MBA tutors. Results showed that the model-based training programme was effective in enabling participants progressively to develop skills in the use of CMC. They were able to transfer the resultant skills to develop and support on-line interaction in a management education setting. The on-line training programme was found to be cost effective against face-to-face training.

The research suggests that the medium offers new opportunities for the development of management education on-line, but on-line monitoring of performance subsequent to the training showed that on-line pedagogy is still in its infancy. There is thus scope for much more inquiry into and dissemination of good practice in terms of the usage of CMC as an aid to learning, discovery and creativity. The potential, however, is there for students to take control of their own learning, and the flourishing student on-line self-help groups provided some evidence for this.

## Introduction

This paper describes the use and translation into an on-line training programme for management tutors of a model (Diagram 1) of Computer Mediated Conferencing (CMC) for Learning. It was also used as the basis for large scale student induction programmes, and for structuring virtual on-line environments for management courses. The model was developed through extensive participant observation and focus groups of users, and describes the learning processes of the on-line learner from novice to independent user in five developmental stages.

*Diagram 1 - Model of CMC Use for Learning and Teaching*

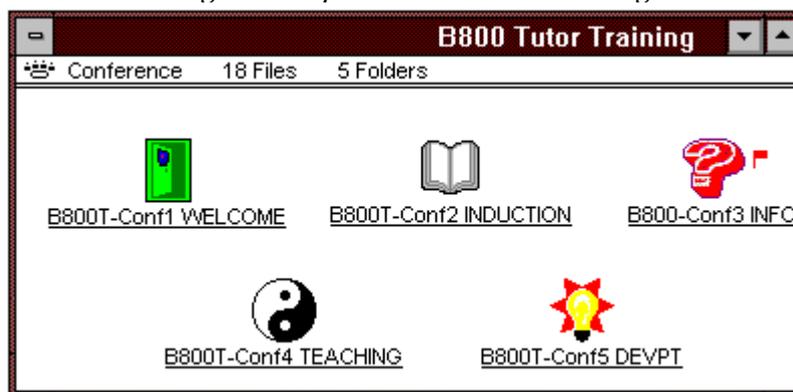


## Planning for Virtual Management Teaching

The task described in this paper was to plan, set up and manage a training programme, beginning in the autumn of 1995, to teach on-line around 180 potential course tutors to be proficient in the use of CMC, using *FirstClass<sup>tm</sup>*, in time for the start of the new Open University Business School (OUBS) MBA foundation course *B800 Foundations of Senior Management* in February 1996. Furthermore, we believed that to teach and explore the use of CMC through face to face methods would send the wrong signals to the tutors.

A series of "top level" conferences was set up, each equivalent to a stage of the model. Within each of these conferences, a framework of workshops, activities and discussions directly related to the model of use at that level was created. Each level of the training programme included a "Reflections" conference which asked questions about the participant's use of the programme at that level.

Diagram 2 - Top Level of B800 Tutor training



### Stage 1 ACCESS

At the first stage of CMC use, the learner needs information and technical support to get "on-line", and motivation to undertake the time and effort involved. Access to support needs to be available particularly at the times when the learner is likely to be struggling to get on-line for the first time on his or her own. This Level 1 stage can be considered to be over at the point at which the learner posts a first message in an "Arrivals" conference. 187 such messages were thus posted between November 1995 and 18 March 1996. Each was responded to individually by e-mail by the authors of this paper, as the training programme leaders.

Access rating: The mean participant score for access to the conferencing system on a rating scale of 1(-) to 10(+) was 6,94 with 47% of tutors in training rating it as 9 or 10, and only 5 (6%) under 5. The attempts to make tutors in training feel valued and welcome in the virtual environment achieved a mean score of 8,74 with 54% scoring it 9 or 10. Thirty eight per cent reported that they felt highly motivated to continue with

only 7% not motivated. The training programme scored a mean of 7,84 and using this medium for teaching on the course scored 7,39.

At the end of Level 1, trainees reported an average of 105 minutes spent off line on reading and preparing to train, and 67 minutes on line. However, the off-line time included, in some cases an inordinate amount of time spent on getting and setting up appropriate equipment.

## Stage 2 INDUCTION AND SOCIALISATION

The new on-line user needs to be sensitised to the "cultural" norms of CMC. An introduction to "netiquette" was therefore provided at this level by examples and practical work on line.

Those who are initially reluctant to commit themselves fully to public participation in conferencing can be encouraged as a first step to read and enjoy others' contributions to the conferences for a short while by "lurking", before taking the plunge and posting their own messages - a natural and normal part of CMC socialisation and therefore to be encouraged for a while as a first step. It is also important to be tolerant of "chat" conferences and socialising (McCreary 1989). At the point of feeling "at home" with the culture and reasonably comfortable with the technology, the learner is free to move on.

Issues of intellectual ownership, copyright, privacy and freedom of speech were considered and explained at this level.

### Level 2 - Induction

Level 2 was intended to provide basic software skills in using FirstClass™, increasing feelings of confidence and comfort in working with others through the CMC medium and the opportunity to network. Acquisition of basic technical skills at this level scored a mean of 7,49. "Networking" aspects (finding others with similar interests) rated only 5,29 - probably reflecting a natural focus on technical and behavioural concerns, rather than the networking potential, at this level. Tutors spent just less than one hour off line and one hour on line for this stage.

## Stage 3 SEEKING INFORMATION, FINDING NEW PATHWAYS

The acceptability of a communication medium to a user is likely to be directly related to the "richness" of the information it conveys (Taha & Caldwell 1992). The proliferation of messages and conferences in CMC leads participants to expect to be able to shift and sift through the mass of on-screen data to find what they really need, thus putting the spotlight on the task-focusing and support skills of conference leaders.

The learner typically starts to understand the potential for forming interest groups through writing and posting on line and responds to requests for information and advice, even from apparent strangers. The cost of responding is low in terms of time and effort (Sproull & Kiesler 1992). For a conference leader, a "hands-off" approach to support and teaching is suggested. Remaining "silent" for a while is often appropriate to enable participants to support each other, while the leader must remain alert to the need sometimes to open new sub-conferences and encourage participants to "move" there in the interest of task focus. Ultimately the participants will find their own way around and develop personal sifting and choosing mechanisms. At the point at which they resist direction, they are entering the next level of use.

### Level 3 - Information Giving and Receiving

At level 3, additional skills conferences or "workshops" aimed to develop participants' ability to work with the software. In addition, on-line seminars and workshops directly related to the B800 course were set up in line with the model's supposition. Tutors gave the programme a mean score of over 7 on each of the objectives. An average of one hour and 5 minutes off line and 43 minutes on line was spent on this stage.

## Stage 4 INTERACTION

At this stage the participants start to interact with each other, often in highly exposed and participative ways. The act of formulating and writing down an idea or understanding and reading and responding to peers is a most important cognitive skill (Harasim 1989). Collaborative learning can be seen to happen in very visible and often exciting ways (Kiesler 1992, McConnell 1994). At this stage, very active learning, especially widening and appreciation of differing perspectives and understanding of application of concepts and theories happens very obviously as conferences unfold and develop. Tutor skills of group-building and maintenance, and especially "weaving" contributions together, become important

It is common for participants to demonstrate a form of "meta-learning" in a way that evaluates the technology and its impact (Wellington 1995). At this stage, the students are taking control of their own learning processes (Marantz & England 1992).

### Level 4 - Interaction.

Level 4 focused on a discussion of the functional areas of tutoring through distance learning. It attracted a large number of positive qualitative comments, as the tutors felt they were using conferencing to share ideas, and achieving new ideas that had direct relevance and impact on their teaching. Active conference moderation was required to manage the volume of messages that was generated.

## Stage 5 AUTONOMY

At this stage, the learner becomes responsible for his or her own learning through the computer mediated

opportunities and little support beyond what is already available is necessary. The participants will often be confident enough in the medium to confront a tutor when interventions seem unhelpful or out of place, or indeed to challenge the basis of the conferences - or system itself, typically to demand better access, faster responses, more software. At this point, a blurring between learning and teaching leads not only to frequent changes of roles, but also to lack of need to define roles.

#### Level 5 - Autonomy & Development

At this level, participants were introduced to the skills of creating and setting up their own conferences, and they were given a practice area in which to do this. In addition, they were invited to set up discussion conferences on topics of their choice.

The final reflections conference showed an average score of 7 against most of the questions asked. Only the potential use of CMC for working with their students attracted a slightly lower average score of 6,52, a possible reflection of facing up to the reality of setting up of their own conferences and the imminent start of the B800 for real!

### Participation Level and Evaluation of the Software by the Tutors at the end of their On Line Training

Over 75% reported "active participation" in the on-line training programme. However, 53 respondents also pointed out the value of "passive" participation, i.e. browsing or lurking. The success of the overall training programme in maintaining interest scored a mean of 7,3, with 24 respondents scoring it 9 or 10 and only 3 giving it less than 5. FirstClass™ scored highly in terms of consistency of icons and screen displays with 40 respondents giving scores 9 or 10, with a mean of 8,22. Most also considered it easy to use, although the lack of an off-line reader at the time was a cause of some concern.

### CMC for Management Learning

A first crude attempt to understand whether CMC lends itself to a variety of learning approaches elicited a mean score of 7 although some tutors pointed out that this depended on the choice of platform and structures, the purposes and also the quality of conference moderation.

Many tutors commented on their desire for clearer "routes" through the conferences, although problems of sifting large amounts of on-line messages probably arose more from a lack of confidence in the medium. This indicated to us a need to signal more clearly to participants by the use of icons, conference titles etc., purposes and appropriate modes of communication within and between conferences.

### Summary of observations of the Tutors in Training within the On Line Programme

Three broad types of response to the on-line training programmes were categorised:

- **The Swimmers:** These trainees, who tended to be already experienced or have early access to hardware, dived in early. They responded happily to the training programme and continued to log in for a while to help others as they arrived.
- **The Wavers:** Around one third of the trainees needed considerable help to get started - typically via the telephone helpline. Once the Wavers reached level 2 of the training programme, most continued successfully through the training to Level 5 competence, although they typically needed to ask for more help than the Swimmers.
- **The Drowners:** Around 30 trainees found it extremely difficult to log in to the system, and those who did eventually arrive found it very difficult to cope with the large numbers of previously posted messages. Only a minority of these successfully completed the training

### Costs and comparisons

The decision to offer the programme on-line was arrived at on logistical and pedagogical, rather than financial, grounds. To train other than virtually seemed a contradiction in terms and the asynchronous nature of CMC offered considerable flexibility. Participants took their own time both to log in and out of the conferences when it suited them as well as to work through the whole training programme; this varied from one week to 5 months. That said, the training programme proved to be very cost effective.

Concerns about the use of CMC for OUBS courses centred on whether the use of CMC would complement or substitute for other learning components, and how ultimately students' time would be best used. At this early stage of understanding, this aspect is still problematic as well as fascinating, since ultimate "control" of the use of conferences seems undesirable as well as all but impossible (Oldenburg 1991). As the model of use suggests (Diagram 1), as learners become more confident in the use of CMC for learning, there appears to be less "teaching" and more independent learning together with more integration of the use of this component with other teaching media. Much more work is needed!

## B800 use of CMC

Teaching of the first cohort of just under 1 400 B800 students across the UK and Continental Western Europe began in February 1996. As part of tutorial provision, the tutors set up and ran conferences for contact, support and teaching. As the course progressed, enquiries and administration areas were set up, and a major on-line exercise to enable students to run further rounds of a computer-based management simulation game. The "Senior Common Room" - for tutors and course team only- also proved an exceptionally important and well-used arena. In addition, a student "Village" was set up and run for students by MBA alumni, who had participated in the training programme.

## On Line Monitoring of the Quality of the Virtual Management Teaching

A monitoring system was set up to provide feedback to and dialogue with tutors who were supporting students on B800 through FirstClass™. Advertisement for and applications from B800 tutors to act as on-line monitors took place on-line. An on-line feedback form was devised for monitors' use. The form focused on the observation of good practice and suggestions for alternative approaches. The intention was that the monitor would "visit" a conference, record his/her observations on the electronic form and send it on-line to the tutor as well as to the tutor's line manager in his or her Regional Centre to encourage the sharing of ideas and good practice.

The use by the students of the tutor conferences was extremely variable, with a variety of patterns emerging. A number of tutors experienced initial problems in setting up their conferences, pointing to a need to strengthen this skills aspect of the training programme.

The Swimmers proved on the whole the most successful at attracting students into participating in the tutor group conferences, with a positive correlation between the number of messages posted in the tutor training conferences, and the number posted in the tutor group conferences between March and June 1996. Most of the Wavers also went on to become successful, though some became despondent at times when there was little students activity on line. Unsurprisingly the Drowners posted the fewest messages. Considerable use of e-mail for tutor-student and student-student contact was reported. However, since this was entirely private, we were unable to access it to compare it with other conferencing activity in terms of quantity, content or quality. The value of training the tutors is confirmed in the positive correlation between full participation in the training and both the quality and quantity of messages posted in the tutor group conferences. It further emphasises the importance of achieving full training participation before tutors begin work on line with students.

Content analysis of the messages in the tutor groups suggests that the majority were at levels two and three of the model of use: i.e. socialisation and information giving and sharing, including facilitating the setting up of student "self help" groups.

## Phase two of the MBA tutors' training

From February 1997, all OUBS MBA and certain other courses will be offering contact, support and administration on-line for students - approximately 3,500 registrations for the MBA alone. We are therefore set to train a further cohort of tutors in FirstClass™ and CMC. Amendments and improvements are described in the fuller paper. However, the basic model has proved itself to be robust.

## Conclusions

This paper has outlined a 5-stage model for the development of competence in on-line computer conferencing. The model was tested in an action-research setting - an on-line training programme for a cohort of OUBS MBA tutors. Results showed that the model-based training programme was effective in enabling participants progressively to develop skills in the use of CMC. They were able to transfer the resultant skills to develop and support on-line interaction in a management education setting. The on-line training programme was found to be cost effective as against face-to-face training.

The research suggests that the medium offers new opportunities for the development of management education on-line, but on-line monitoring of performance subsequent to the training showed that on-line pedagogy is still in its infancy and in need of further development.

## References

For references and appendices, please see the full version of this paper.