Managing Knowledge at a Distance

Knowledge management and electronic learning tools in the UK Open University MBA

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The Open University Business School, established in 1983 is part of the UK Open University which was founded in 1969. OUBS now has some 25,000 students across 38 nations. 7,000 of these are participants in the MBA program, launched in 1989. 2,500 of these are based outside the United Kingdom. As part of a major distance education institution, with some 155,000 students in its non-business programs, the School has always used a variety of distance technologies. The original model for the OU was one of mass delivery via radio and television broadcast, backed with purpose designed printed media and leavened with face to face activities in tutorial groups and at residential schools. During the thirty years of its existence, the generation and transmission of knowledge has been transformed through information and communication technologies. At the same time, these technologies have facilitated the globalisation of the world economy, increasing the prominence of intellectual capital.

In 1999 a new second stage elective was added to the OUBS MBA. B823 *Managing Knowledge* was consists of thirteen units which occupy one week of study each. (An overview of the MBA program, showing the position of B823 can be found at http://oubs.open.ac.uk/). Students are required to complete three tutor marked assignments, attend a short residential school and pass a written examination. The course is broad in its emphasis, reflecting the multidisciplinary development team which was headed by Paul Quintas, the first Professor of Knowledge Management in the UK. The team identified a significant but minority role for information technologies in the management of knowledge. Units deal with communication, the cost and value of knowledge, and the process of knowledge management within and between organisations. Intellectual capital and its measurement are dealt with in some detail, along with intellectual property rights, and the management of knowledge and innovation. The use of brands to encapsulate knowledge and values and the human resource dimensions of knowledge work are also dealt with.

The technologies which enable knowledge strategies, are examined along with current best practice in knowledge management. However, a key feature of the course, building on OU practice, is the use of established and state-of-the-art knowledge technologies in the creation of the distance learning environment. OUBS students are themselves practising managers in public, private, not-for-profit and profit organisations. They contribute key resources to their learning environment through their diverse experience.

The emerging global economy foregrounds both knowledge management and working practices that require the equivalent of distance learning technologies. In manufacturing economies that are not prepared to compete purely on cost terms, global production, distribution and consumption forces a

shift in focus towards the end of the production chain where product differentiation and customer support can be used to add value for goods and services. The notion of a *production chain* representing a geographical hierarchy of resources, manufacturers and consumers (e.g. Dicken; 1998, Figure 1.1), is being superseded by the idea of *global production network*. Disparate national and regional cultures became increasingly interlinked within networked and globalised organisations and alliances. Human capital and its effective management become necessary to future economic security.

In this context, management education is shifting from a concern with the accurate transmission of known information to one of enabling critical exploration and of generating new and relevant knowledge for the use of individuals, groups, businesses and not-for-profit organisations. Just as managers are discovering new ways of collaborating with others, exploring new communities, inventing businesses, seeking resources, finding information and *learning* through interacting electronically on a huge scale, so the OUBS is shifting to an interactive model of distance learning.

(For an on-line resource developed around these issues see http://oubs.open.ac.uk/businesscafe)

Asynchronicity has been a key aspect of OU distance learning since the inception of the University. Electronic support of asynchronous communication plays an increasing role with students. Since 1991, the Open University Business School (OUBS) has been developing the use of computer-mediated communication (CMC) in MBA courses. During the early 1990s general interest conferences were provided covering topics of the students' choosing. They were available to those MBA students and tutors who wanted to use them and typically 20-30 percent of students or 100-200 individuals per course made use of this opportunity. The academic role developed from passive monitoring of these conferences, to more interactive facilitation. Distinctive e-monitoring skills were identified through action research, which allowed for pathways, ideas and feedback to be explored. The 5-step model developed by Dr Gilly Salmon is summarised below (See Salmon 2000a and 2000b for more details about the methods used and the frameworks developed).

The Model

Stage one
Individual access and the ability of participants to use online learning tools are essential prerequisites for participation in online learning.

Stage two
Individual participants establishing their online identities and then finding others with whom to interact.

Stage three
Participants give information relevant to the course to each other. Up to and including stage three, a form of co-operation occurs, i.e. support for each person's goals.

Stage four,
Course-related group discussions occur and the interaction becomes more collaborative. The communication depends on the establishment of common understandings.

Stage five

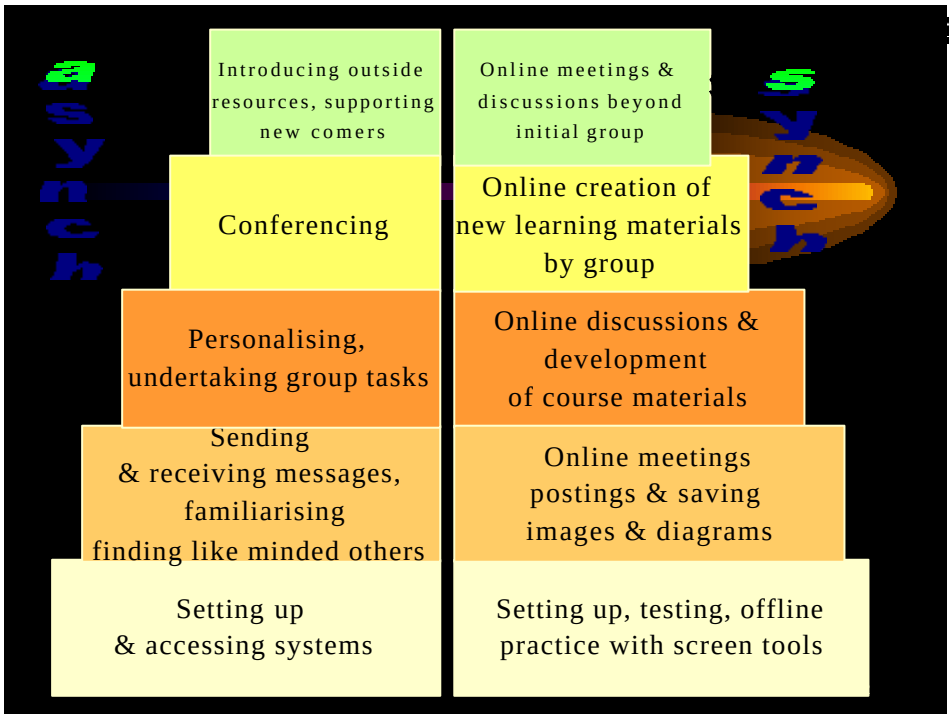
Participants look for more benefits from the system to help them achieve personal goals, explore how to integrate CMC into other forms of learning and reflect on the learning processes.

Each stage requires participants to master certain technical skills. Each stage calls for different e-moderating skills (shown on the right top of each step), each requires a different intensity of interactivity between the participants. From stage two onwards, it is important to provide online activities that encourage participants to engage in active learning and with each other in meaningful and authentic learning tasks. A summary of these activities can be found at

http://oubs.open.ac.uk/e-moderating

Asynchronous and Synchronous Learning Support

The 5-step model can be applied to both synchronous and asynchronous support for learning. **Figure 1** shows the corresponding support required for synchronous and asynchronous activities, building from Stage 1 activities at the base to Stage 5 activities at the top..



As the delivery of courses becomes more interactive, a role for intensive, real-time discussions has been identified. An electronic means of sharing visual representations for discussion and annotation, as flipcharts and OHPs are used in a face-to-face tutorial has been developed.

In the first presentation of *Managing Knowledge* asynchronous electronic support through the bulletin board system (FirstClass) was supplemented with Lyceum, a synchronous internet-based tool developed by the Knowledge Media Institute (KMI) at the Open University. This delivers audio communication and a shared graphic workspace via a single connection. Lyceum represents the new technologies available for the support of knowledge-based organisations and provides students with

experiential learning opportunities. While several commercial applications offer some of the facilities of Lyceum, the precise combination of features has been developed for OU practice and priorities.

An account of the development of Lyceum in the context of other Computer-supported collaborative work (CSCW) applications is available as a set of PowerPoint slides at

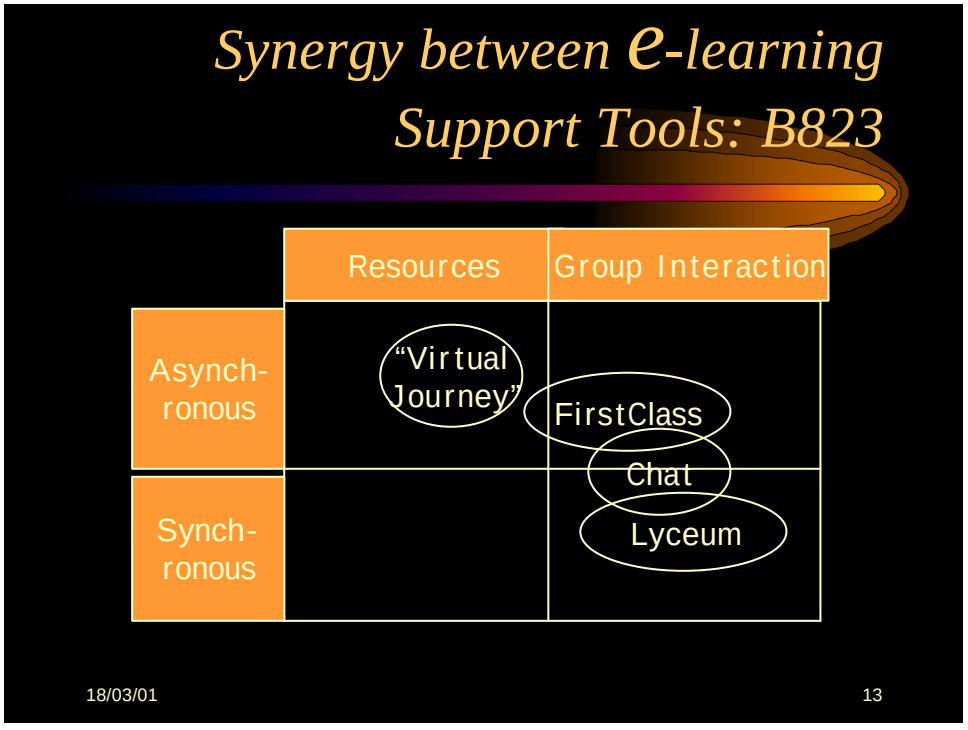
http://kmi.open.ac.uk/people/sbs/talks/Lyceum-CMC-18iv00/

A technical report analysing of the use of Lyceum during the first presentation of B823 is available at

http://kmi.open.ac.uk/publications/techreports.html/

"Virtual Journeys": learning paths and memory tracks

There is an overlap between the synchronous Lyceum mode and the asynchronous FirstClass mode, in that both applications include a synchronous text-chat option. The use of both FirstClass conferencing and Lyceum discussion has revealed a need to capture interaction in both media as a resource to be shared by successive cohorts of learners. FirstClass conferences are archived during course presentations, but a more accessible means of creating a shared resource is being developed, using standard web technology. **Figure 2** shows how these tools provide asynchronous and synchronous interaction, which can be used to create asynchronous resources, based on web technology.



In August 2000 the Odyssey Group of organisational researchers piloted Lyceum in a research context, by using it to provide "electronic adjacency" to a distributed team of researchers, an academic variant of the "virtual" or "distributed" organisation. The results linking physical and virtual participants during a two-week workshop are discussed at

http://www.geocities.com/the_odyssey_group/lyceum.html

The group had already developed the notion of a "Virtual Journey" as a means of accessing experience without co-presence. A web page (or small set of pages) containing images gathered during a journey is constructed with links to relevant web-sites discovered either on route or subsequently.

Web technology can be used to capture key aspects of an environment or a pathway through an environment allowing virtual participation in workshops and discussion asynchronously. Lyceum provided synchronous interaction in this context. The richness of this simple medium is a means of surfacing aspects of implicit knowledge. Some examples can be seen at

http://www.geocities.com/stephen_e_little/vjourney.html

The addition of web-based resources to the learning support repertoire allows a form of "course memory" to be created. Such a resource can complement the on-line conferences and be developed by successive cohorts of learners. An overview of the synergy between these synchronous and asynchronous tools and the resulting learning environment can be found at

http://oubs.open.ac.uk/gilly/

Moving into a new century, the OUBS is finding a convergence between its practices as an institution of learning and those of the learning organisations which are developing in response to the new, global business environment. The Open University as a whole is experiencing a shift from its original one-to-many model of delivery to a much more interactive and flexible framework. This reflects the experience of many business enterprises and administrative organisations. The electronically supported distance learning environment is both a means of learning about the effective management of knowledge and of achieving it in this new context.

Acknowledgement: Many thanks to Dr. Gilly Salmon for permission to include her work on electronic mentoring.

Stephen Little is course team chair for the presentation of B823 Managing Knowledge, and Senior Lecture in Knowledge Management at the Open University Business School.

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