

BHERT Newsletter,

Published by Business/Education Round Table, Melbourne, Australia

Issue 11, July 2001

Managing Knowledge at a Distance

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

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The “knowledge economy” is an emerging global system driven by decreasing transaction costs delivered by information and communication technologies (ICTs), it requires working practices involving close collaboration across increasing distances. These distances can be both physical and cultural. Divergent nations and regions are becoming increasingly inter-linked within networked and globalised organisations and alliances. Increasing complexity and specialisation require knowledge intensive operations to utilise virtual forms of co-location to achieve a critical mass of intellectual and physical resources. ICTs are used to enforce uniformity of practice across cultures, or to engender a sense of non-locational “place” among physically separated employees, but this shift requires close alignment to a variety of local business practices rather than to any convergent “global culture”.

Business is discovering new forms of collaboration and inventing new forms of enterprise through interacting electronically on an increasing scale, and business education is moving to anticipate the consequent demands on graduates. The student learning experience must focus on critical exploration and the generation of new and relevant knowledge in a dynamic environment. The Open University Business School (OUBS) is one major provider of business education which is shifting to an interactive model of distance learning in response to the unfolding global environmentⁱ.

The OUBS was established in 1983 as part of the UK Open University founded in 1969. OUBS now has some 25,000 students across 38 nations with around 250 permanent staff and 850 part-time tutors. There are 7,000 participants in the MBA program launched in 1989, 2,500 based outside the United Kingdom. In 1999 a new second stage elective was launched. B823 *Managing Knowledge* consists of thirteen units occupying one week of study eachⁱⁱ. The breadth of the course reflects the multidisciplinary development team headed by Paul Quintas, Britain’s first Professor of Knowledge Management. 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 examined, along with intellectual property rights, and innovation. The nature of tacit and explicit knowledge and their relationship is a central concern. OUBS students are themselves practising managers in public, private, not-for-profit and profit organisations and contribute their diverse experience to the learning environment.

B823 uses established and state-of-the-art knowledge technologies as part of a distance learning environment. The OU developed a mass delivery model for a highly developed product. Radio and television broadcasts fronted purpose-designed print and audio media while individual study was leavened with face-to-face activities in tutorial groups and at residential schools. Students engage with the materials at a time and place of their choosing, rather than learning synchronously in a face to face environment. This asynchronicity is implicit in distance learning, but the electronic support of asynchronous communication is playing an increasing role at the OU. The information and communication technologies that have facilitated the globalisation of the world economy provide asynchronous electronic support to students through the *FirstClass* computer conferencing software adopted across the Open University.

Since 1991, the OUBS has been developing the use of computer-mediated communication (CMC) in MBA courses. General interest conferences were provided on a voluntary basis. Currently each student has an account with a dedicated conference for their tutorial group and tutor. Other conferences deal with administrative matters, course concepts, course team announcements, and social discussions related to individual courses and programs. The academics' role has developed from passive monitoring of these conferences to more interactive facilitation. Distinctive e-monitoring skills were identified through action research and a 5-step model was developed by Dr Gilly Salmon. This provides a framework for the monitors (in OUBS the associate lecturers acting as tutors) to identify the development of an effective on-line community among their students. The model is also a resource for the development of the skills appropriate to other contexts and is summarised belowⁱⁱⁱ.

The Model

Stage one: Access and Motivation

Individual access and the ability of participants to use online learning tools are essential prerequisites for participation in online learning. At this stage an understanding of the difference between one-to-one e-mail and conferencing is developed. This requires a welcoming and encouraging environment. Moderators monitor and comment on student efforts, providing "handholding" where necessary.

Stage two: On-line Socialisation

Individual participants establish their online identities and find others with whom to interact. Understanding of the protocols and etiquette of communication is developed. From stage two onwards, content becomes important. Online activities must encourage participants to engage in active learning through meaningful and authentic learning tasks

Stage three: Information Exchange

Participants share information relevant to the course. Up to and including stage three co-operation occurs, i.e. support for each person's goals, but the growing engagement of participants dramatically increases the volume of information. Moderators guide the students through the material they must select from, and help them develop appropriate strategies for information management

Stage four: Knowledge Construction

Course-related group discussions occur and the interaction becomes more collaborative. The communication depends on the establishment of common understandings. Focus shifts from information content to knowledge process. Students are encouraged to be more technically independent and to engage questions which have no “right” or “proper” answers.

Stage five: Development

Participants look for benefits from the system to help them achieve personal goals, explore how to integrate CMC into other forms of learning and reflect on learning processes. Participants become responsible for their own learning and need little further direct support. The moderator’s role is usually stimulating debate, challenging assumptions and promoting discussion of course related issues^{iv}.

Asynchronous and Synchronous Learning Support

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 presentation B823, *FirstClass* is 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. It provides on-line meetings and tutorials, with groups able to create separate “rooms” during a session. This allows a mix of break-out activities and plenary discussion, as with face-to-face meetings. Materials for discussion, such as diagrams or images are distributed to tutors via *FirstClass* email, and loaded into *Lyceum* for the session. The screen-grabber can capture images from anywhere on the Internet. Sketches and diagrams representing the outcome of a discussion can be captured and archived by the participants.

Lyceum represents the new technologies available for the support of knowledge-based organisations and provides students with experiential learning opportunities. Several commercial applications offer some of the facilities of *Lyceum*, but its precise combination of features reflects OU practice and priorities.

The B823 Course team works with two complementary forms of electronic support for learning. The synchronous *Lyceum* mode and the asynchronous *FirstClass* mode overlap because both applications include a synchronous text-chat option. This allows exchange of typed messages in real time. The 5-step model is applicable to both synchronous and asynchronous support for learning. During the first presentation of B823 the use of *Lyceum* was monitored formally^v. The discussions and interactions in both media generated material of value to subsequent learners. *FirstClass* conferences are archived during course presentations, but the course team is looking to standard web technology to develop a more widely accessible shared resource. This approach was first explored in a research environment.

“Virtual Journeys”: learning paths and memory tracks

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 group is interested in the impact of CMC on organisational development and on the locational logic of organisations.

The group had 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^{vi}.

Journeys can be physical and/or intellectual. Key aspects of an environment or a pathway through an environment are captured, allowing virtual participation in workshops and discussion asynchronously. The use of evocative images with links to existing web-based resources transforms a simple medium into a rich tool for surfacing aspects of implicit knowledge within a community of practice. Other participants can follow and add to the trail, arriving at their own evaluation of a (virtually) shared learning experience. *Lyceum* was used to provide synchronous interaction and discussion between participants within the U.K. and in the Northern Territory, refining and developing one of several journeys developed during the workshop.

Learning and Practice

The addition of web-based resources to the learning support repertoire of the OUBS allows a form of “course memory” to complement the on-line conferences and provide a resource that can be developed by successive cohorts of learners. Such resources are equally relevant for high technology manufacturing, or sophisticated service organisations where the tacit knowledge created through experiential learning needs to be captured and shared across a distributed community of practice.

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” 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 dealing with a dynamic networked environment. The electronically supported distance learning environment is also a paradigm of the emerging networked organisation or *network enterprise*^{vii} that may, through extension to alumni, allow closer alignment between business research, learning and practice.

Acknowledgement: 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.

Notes:

ⁱ See the discussion at <http://oubs.open.ac.uk/businesscafe>.

ⁱⁱ For an overview of this MBA program see <http://oubs.open.ac.uk/>

ⁱⁱⁱ For details see Salmon, G., (2000). Computer Mediated Conferencing for Management Learning at the Open University. *Management Learning* 31 (4) 491-502 and Salmon, G., (2000). *E-moderating: the key to teaching and learning online*. London: Kogan Page.

^{iv} See also <http://oubs.open.ac.uk/e-moderating>

^v The background to Lyceum is available at <http://kmi.open.ac.uk/people/sbs/talks/Lyceum-CMC-18iv00/>. The technical report on Lyceum and B823 is available at <http://kmi.open.ac.uk/publications/techreports.html/>

^{vi} Lyceum and the Odyssey workshop is discussed at http://www.geocities.com/the_odyssey_group/lyceum.html. “Virtual journeys” can be seen at http://www.geocities.com/stephen_e_little/vjourney.html.

^{vii} See the definition of a “networked enterprise” in Castells (1996) *The Rise of the Network Society*, Oxford, Blackwells.