The use of computer conferencing (CC) for delivery of instruction has become prevalent in higher education. While this medium provides a rich environment for communication between learner and instructor and among learners, the implementation of successful programs using CC requires consideration of several issues: administration, instructional design, faculty and instruction, and student support.

This publication of DEOSNEWS offers the second in a series of articles on the use of computer conferencing, based on presentations at the "Best Practices in Computer Conferencing in Distance Education" conference held at The Pennsylvania State University in February 1996. The goals of the conference were to identify and highlight exemplary practices of institutions of higher education that use computer conferencing to deliver courses. The first day of the conference showcased the successful use of computer-mediated instruction at four institutions: Thomas A. Edison College, Rochester Institute of Technology, The Open Learning Agency of Canada, and Houston Community College System. The second day of the conference was devoted to intensive discussions among participants and the representatives of each of the institutions on issues of administration, course development, faculty, and student support.

The first article in this series of "Best Practices" featured a description of computer conferencing at the Rochester Institute of Technology (see DEOSNEWS, Vol. 7 No. 6). The complete conference report may be purchased from the American Center for the Study of Distance Education. It includes summaries of each of the presentations of the four institutions, overviews of the conference discussion sessions, and highlights of the conference schedule. For more information, or to order, call the telephone numbers listed above or visit our Web site.

The article in this issue of DEOSNEWS summarizes the "Best Practices" presentation by Penny Street and Jacqueline Bradshaw of The Open Learning Agency, British Columbia, Canada.

THE OPEN LEARNING AGENCY:

THE OPEN UNIVERSITY AND OPEN COLLEGE ONLINE PROJECT

Penny Street and Jacqueline Bradshaw

INTRODUCTION
The Open Learning Agency (OLA) (http://www.ola.bc.ca/) is a unique, fully accredited, publicly funded institution that provides a wide range of formal and informal educational and training opportunities to learners in British Columbia and around the world. We use various technologies and work in partnership with many other organizations. Located in Burnaby, British Columbia, Canada, the OLA is comprised of several components including:

* The Open University and Open College, which have provided open learning credit courses and degree programs since 1979;

* Workplace Training Systems, which serves the education and training needs of people in their places of work;

* School Programs, which serves the needs of teachers and learners in the kindergarten-to-grade-12 (K-12) sector;

* The Knowledge Network, British Columbia's educational television service, broadcast to more than 500 British Columbia communities (approximately half a million regular viewers); and

* ICES, an international credit-evaluation service.

The Open University and Open College (OU/OC) together meet the needs of over 12,000 students each year, delivering approximately 300 different courses at a distance and utilizing a variety of delivery methods and technologies: print, mail, telephone, teleconferencing, video-conferencing, broadcast television, and, most recently, e-mail, computer conferencing, and the World Wide Web. The OU/OC has an "Open Door" enrollment policy; many courses have no prerequisites and there is no formal admission to the university.

The Open University offers a fully articulated university transfer program at a distance, which includes flexible credit transfer arrangements. The result of this flexibility is that many of the students who take our courses do not receive their credentials from us, and many of those who receive their credentials from us have not taken all their courses with us.

THE OU/OC ONLINE PROJECT

An innovative project of the Open University and Open College, "OU/OC Online" uses computer conferencing as one of its primary delivery mechanisms. The original mandate of the project was to increase student satisfaction and participation, thereby increasing the probability that students would successfully complete individual courses with us, go on to take further courses, and eventually complete entire programs.

We began the OU/OC Online project having had some experience with earlier university-level and K-12 online pilot projects. OU/OC Online required -- and received -- wholehearted OLA-wide participation and support. This institutional buy-in was critical to the project's success. OLA's "Strategic Priorities and Education Plan" specifically encouraged the use of information technologies to deliver existing courses to our traditional distance-education markets. The project was championed by the Director of Academic Studies. The Associate Director of Structured Learning served as the Project Manager. Other team members included: Program Coordinators, Course Designers, Tutors,
Senior Tutors, Program Assistants, and Graphic Artists; representatives from the Registry, Student Records, Exams, and the Student Library Service; and members of the Instructional Computing Services and Corporate Communications groups.

One of the most challenging aspects of the project was its timeline: eight months from initiation to delivery. The project was launched in March 1995; its plan was completed and accepted in May; implementation began in June; and online delivery to students began in November 1995.

The project plan had to deal with a complex set of issues including:

* Articulation of the concept,
* Description and design of the environment (its "look and feel"),
* System design,
* Interconnectivity with other online services,
* Tutor Collective Agreement issues,
* Measurement and evaluation benchmarks,
* A three-year operating plan,
* A marketing and communications strategy, and
* An impact analysis on Student Services and other Agency departments.

THE OU/OC ONLINE ENVIRONMENT

Courses offered through The Open Learning Agency's Open University and Open College Online (http://www.ola.bc.ca/ou/) are delivered via the user-friendly but sophisticated FirstClass computer-conferencing software (http://www.softarc.com/). Students receive the OU/OC customized FirstClass software when they register in an online course.

All of the OU/OC Online courses are also offered in a regular, non-online distance mode so that students have a choice of delivery method. In the non-online mode each student receives a comprehensive course package in the mail and has regular telephone contact with his or her tutor. Assignments are delivered to and from students by mail.

Most of our online courses include print packages: a course manual, units of commentary and step-by-step instructions, and textbooks; as well as maps, audiotapes, videotapes, etc., as needed. Instructions for assignments are usually provided online. Many of our online courses are also telecourses; that is, they have required television components that are broadcast on the OLA's Knowledge Network, the British Columbia educational television station.

For OU/OC Online we designed and developed a FirstClass environment for post-secondary course delivery that provides the following for each student:
* Course content (in addition to what they receive in their course package) divided into course information, units, seminar areas, assignment instructions, etc.

* A Personal Mailbox for receiving and organizing e-mail

* An online FirstClass Orientation, a training course to which they have access the entire time they are working on the course, should they need to refer to it at any time. They also receive a sixty-page OU/OC Online FirstClass Manual and a twenty-minute video that guides them -- showing both the Mac and Windows platforms -- through the basic online activities: interacting with others; using the personal mailbox to send, receive, delete, and save mail messages; managing files and documents; uploading and downloading attachments; and participating in conferences.

* An unmoderated student lounge open to all OU/OC students taking online courses (but inaccessible to tutors or OLA staff!) -- a place for casual, non-course-specific interaction

* Online technical help and both telephone and e-mail access to a technical support person

* Comprehensive student services, including access to university library materials and a librarian, exam information, the registry, academic advising, and detailed course information

* A detailed, searchable broadcast schedule for the OLA's Knowledge Network television station

In addition to all of the above, course tutors have access to:

* Interactive and asynchronous Online Instructors' Training, which is complemented by a printed Online Instructors' Manual; and

* An online Faculty Club (inaccessible to students).

Most of the issues pertaining to online education are pedagogical, not technological. Appropriate use of the various educational media, whether it be print, computer conferencing, audio, and broadcast television or video, is crucial. Naturally, reading and the exchange of ideas are the cornerstones of university learning. Reading is best done in print, not on the screen, so it is not advisable to deliver large blocks of text online. However, the online environment is perfectly suited for the exchange of ideas through seminars and discussions, one-to-one communication, and teamwork. The online environment should be just one of many tools available to you. Don't try to make it do everything.

The keys to the success of online delivery are:

* Well thought out graphic and instructional design of the environment itself;

* Partnering of online tutors and instructional designers in the initial design of the online course environment, organization, pacing, and content;

* Course-to-course consistency in the use of the environment and its icons, ensuring that a student who has taken one online course will immediately feel "at home" when he or she enrolls in another one;
* Technical support for both tutors and students, especially at the beginning when getting connected is the worst bottleneck;

* Student and tutor training in how to use the conferencing system and separate training for tutors in online instructing strategies; and

* Links to the library and student services infrastructure.

We are experimenting with a few delivery models, including: group enrollment with strict pacing (often linked to television broadcasts); continuous enrollment, where a student can begin at any time and proceed at any pace; and a hybrid of continuous and paced models, what we call the "dude ranch model," where students queue-up until a critical number is reached -- say fifteen -- and then work as a group, in a paced manner through the course. Some studies have shown that there are much higher completion rates with paced delivery.

To see what the OU/OC Online FirstClass environment looks like and how it works, we provide a simulation on our OLA Web site at http://www.ola.bc.ca/ou/online/. Our FirstClass environment is not delivered on the Web, however. This simulation only provides an illustration of what it looks like and how it works to people who visit our Web site. Any comments or questions can be sent via e-mail to a "mail-to" contact on our site.

IMPACT ON SUPPORT AND STUDENT SERVICES

There were many issues to be dealt with in delivering courses in an online environment that were not a direct part of the course delivery but were essential elements of managing the process. Processes that had the most impact on OLA staff were student registration, the management of online accounts, the distribution of materials to students and tutors, and the requirements of the telecommunications infrastructure.

Registration

In the Registry and Student Records areas, the information-flow requirements to new service areas were critical. Information had to be shared with compressed time frames, since the new courses were delivered starting on a specified date, and not continuously (whenever the materials were received) as with the traditional print-delivery mechanisms. A related issue was the need for information on the new timelines and requirements for students in the online courses. The information was not always at the fingertips of the registration and records staff.

Online Account Management

Managing the creation, modification, and eventual deletion of student "online" accounts presented another challenge. Again, the principal requirement was to provide a timely flow of information to and from the client groups. Students registering at the last minute often found themselves unable to commence on the published start-date of the course, and had to "catch-up" once they got online.

Materials Distribution
For the same reasons, the Materials Management group, the people at OLA who pack materials and send them to students, had to deal with two types of packages for each online courses (one package for online students and another for traditional distance education students). They also had to contend with new types of materials, such as software and disk duplication. Turnaround times and inventory availability were critical.

Telecommunications Infrastructure

Providing reliable Internet telecommunications at a reasonable cost given BC's geographic distribution -- a total population of three million, with most of the population concentrated in the southwestern corner, and the rest dispersed over a vast hinterland of small cities, towns, and outposts -- was also a challenging task. Lack of Internet service providers in all the regions left us little choice in selecting a carrier. This required us to work out service issues knowing that there was no alternative vendor. In the initial stages of the project, the individual students' telecommunications costs were covered by the Open Learning Agency. It is most likely that in the future a requirement for participation will be that the students have to be responsible for identifying, signing up for, and paying for their own Internet access.

LESSONS LEARNED

Overall, we have learned that the migration to an online environment is indeed a "Slow Revolution." Moving from pilot project to full implementation has clearly shown that the needs of the "early majority" differ from "early adopters." For the early adopters, support services become more critical, and there is a need to be more proactive in their provision. An effort such as this has required a great deal of inter-Agency collaboration and communication.

In summary, it can most certainly be said that the benefits of delivering courses online are great. In addition to providing an enriched learning environment for students, the enthusiasm and experience gained by tutors has been significant. Pursuing our strategic initiatives has gained us increased support from the provincial government, and opportunities have arisen for us to collaborate and provide various online services to other post-secondary institutions in British Columbia.