

Educating the Leaders of Tomorrow:
The Library Without Walls

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INTRODUCTION

Delivery of library services to distance education learners has become a key challenge to academic libraries in recent years. As more students enroll in programs and courses in locations physically off-campus, recognition of the demand for information and the need for resources by these students has reached the service agendas of many libraries. While much has been written on different methods of delivering academic instruction to the student, there seem to be fewer examples of standardized methods of delivering library services and resources to the distance student. A recent search of the ERIC database returned 6,721 records with Distance Education in the descriptor field; only 115 of those dealt with academic libraries. Technology has enabled instructors to present unique and creative solutions to the delivery of course content. Libraries are beginning to extend resource delivery to distant learners as well. As a key gateway to delivery, the Internet has become the major interface for specialized delivery. Teleconferencing software, CD-ROM's, web interfaces to indexes and full text journals, development of proxy servers, and easy access to materials via improved document delivery methods have opened possibilities for achievements unheard of a few years ago.

Quality assurance benchmarks for distance education suggest it is vital that "students have access to sufficient library resources that may include a 'virtual library' accessible through the World Wide Web, and ...are provided with hands-on training and information to aid them in securing material through electronic databases, interlibrary loans, government archives, news services, and other sources. (Quality on the Line, p.3 - <http://www.nea.org/he/aboutthe/Quality.pdf>)

The University of Calgary Library agrees with these benchmarks and has taken a leading role in recognizing that information resources are critical to the success of a student's educational experience. The Library's mandate states that students, regardless of location, will receive the same resources and services as on-campus students and it strongly advocates equal access to information for all distant learners. Our distant learners no longer need to depend on an intermediary to undertake research, provide instruction and initiate article retrieval. The Library has provided both financial and professional support, including the creation of a Distance Education librarian position, to develop and deliver services for users outside the physical library across Canada and outside our borders.

NATIONAL STRATEGIES

Since 1995, the University of Calgary has been offering a Masters of Continuing Education (MCE) degree with a choice of specialization in Workplace Learning or Leadership and Development. The MCE program is a distance learning program combining on-line computer-based instruction and in-class activities delivered by the Faculty of Continuing Education. It is a cohort-based program (i.e., students

studying and learning as a group) designed to be completed in a minimum of 2 years, consisting of 12 courses, a major written project equivalent to a thesis, and an oral exam. The MCE Program is geared toward professionals in a variety of disciplines, including Human Resource Practitioners, Trainers, Organizational Consultants, Educational Administrators, Facilitators, and those responsible for organizational learning and worker development. Participants come from the private, public and not-for-profit sectors.

The focus of the Workplace Learning specialization is to develop professionals who can play a leadership role in creating and shaping learning environments that foster individual and organizational success. The assumption is that continuous learning is a crucial component of productive organizations and institutions. The Leadership and Development specialization was developed to accommodate those students whose career interests are more closely aligned with management and who wish to have greater emphasis on leadership and human resource development. A broad range of learning and management courses has been structured to achieve meaningful and worthwhile learning outcomes for MCE students. Regardless of the delivery method (FTF: face-to-face or CMC: computer - mediated communication), collaborative critical discourse is the essential and distinguishing characteristic of the teaching-learning transaction.

While this degree is offered across Canada, it does include some international students. Each academic year begins with a three-week in-class institute at the University of Calgary. The remaining courses are offered on-line via the Internet using the University's instructional and conferencing software, FirstClass. FirstClass allows messaging, discussion groups, document sharing and conferences. The Distance Education (DE) Librarian participates in both of the in-class and online instructional formats. Initial information literacy instruction is offered in the face-to-face sessions; the online format is primarily used for maintenance and reinforcement of skills and point of need instruction.

The U of C offers full library support to students in the MCE program through a service known as Library Connection. Library Connection strives to offer all the services of a University Library to students who are at a distance, including instruction and tutorials, research assistance, and document delivery. The DE Librarian maintains a presence on the FirstClass system, staying in regular email and discussion group contact with students in the program. It is also possible for students to request private chat sessions with the librarian to work collaboratively on research or access issues. Students are able to request journal articles and books via web request forms or email and a large number of subject-relevant databases offer full-text journal articles and full-text books via the Web.

In the Fall 2001 semester, the Distance Education Librarian was invited to participate more fully in one of the MCE courses, *Facilitating On-line Learning*. This participation consisted of "setting up shop" within the course folder, offering

a more focused library presence to the students in this course. Because it now appeared to the students that the librarian was there “just for them” rather than for the entire program there was a much higher level of interaction between the librarian and the students in this one course. An added bonus for the librarian was that he was able to read the course assignments and each individual student posting, including student biographies, thus engendering a much better understanding of what the students really needed when contact was made. By maintaining this virtual presence within the “classroom”, these students received personalized assistance in a better way than traditional on-campus students might by walking in to the library and sharing their assignments with the reference librarian.

The threaded discussions in FirstClass also mean questions aren't asked in isolation as they are at a traditional reference desk. Simply by reading a question and answer exchange in the Library Chat section, students are able to learn something, possibly before they even knew they had a question. On occasion, students even chime in to help each other before the librarian has had a chance to answer a question. In this instance reinforcement and thanks are offered. Technology has enabled the library to provide at least equal and possibly superior reference and instructional support to these students scattered across Canada.

In late 2001 the DE Librarian began experimenting with online tutorials to reach distance students with an immediate need for information. Using commercial software called Qarbon ViewletBuilder <<http://www.qarbon.com>> the librarian created a series of short (usually less than 3 minutes each) tutorials explaining how to accomplish specific research tasks. For instance, the students in the MCE program are able to request hard copies of final projects to be sent to their home. These projects are described in our online catalogue, and one of the first tutorials instructed the students on how to find these materials in the catalogue.

The ViewletBuilder software allows a series of screenshots to be both animated and annotated, giving the impression that the student is watching a live presentation or database demonstration. Audio is also supported by this program, but has not yet been used by the Librarian. The impetus behind these tutorials was to satisfy the information needs of distance students on the spot. The first tutorials answered some of the questions we were receiving on a regular basis. Whereas an on-site student could wander over to the Reference Desk, or turn to the student at the workstation next to them, distance students often either need to pick up the phone or send an email to obtain answers to otherwise simple questions. These tutorials are designed to answer basic questions when students need a quick answer. They have a final added benefit of a small level of interactivity, allowing short click-through quizzes to be built in to ensure the student understands the concept being explained. Examples of these tutorials can be found at <http://www.ucalgary.ca/library/libcon/viewlets/>.

Another way the U of C is able to disseminate research information to distance students is through the use of Allectra, our electronic reserves module. Because electronic copyright laws are stricter in Canada than they are in the United States, the U of C ended up building its own electronic reserves program, as commercial products were not stringent enough to satisfy publisher demands for secure access. Namely, we needed a secure system that would allow only students enrolled in a specific class to access scanned documents. The system also needed to be able to provide access statistics to calculate how many times a document had been viewed (some publishers charge per view). Allectra is able to deliver learning objects in over a dozen formats (PDF being the most common) and to limit access to students at the lecture level. Students are authenticated against the Registrar's database and only students enrolled in a given class have access to the materials. Allectra provides usage statistics to satisfy publishers, but retains anonymity at the same time. Students find being able to access required readings at any time of the day or night extremely convenient. More detailed information about Allectra can be found in the November 2001 issue of D-Lib magazine <<http://www.dlib.org/dlib/november01/pearce/11pearce.html>> (vol. 7 no. 11). Allectra has only recently gone into full production at the Library, and the MCE program is considering using it to deliver required readings to students in the Fall 2002 semester.

INTERNATIONAL ENDEAVOURS

The University of Calgary/OLADE project is an example of North-South cooperation and an excellent model of a cross-cultural working relationship. OLADE (the Latin American Energy Organization), was founded in 1973 by 28 member countries in the Caribbean and Latin America as a cooperative and coordinating agency to develop member countries' energy resources and implement measures for environmental sustainability and energy regulations and legislation.

Because of an expressed need to train professionals in energy disciplines and environmental control, the University of Calgary began offering an innovative educational program in 1997 to assist OLADE with fulfilling its mandate. With funding support from CIDA (Canadian International Development Agency), the University has developed a Masters of Science degree in Energy and the Environment for participants from Latin America, and elsewhere in the world, to train future energy sector leaders. The 14-month program is delivered each year at the OLADE Headquarters in Quito, Ecuador. It includes a thesis-based project as well as advanced courses and seminars taught in English by professors from the Faculty of Environment, Management, Law and Engineering at the University of Calgary and from prestigious Latin American universities, specialists from public institutes, state and private sector companies and OLADE consultants. Students include technical and managerial professionals from government and energy enterprises and public and private companies.

As these students are University of Calgary students, it was decided to investigate, and then offer, access to our electronic databases (full text articles and indexes), access to the library catalogue, opportunities for document delivery, and a library web site (which included a list of free useful Internet energy sites). The web had opened the door to provide previously unavailable information to augment the students' work. The project would provide quick, easy and discriminate access to those who needed it regardless of locale and would support "just in time" independent research.

The easy part was the availability of the databases. Work was initially undertaken by the U of C Library and Information Technology staff to implement database connections and usage authorizations and database vendors were assured of password access for use only by U of C students in accordance with database licenses and contracts.

The critical (or hard) part was the instruction – providing information on how-to-access, how-to-use. For the second and third cohort of students in 1998 and 1999 (unfortunately the first cohort of students in 1997 were not included in our services), two separate trips to Quito were made by the Head of the Management Resource Centre. During these trips individual assistance was offered along with a Research Project Skills seminar on library instruction, search strategy techniques, access procedures, and the establishment of e-mail connections for future in-depth reference assistance. This in-person contact established good rapport with students but connection to the telnet software (necessary at that point for a number of key databases) was not fully operational (although it had been successfully tested prior to the visits) and the Internet connections were slow, tedious and frustrating.

Despite the technical glitches, information was getting across and students were learning to use the system. Between the 1998 and 1999 librarian visits, reference questions increased from 12 to 36, a tripling of questions. Even more significantly, document delivery requests increased from 15 to 363, 24 times the requests of the previous year.

In 2000, because of the high cost of a two-day site-visit, the U of C / OLADE Program decided to pursue electronic delivery of the information and a more vigorous and ambitious information literacy program was designed. For the third cohort of students, a CD-ROM presentation was created. This modular tutorial, equivalent to 4 hours of instructional time, allowed for written on-screen content, a video demonstrating how to access and use databases, explanation of search strategy techniques (using Smart Board technology) and direct connection to the databases and other web sites. A graphic artist was used for design and a programmer to develop the web site access. The videotape was edited to insert sections, headings and explanatory notes for smooth organizational transition between modules. A copy of the tutorial CD-ROM was provided to each student. (Information professionals have questioned the use of a CD-ROM product

instead of providing instruction information directly on the web. In North America, quick and easy access to the Internet is taken for granted; in some off-continent countries, connections can be slow and problematic. The CD-ROM was utilized to ensure dependable access to the information).

A follow-up survey indicated that 75% of the students felt the CD-ROM was informative and well organized and 80% indicated that it stimulated their interest in resources and that the DE environment was effectively used. Positive comments indicated that the CD did not have to be used sequentially, sections could be reviewed at any time and it was a good demonstration of U of C materials.

Technology is ever changing. Developments of new software, new electronic databases and new methodologies must be accommodated in order to better serve the educational process in general, and distance education students, in particular. For the 4th intake of students in 2001, it was decided to revise the CD to offer enhanced training modules particularly for the database segments. Centra Reader software, which captures on screen images and converts recordings into streaming media formats and allows for voice over recordings, was utilized. The software enabled the capture of computer/database screen close-ups, provided “crisper” visuals and cleaner audio back-up than the previous videotape of similar material. Detailed demonstration with the accompanying vocal explanations of how to use databases and the catalogue, online document delivery requests and free Internet sites was incorporated into the existing CD-ROM. This replaced several video modules from the previous year. We had created a multi-media learning tool – almost as good as an in-person presentation.

Comments from a follow-up survey indicated that the product was well organized, it encouraged self-direction, increased students’ searching skills and abilities and was clear and easy to use. However, a survey from the graduating students at the end of the program in December, 2001, indicated that, although all students initially used the CD-ROM, only one third used the full text databases, one half searched indexes and only 66 document delivery requests were received (down 55% from the previous years). Findings indicated that all students used free, useful Internet sites and that three quarters of the students used the web for a majority of their information. This is something that professional will need to consider when developing any DE library programs. Serious thought is being given to revising instruction emphasizing the importance of subscription databases, an evaluation of Internet sites, the value of document delivery services and a de-emphasis on use of web alone for research purposes.

To date, the Program has been a qualified success considering the distance, the Internet speed connection problems, and the introduction of new learning methodologies. A great deal has been learned on instruction techniques and

presentation methodologies. Further changes will be forthcoming for the next cohort of students in 2002.

CONCLUSION

These projects have demonstrated a commitment to provide equitable access to information and research services for distant learners. There have been challenges and a few problems but these are exciting times. Information professionals have the challenge of software choices for instruction – courseware, teleconference, online tutorials, videoconference, or CD-ROM to teach what the web so easily provides. These types of services cross faculty, university and geographical boundaries and support worldwide connectivity to information. Our students deserve the best we can innovatively provide.