“Distance education” is an aspect of the Dalhousie learning experience that is not well known across our community. The current issue of *Focus* profiles some of Dalhousie’s distance education success stories, with the intent of inspiring others to join this growing community of scholars in the creative use of technology in distance and face-to-face courses.

Lynn Taylor
Centre for Learning and Teaching

Distance Education at Dalhousie

The last decade has seen a significant growth in the number of programs and courses offered through distance education at Dalhousie, most notably in the area of professional and continuing education. In this issue of *Focus*, you’ll read about some of these initiatives and about how they are providing exciting learning opportunities to students from across the country and around the world.

Responsibility for distance education at our university is decentralized; planning and development of distance courses is largely left up to academic units. Leading the way in distance delivery are the Faculties of Health Professions and Management and the College of Continuing Education (see the box on page 2). The success of these initiatives at the Faculty and departmental levels relies in part on institutional policies, practices, and resources that respond to the particular needs of those learning and teaching at a distance. A number of years ago the Faculty of Health Professions established a Distance Education (DE) Committee to bring together academic and administrative staff to find solutions to common problems associated with the provision of distance courses. While it remains a Faculty of Health Professions body, the DE Committee has assumed a leadership role in distance education matters and welcomes participation from any member of the university community interested in working to promote, support, and expand distance education at Dalhousie.

In large measure, many of the pressing practical problems initially facing the DE Committee have been dealt with (a student living in Yellowknife is no longer likely to be told she has to come to campus to get a photo taken for her DalCard or to pick up that book she needs to complete an upcoming assignment). The Committee has turned its attention to larger, more complex questions about the future path of distance education at Dalhousie. Currently, the Committee is investigating the potential for increasing the number of distance programs and courses—an initiative aimed at both expanding learning opportunities for students and contributing to the University’s strategic plan for enrolment growth.
Because there are few distance credit courses offered outside of professional degree programs, the Committee is investigating the feasibility of developing more “stand alone” undergraduate and graduate courses to serve a number of purposes. Such courses could provide electives for students in existing distance programs, many of whom must go to other universities to access the electives they need. On-campus students could access distance courses to overcome scheduling difficulties. Students would have the opportunity to obtain the skills required to learn in this environment, thus preparing them to engage in distance professional development activities after graduation.

To inform decisions about future developments, the Committee, with the assistance of the Registrar’s Office and the Office of Institutional Analysis and Research, is gathering data on the numbers of current Dalhousie students taking distance courses at other institutions. Perhaps the most surprising finding to date is the very large number of Dalhousie students taking courses from Athabasca University (which offers only distance programs). When the data collection is complete, the Committee will be better able to make recommendations about the opportunities to grow and enhance distance education at Dalhousie.

If you’re interested in joining the DE Committee or in learning more about its work, please contact the Chair:

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Director, Disability Management Program
Distance Education Adds Options for BHSc Students

One of the known benefits of distance education is the flexibility it allows in terms of geography and time. This benefit is clearly realized by fourth year students in the Bachelor of Health Science (BHSc) program at Dalhousie. This final (fourth) year of the program consists of academic courses, clinical education courses, and specialty practice courses that can be completed without the student being physically on campus.

The School of Health Sciences offers a BHSc in five professional streams—diagnostic cytology, diagnostic medical ultrasound, nuclear medicine technology, radiological technology, and respiratory therapy. The final year of the program consists of several higher level core courses (e.g., Leadership in Healthcare and Critical Research Appraisal) which are delivered completely online through Blackboard Learning System (BLS). In addition to these required core courses, students can choose from a list of online electives, drawn from other schools within the Faculty of Health Professions.

Depending on the professional stream, the clinical component of the fourth year may consist of clinical education courses and specialty practice courses in specialized areas such as mammography, computed tomography (CT), cardiac ultrasound, PACS administration (Picture Archiving and Communications System for diagnostic images), anesthesia assistant, etc. These can be completed in health care facilities within or outside the Halifax area. Many of these clinically based courses are designed using a hybrid structure which combines clinical learning with an online component. This design strives to create interactivity and a sense of community among students who are geographically distant from each other and from their facilitators.

Students who stay in the immediate area to complete their fourth year have the option of including both online and in-class courses in their studies. Students who choose to live outside the Halifax area complete the degree by distance. They do this for a variety of reasons: some want to return to their hometowns for personal and financial motives; others want to work in their profession and complete the baccalaureate degree on a part-time basis; others choose to move to a different location in order to complete a specialty practice which has limited clinical placements in the Halifax area.

The fact that the final year can be completed at a distant location not only accommodates students’ interests and goals but also benefits key stakeholders—the health care facilities outside the Halifax area. These organizations and their employees contribute to the students’ progress as they supply the clinical experiences, supervision, and evaluation related to these courses. The health care professionals that act as the specialty practice supervisors and preceptors in the clinical sites are enthusiastic about the opportunities to guide student learning in their areas of expertise. They work collaboratively with the school faculty to plan clinical experiences, set standards of performance, and design learning activities and evaluation methods. The employers are also eager to accept students in these clinical areas and to make the learning environment welcoming and attractive. They hope to ultimately employ the graduates and do their best to accommodate their learning.

So what are the challenges for students who complete the BHSc as distance students? Many say that, although they appreciate

“I really appreciate the online courses because of the flexibility they allow me. If it were any other way I wouldn’t be working on this degree.”

by Roberta Sharp
School of Health Sciences
Dalhousie’s niche-market MBA (Financial Services) Program

by Joan Conrod
School of Business Administration

Dalhousie’s MBA (Financial Services) Program is widely recognized as a career-builder in finance circles across Canada. The program is offered in conjunction with industry partners—most notably, the Canadian Securities Institute (CSI) and the Financial Planners Standards Counsel (CFP designation). Students pursue a program of study that incorporates courses/study streams from a partner organization and up to twelve distance courses with Dalhousie.

The MBA (FS) program is delivered via the web, uses cutting-edge virtual classroom tools, and includes an on-site element which provides each learner with the benefits of face-to-face interaction with educational experts and networking with fellow students. In the distance element of each course, students work through modules and have specific deliverables: assignments, cases, papers, and/or group projects, depending on the course. When this program was first designed, the distance portion was fairly static, and was more like a traditional paper-based correspondence course.

Probably the first incentive for designing classes for delivery over the internet was the ease with which we could use the web to collect and disseminate learning materials to students who are geographically dispersed. This
practical concern made this channel very attractive but this early form of “e-learning” consisted mainly of distributing materials digitally rather than through the regular mail system. Over the last 12 years, other possibilities offered by web-based teaching tools have been cautiously explored and have now gathered real momentum in the MBA (FS) program.

Each course has a Blackboard Learning System (BLS) site, and BLS and other tools are used to engage students. Among these are:

- Taped introductory remarks and orientation information
- Use of Virtual Classroom® (for web conferencing)
- Taped lectures (audio and video) which the students can listen to repeatedly at any time
- “Video questions” wherein students are given problems then watch or listen to a recording of the instructor explaining the solution step-by-step (most often used in the numeric courses). Instructors work through a solution, sometimes drawing graphs or displaying other visual aids, explaining them as the drawing hits the page. (Camtasia software is used to record the instructor’s computer screen and verbal explanations.)
- Synchronous group discussions
- More traditional posting of information for students on a timely and efficient basis, use of notice boards and discussion boards, use of Gradebook, etc.

Instructors and staff members involved in the program identify a number of factors that encourage the widespread use of distance learning tools:

1. High caliber instructors who are engaged in the learning process and willing to invest time and persist to make a new element work. In particular, timely and directive on-line instructor presence is important in fostering student use of the site.
2. Available staff resources, to minimize the learning curve, and to disseminate experience from one instructor to another, and from one course to another.
3. Enthusiastic student response—once students see the value of a learning tool, they are quick to ask for these in other courses, motivating other instructors to adopt new methods.

There are, of course, challenges. Some students are behind firewalls and computer access is an issue. Some are unwilling to engage in the use of the tools, while others over-use them. From a course design perspective, instructors struggle to make appropriate resources available without overwhelming students who have many responsibilities to juggle. And, of course, instructor and staff time and energy and ability are variables.

Probably the most remarkable element of the distance portion of the program is the volume of use—this is an accredited AACSB (Association to Advance Collegiate Schools of Business) graduate program with 250 students, approximately 200 of whom are taking courses in every term.

The Dalhousie Master of Business Administration (FS) degree program prides itself on serving students with the highest standard of customer care and challenging them with a robust and rigorous program of learning. Perhaps the most telling information about the impact of the program comes from its students who comment positively on how the web-based design keeps them engaged in the learning process, allows them to work at a quick pace, makes it possible to keep learning materials up-to-date with current events, and provides a mechanism for instructors to respond to student concerns and challenges in a timely and efficient manner. Tim Houck, MBA (FS) 2004, a Branch Manager with TD Canada Trust, states that, “All aspects of the program—personal, business, and academic—exceeded my expectations.”
In 2003, a team of personnel from the Biology Department and the Centre for Learning and Teaching at Dalhousie developed two fully online Introductory Biology classes. BIOL 1020 (Cell Biology, Genetics, and Evolutionary Biology) and 1021 (Organismal Biology and Ecology) are the Distance Education (DE) equivalents of the campus-based classes BIOL 1010 and 1011. Classes involve weekly readings, quizzes, assignments, a multi-stage term project, and midterm and final exams.

The online Biology courses do not have a traditional laboratory component; instead, students conduct virtual experiments and analyze lab data. One of our goals is to supplement existing activities with labs and field exercises that students can do from home to enhance students’ experience of the concepts, processes, and challenges of scientific work.

In campus-based laboratory sessions, students are provided with materials and equipment, and are supervised by teaching staff who ensure that safety rules are followed and who provide immediate guidance. In adapting laboratory activities for home use, it was necessary to find materials and equipment that students could obtain easily from grocery stores or pharmacies. Procedural changes included providing measurements in cups and teaspoons as well as milliliters, and having students use syringe barrels for more precise measurements. As DE students cannot be supervised while performing labs at home, ensuring safety awareness and correct handling and disposal practices was an important consideration. After reading safety information sheets for all potentially hazardous materials (household materials such as rubbing alcohol and detergent), students must write a safety quiz which includes a statement, devised by Dalhousie’s legal department, that all material safety information has been read and understood. Students must score 100% on this safety quiz before lab protocols are released to them, and no lab assignments are accepted from students who have not achieved this score.

In the winter term of 2008 we piloted three labs for bonus marks, by adapting procedures from the campus-based classes for online use. In a microscopy lab, students prepared and stained cells using food colouring or a modified Gram Stain protocol, and used a personal digital microscope to capture and upload images of what they saw. In a DNA extraction lab, students obtained a crude sample of DNA from bananas or strawberries. A third lab examined the activity of amylase, an enzyme present in saliva that breaks down starch. This activity was very similar to an existing virtual amylase lab assigned to students, providing them with a chance to reflect on the advantages of each approach. Because the virtual lab already assessed the effects of pH and temperature on the rate of digestion of starch, these activities were removed from the hands-on lab for the summer 2008 term, reducing the procedure to examine only the effects of amylase concentration. Many students preferred the virtual lab as being cleaner, faster, and certain to succeed, but also recognized the value of the hands-on method of performing the experiment. Some felt apprehensive about performing these labs without direct guidance, while some enjoyed working at
their own pace with the option to repeat the experiment. In the summer term of 2008, the DNA extraction lab was added to BIOL 1020, and the amylase assay lab was added to BIOL 1021; students submitted digital photographs of their results, and answered questions on the lab. Most students completed the lab successfully, submitting photographs of good quality results, and their assignment answers indicated that the labs helped them to understand the concepts that were presented.

Fieldwork is another important aspect of hands-on experience in Biology. Currently, students in BIOL 1021 research, write, and peer review profiles of Nova Scotian plant species for a class wiki (wiki.epigaea.ca). Students learn about plant species found in Nova Scotia, and also learn to use web pages, scientific journals, and library databases for research. They synthesize their findings and properly cite their sources in a short and engaging piece of scientific writing.

This project was developed with the aim of eventually combining this research and writing exercise with a field exercise, expanding the class wiki to include a set of Digital Herbarium Records (DHRs). Students use a digital camera to document occurrence of a species at a particular location and time; photos must include documentation of features needed to confirm its identification. This project was piloted during the summer 2008 term as a bonus exercise, and students produced several useful and high-quality DHRs. In developing these activities, we came to understand the need to provide support in a variety of print and online formats to students conducting lab exercises at home; at the same time, we feel that these lab exercises help further to develop students’ abilities to work independently and problem-solve. We are continuing to develop hands-on lab and field exercises, as well as virtual activities for students in BIOL 1020 and 1021.

Acknowledgements:

We thank the students in BIOL 1020 and 1021 for their valuable feedback; Rachael Craig for her excellent assistance in early trials of the labs, photographing supplies and results, and drafting safety documents; and Jennifer van Dommelen for her comments on the manuscript.

3. Students came in to campus to use this microscope; Model MFL-82, C&A Scientific Co., Inc., Masassas VA
More than a century ago, distance education was already on the agenda of universities in North America. In 1892, the University of Chicago wrote in its Official Bulletin that distance education “has been associated with a quintessential aspect of the university’s commitment to the betterment of society and individuals” (Larreamendy-Joerns & Leinhardt, 2006, p. 574), furthering that the university had a social and moral responsibility to reach out to students who would not traditionally have access to higher education.

“The School of Social Work, Dalhousie University is committed to building a socially just society, defined as one that upholds and validates the values of equality, diversity, inclusiveness, democracy, and concern for human welfare” (School of Social Work, Dalhousie University, 2006). Our curriculum and pedagogical practices follow this mission and vision statement. Distance delivery of our programs is congruent with providing accessible social work education and building community and diversity amongst our faculty and student body and the wider social work community.

For the School of Social Work, distance education first began in 1995 with the Cape Breton program. We delivered our Bachelor of Social Work (BSW) program in a combination of on-site and distance delivery, designed to overcome a geographical barrier. This evolved to the launch in September 2001 of our national distance delivery of both undergraduate and graduate degree programs.

The Master of Social Work (MSW) program is delivered completely on-line and the BSW program consists of on-line courses plus a two week on-site residency at the Dalhousie University campus. The BSW and MSW programs are generally taken over three years of part-time study. Proposed modifications to the BSW and MSW programs will include a 24-month schedule of completion. To date, we have graduated 104 BSW students and 160 MSW students. Our eighth BSW and MSW cohorts have just begun their studies.

Accessibility: The School has traditionally been committed to geographical and culturally accessible education, as illustrated through our distance delivery programs, our Cape Breton program, and our current Mi’kmaq/Maliseet BSW program delivered in partnership with St. Thomas University. In addition, distance delivery has allowed us to extend our reach to students with (dis)abilities, students with young children, and working students. Many students today cannot afford to leave their jobs to attend university; distance education provides the option of part-time study within the student’s own, often rural, community. According to Larreamendy-Joerns and Leinhardt (2006), distance education increases the democratization of education by providing access to people traditionally excluded through class lines.

For students with visual, mobility, learning, mental health, and chronic health (dis)abilities who have taken our programs on-line, an accessible on-line learning environment is as essential as a physically accessible campus (Burgstahler, Corrigan, & McCarter, 2004). In 2006 we received a Teaching with Technology grant from the Centre for Teaching and Learning at Dalhousie to further develop an online course that adheres to web-based accessible standards (Web Accessibility Initiative, W3C) and to principles of universal design. We streamlined content formatting to provide for easy navigation. By structuring the layout of the online content with respect to font size,
color, style, contrasting yet soft tones and by providing a variety of pedagogical processes, we were able to adapt the course to different learning needs. Electronic versions of text benefited both students with visual (dis)abilities, for whom English is a second language, and auditory learners. For visually impaired students, we tagged text notes for screen readers; for those with hearing impairments we provided both visual and auditory content through video clips that included text. By utilizing asynchronous communication tools, students with mobility and learning (dis)abilities were able to read and respond to postings online in a timeframe that suited their learning style.

**Community:**

Distance delivery of our programs is not correspondence study; it is highly interactive, utilizing various communication tools including discussion groups, e-mail, voice tools, chat rooms, and so forth. In an adult learning model of education, students participate in the creation of learning opportunities. For example, small groups may decide to meet online at specific times, create chat room venues, create collaborative content, and find other ways of connecting within the course. Whether due to the perceived social distance of being at the other end of a screen or to some other phenomenon, our students tend to be willing to share their personal and professional lives with their fellow students and instructors. On-line learning promotes community building, collaboration, and peer learning (Littlefield & Roberson, 2005). Academically, students have helped each other in the navigation of the online course, challenged each other’s views in a respectful manner, provided resources for assignments, or illustrated a social work theory/practice link with examples from their own practice.

Students have also supported each other through personal health crises, family or community struggles, and work and school dilemmas. Teaching in distance programs can also affect teacher-student relationships. Gilmore and Warren (2007) found that faculty teaching on-line experienced a greater emotional connection with their students compared to campus teaching. The relationships forged can be quite powerful. Our MSW distance students come from across the country for convocation so that they can meet each other and faculty face-to-face for the first time. Likewise, our BSW students come for the on-site residency with the foundation of teambuilding and group cohesion already established online.

**Diversity:**

An exciting aspect of on-line teaching and learning is the diversity among individuals involved in a course. Our School has always promoted diversity, through our affirmative action admissions policy (AA policy), the designated hiring of faculty, and the work of the School’s Diversity and Equity Committee.

Country-wide representation of students and faculty enriches discussions about practice and policy from diverse practice areas and from multiple jurisdictions across Canada. Students and faculty share their unique personal, community, and work experiences.

Within our distance delivery programs are students who identify from a variety of ethnic origins, including Chinese-Canadian, Indo-Canadian, African Canadian, various Aboriginal groups (Mi’kmaq, Maliseet, Ojibwa, Cree), and new Canadians. Representation from an array of spiritual practices includes Hinduism, Judaism, Islam, and Christianity. Our experiences tell us that faculty and student diversity in ability, age, class, race, and sexual orientation facilitates knowledge construction and understanding within the on-line learning environment.

Increasing access to social work education through distance delivery was a founding component of the social work program at Dalhousie University. With a commitment to diversity, the building of community, and accessibility, populations that have traditionally been less represented within the profession should begin to find an identity within social work.
References:


Want to learn about designing or teaching an online course? Here are some of the books you can borrow from the Centre for Learning and Teaching:


R. Colvin Clark and R. Mayer. 2003. eLearning and the Science of Instruction


M. Simonson, S. Smaldino, M. Albright, and S. Zvacek. 2009. Teaching and Learning at a Distance: Foundations of Distance Education

New Program Launched in September 2008: Master of Information Management

by Michelle Hunter (Centre for Advanced Management Education) and Fiona Black (School of Information Management)

Following significant market research in the public and private sectors, the Faculty of Management has introduced Canada’s first Master of Information Management (MIM) program using a blended learning (distance/on-site) delivery model.

Dalhousie’s MIM is designed for professionals with information management responsibilities and at least five years work experience in any sector. The MIM is offered to help managers comprehend and deal with increasing pressures around organizational information management in order to support effective decision making.

The first MIM cohort includes professionals from public and private sector organizations, from British Columbia to Labrador. These professionals appreciate asynchronous distance delivery. Due to their relative sophistication with IT applications, they are quick to learn their way around distance learning technologies and have justifiable expectations that their learning will be facilitated by more than the provision of online textual materials. They are thus an excellent group of students with whom to explore all of the potential of the Blackboard Learning System (BLS).

MIM courses are delivered primarily via BLS, complemented by two- to three-day onsite intensive sessions. Award-winning and highly experienced professors teach MIM courses with program and technological support from the Centre for Advanced Management Education’s (CFAME) highly effective team. Using BLS and other web-based tools, MIM program instructors and staff strive to ensure that their off-campus students feel connected to Dalhousie and that they have access to the support services and interactions with peers and teachers needed to enhance their academic studies.

For further information you can visit: mim.management.dal.ca

What is Information Management?

Information management encompasses the entire process of strategically creating, defining, finding, analyzing, protecting, classifying and distributing information within an organization to facilitate situational understanding and decision making. Information management includes the acquisition, control, and disposal of information products; the application of theories and techniques of information science to create, modify, and/or improve information handling systems; and the provision of services to internal and external clients.
The public service as a whole is grappling with succession issues as current demographics see more and more of the most experienced public servants retiring. In the forefront are questions regarding how best to retain valuable human resources, how to facilitate their growth and development, and how to ensure effective leadership in future. Dalhousie’s distance MPA (M) was developed in response to a stated need in the public arena for a graduate level program that would allow participants to advance their skills and knowledge while still working in a full time capacity. The program embodies Dalhousie’s values regarding academic excellence and adds the components of cutting-edge technology and a dedicated administrative group (CFAME) to provide a learning experience that is streamlined and effective for mature learners with high level public commitments. The MPA (M) is described as innovative, responsive, and flexible and is perceived as such by both government units who support individual participation in the program and by the alumni and current students who have direct experience with this educational vehicle.

Innovative:
- Utilizes an advanced online platform known as “Blackboard Learning Systems” (BLS) to facilitate distance learning
- Adds an in-classroom component to solidify learning and facilitate the building of networks amongst learners who hail from every corner of Canada’s public sector

Responsive:
- Educational and administrative support is provided beyond regular business hours in recognition of the mature learner’s schedule
- The skills of experienced academics and public sector employees/educators are combined in the program’s curriculum development in order to ensure that the program constantly considers and meets the needs of learners

Flexible:
- As dictated by each individual’s changing professional commitments, it is possible to either take a number of courses per term or to skip a term completely without penalty
- Curriculum updates occur each term as the result of on-going feedback from our learners and based on needs identified in the public sector