

E-Learning in Canada

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A principal characteristic of the Canadian experience with e-learning is the uniquely Canadian feature of provincial jurisdiction over education. Canada is the only country that does not have a national department or ministry of education. Therefore, any investigation of e-learning in Canada must focus more on specific provincial initiatives in technologically enhanced learning rather than a Canadian overview. In the best sense, Canada's e-learning programming can be viewed as a patchwork quilt made up of interesting projects, programs, and initiatives. In the worst sense, it is a set of disparate and uncoordinated activities constantly struggling with and reinventing solutions to problems solved elsewhere.

Canada is a large country unlike any other. The vast majority of the population lives in the south of the country within 100 kilometres of the US border with scattered, remote, and characteristically small communities spread throughout the vast northern regions. The majority of the population

in these remote regions are aboriginal, belonging to numerous diverse First Nations communities. Moreover, almost 25% of Canadians speak French as a first language and are mostly resident in the province of Quebec. Finally, Canada is an immigrant nation with major pockets of immigrants residing in communities within the major metropolitan areas. This creates geographic and cultural, as well as linguistic, barriers that make it difficult for people to communicate. These obstacles vary from province to province and in the far northern territories. Addressing them requires different approaches in different regions with diverse communities.

Interest at the national level in e-learning was driven mainly through increasing concern over the development of Canada's "education industry." CANARIE, Canada's advanced Internet development organisation, has implemented the world's fastest Internet backbone, CANet4, which spans the country from east to west and includes isolated northern regions. This "super-

net” links public and private research institutes, companies involved in research and development in information technology, as well as higher education institutions. The now defunct Telelearning Network of Centres of Excellence (1995 -2002) was a geographically distributed network of researchers and client communities from across Canada, who collectively researched the development, application, and evaluation of advanced learning technologies. Finally, the federal, National Science and Engineering Research Council has funded a 5-year Canadian research project known as Lornet, a partnership of six universities across Canada that is developing interoperability tools for e-learning based on semantic Web tools, IEEE LOM, SCORM, and other standards. Despite these federal initiatives, the provinces maintained their independence and continued to act autonomously, if not at cross purposes.

The first provincial initiatives can be traced back to the earliest province-wide distance learning network in Newfoundland, TETRA (Telehealth & Educational Technology Research Agency), in 1977; to the 1986 founding of Contact North/Contact Nord in Northern Ontario; and to the 1993 beginnings of the TeleEducation New Brunswick project. These uniquely Canadian networks began as audio and audiographic networks using simple teleconferencing and computing applications and evolved into online e-learning networks as the Internet matured and the World Wide Web appeared. These

networks provide (or provided, in the case of TeleEducation NB) e-learning sites and human support to different institutions delivering learning in their respective provinces.

There is considerable activity in e-learning in several provinces, while others have very little. There is also a wide range of Canadian approaches depending on the level of education and the types of learning. The networks described above represent one approach. Other provincial networks have also evolved to support the growing number of traditional universities that are offering some programs, or parts of programs, over the Internet. In fact, the majority of courses offered in Canadian universities now have at least some component of either World Wide Web content and/or require some communications using e-mail.

This growing use of e-learning by institutions has stimulated the growth of collaborative networks or consortia, especially in the western provinces. The prairie province of Saskatchewan adopted a Technology Enhanced Learning (TEL) Action Plan in 1997, which led to the creation of Campus Saskatchewan, a partnership model for promoting interinstitutional collaboration “to achieve shared goals and priorities for the use of technology enhanced learning.” Campus Manitoba shares a similar mandate in a neighbouring province with Inter-universities North, which focuses on providing University-level programming in the more isolated communities of the North. BC Campus is an

online educational service in the west coast province of British Columbia that connects students and educators through a single access point to online learning resources available at BC institutions. In addition, BC Campus provides funds competitively for e-learning content development and maintains a repository for distribution of this electronic content. eCampus Alberta is a consortium of 15 colleges and technical institutes designed to stimulate and facilitate online learning in the western mountain province of Alberta. Alberta North is a complementary consortium serving institutions in Alberta's northern region with participation in the Northwest Territories. Nationally, the Canadian Virtual University consortium brings together the e-learning departments of twelve different universities in eight provinces into a common Web site.

Alberta is a Canadian leader in e-learning with Athabasca University, which is Canada's only open university or single-mode distance delivery institution. Previous open universities have been merged into traditional universities, making them dual-mode. The former British Columbia Open University is now a department of the new Thompson Rivers University, and Téléuniversité du Québec (TÉLUQ) is now formally a part of the Université du Québec à Montréal.

In Ontario, Canada's most populous province, the government has left the decision making relating to e-learning to the different institutions, from which a few leaders and interesting initiatives

have emerged. TV Ontario produces televised learning content. The University of Waterloo has a long history of distance education and more recently has been the lead institution in the Co-operative Learning Object Exchange (CLOE), which is a collaboration among Ontario universities and colleges for the development, sharing, and reuse of multimedia-rich learning resources using a common repository. We previously mentioned Contact North/Contact Nord as a leading example of a collaborative e-learning network.

Quebec, Canada's only unilingual French-speaking province has supported the previously mentioned TÉLUQ as a leading open university. At the community college level the newly named CÉGEP à DISTANCE carries on a 15-year tradition of supporting distance education and e-learning. SOFAD (Société de Formation à Distance des Commissions Scolaires du Québec) produces adult distance learning courses. Canal Savoir (Corporation pour l'Avancement de Nouvelles Applications des Langages) is Quebec's principal provider of televised distance education courses from member universities, colleges, and telecommunications partners.

New Brunswick, Canada's only bilingual (French-English) province, hosts distance education course offerings from the Université du Moncton, a French-speaking university, and from the English-speaking University of New Brunswick. The province is unique in Canada in hosting two private sec-

tor e-learning universities delivering graduate programs in business and psychology at Lansbridge University and Yorkville University, respectively. The province also hosts the training/mentoring department for Skillsoft, the largest e-learning company in the world. From Fredericton, NB, mentors train workplace learners all over the world in skills such as project management, Microsoft professional, Cisco, Sun, Oracle, and other certifications.

Newfoundland, as we noted above, was the Canadian leader in distance education, which began in Memorial University's Telemedicine unit. The Open Learning and Information Network(OLIN) is an organization that brings together public and private sector institutions and companies that are involved in different aspects of e-learning at different educational and training levels.

In addition to these Canadian universities, US universities are establishing campuses in several Canadian provinces and offering e-learning programming. Interestingly, the province of Ontario, Canada's largest province is allowing the opening of campuses of US universities, for example the University of Phoenix, and the DeVries Institute, while prohibiting any presence by Athabasca University, based in another province.

FUTURE TRENDS IN E-LEARNING IN CANADA

It is evident from the Canadian e-learning description provided above that

there is a wide variety of approaches to implementation in the different provinces. Nevertheless, e-learning is expanding as the vast majority of universities and community colleges continue to expand their e-learning options for the benefit of their students. The average Canadian university student now works part time (or full time) while studying and is demanding more flexibility in the course offerings. Significant trends in Canadian e-learning that should be watched include:

- The development of common standards supporting the interoperability of learning resources in the form of learning objects;
- The implementation of technical standards and interoperability tools for instructional design and activities;
- The establishment of learning object repositories with content available in common interoperable formats using XML;
- The development and implementation of more robust and people-friendly learning management and content management systems;
- The development and implementation of social software providing students with electronic modes for connecting online socially;
- The continued rapid growth in "blended learning," the use of e-learning in various forms in traditional universities;
- The growth in the use of open source applications, open course

content, and open access research;

- The continuing growth in the acceptance of “exchange” credits from other universities. First- and second-year courses are already accepted by universities across Canada.
- The growth in the acceptance of Prior Learning Assessment and Recognition (PLAR) as more and more adults change career paths;
- The growth in the use of mobile devices for learning, taking advantage of the interoperability of learning objects;
- The growth in the use of games for learning, taking advantage of the technical and pedagogical opportunities made available by the video game consoles and applications;
- The continued rapid growth of Athabasca University, Canada’s Open University on track to have more students than any other uni-

versity in Canada

SUMMARY

It is evident that any view of e-learning in Canada must be informed by the uniquely Canadian feature of provincial jurisdiction over education. As was noted in the introduction, Canada is the only country that does not have a national department/ministry of education. Therefore, any investigation of e-learning in Canada must focus more on specific provincial initiatives in technologically enhanced learning rather than a Canadian overview. A distinctive “Canadian” model cannot exist (unless one views disparate models as evidence of a uniquely Canadian archetype). The provinciality of Canadian e-learning serves to highlight the inability of Canada to sustain national strategies and focus, such as those implemented in many other countries, due to the fractious nature of federal and provincial relations, particularly in education.

Rory McGreal is associate vice president, research at Athabasca University –Canada’s Open University. Previously, he was the executive director of TeleEducation New Brunswick, a province-wide bilingual (French/English) distributed distance learning network. Before that, he was responsible for the expansion of Contact North (a distance education network in the remote region of Northern Ontario –serving remote native reserves and small mining towns). He has worked in arctic Quebec teaching Naskapi Cree students. His PhD (1999) in computer technology in education at Nova Southeastern University’s School for computer and information science was taken at a distance using the Internet. Rory was the founder of the world’s first e-learning Web site for TeleEducation NB and one of the world’s first metadata learning object repositories, the TeleCampus. He

has been the leader in the development of the CanCore metadata implementation profile for implementing the IEEE LOM international standard for learning objects. In the past, he has worked in Canada as a teacher and abroad in the Seychelles, the Middle East and Europe in various capacities as a teacher, union president, ESL technological training co-ordinator, instructional designer, language and computer laboratory co-ordinator, and educational advisor. He has served on the Board of the TeleLearning Research Network of Centres of Excellence, the Commonwealth of Learning's Knowledge Management Group and the Education Steering Committee for CANARIE, Canada's broadband research network. In 2002, he was honoured as recipient of the Wedemeyer Award for Distance Education Practitioner. Rory has had published numerous articles and book chapters on e-learning including an edited book Online Education Using Learning Objects.

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