

Learning Through Technologies: Stories from the Front-lines

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Learning through Technologies: Stories from the Front-lines

This document presents the successes and challenges faced by some of the innovative organizations using learning technologies in projects supported by the Office of Learning Technologies (OLT).

The stories illustrate cases where learning technologies were used in various settings and with different types of learners. They are based on projects that ended during 2003.

About the Office of Learning Technologies

With a vision to ‘promoting innovative lifelong learning opportunities for Canadians’, the Office of Learning Technologies (OLT), Human Resources and Skills Development Canada, supports projects that use information technology to enhance learning and skills development.

OLT developed the Community Learning Networks (CLN) initiative to support community-based projects that demonstrate innovative use of existing network technologies to upgrade skills and knowledge of adult learners in Canadian communities.

Community Education Project

Nitinaht is a remote community in Cowichan Valley, BC, with a population of approximately 200 Ditidaht First Nation individuals. The unemployment rate in Nitinaht is high and the general level of formal education is low. For example, only three people in Nitinaht had graduated from high school in the decade preceding the project. Many factors can explain this situation, and one of them is that until 1999, to gain a secondary education, Nitinaht community members had to either commute three hours daily over a rough logging road or relocate to a larger community.

School District 79 submitted a proposal for a Community Education Project to the Office of Learning Technologies (OLT) in 1999. Other project partners were the Ditidaht community at Nitinaht and the Cowichan Valley Adult and Continuing Education. The project was designed to improve literacy levels and proficiency with computer technology, to increase participation in educational programs, and to provide career development opportunities for community adults that would allow them to live in the community and attend school on their own terms.

Key Success Factors

Learner involvement was essential, especially in project initiation. The driving force of this project came from a question by a Nitinaht adult studying at another town's Community Learning Centre. She wondered whether computers could be used to provide education for her community. This learner's niece in Nitinaht would have been able to deliver the program in her home if she had had an Internet connection.

It was soon clear that a learning centre was needed that could also function as a community centre and could host inter-generational socializing. Several different locations were used before they found a location with adequate space. Evening hours were added in the second year, which provided access for employees, a location for homework, and a time for family literacy activities. Furthermore, the cultural advisor from the Ditidaht First Nation was at the centre whenever it was open. Certified educators were on-site one day every two weeks and they could be contacted during regular working hours using electronic communication.

The steering committee for the project was composed mainly of community members with a few members from the School District. It was the Community leaders that identified priorities and provided ongoing support while external partners acted as facilitators and advisors.

Project Highlights

1. Academic

At the end of the OLT funding period, there were 18 students enrolled with about 70 percent of the students showing progress in their coursework. Daily attendance fluctuated, but averaged three to five, others worked from their homes. 75 percent of the students worked towards high school graduation diplomas and others worked to upgrade previous accomplishments.

2. Technology

The introduction to information and communication technologies was very gradual and students showed varying degrees of proficiency. During the project, 100 persons, almost half of the population of Nitinaht, used Centre computers. Increased usage was a measure of project success, but it also increased a need for troubleshooting equipment. The software used included *SuccessMaker*, (with exercises for improving grammar, reading, spelling, and math) and *Learning Equation Mathematics* (a series of computer-based math courses).

3. Career Preparation

Due to the low educational level, most of the limited local employment opportunities, such as with fish farms and construction, had gone to skilled workers from outside.

The career preparation aspect of the program progressed the slowest. By project's end, however, one student had completed Work Experience 12 and another was an apprentice at a sawmill. In the final year of the project, a major construction effort began locally and, with help from the Ditidaht First Nation Education Liaison Officer, the contractor registered nine community members as apprentice carpenters, electricians, and plumbers.

4. Community Culture

An important aspect was for curriculum content to be culturally appropriate and for culture-specific educational opportunities to be developed. Care was taken to ensure that the surroundings were appropriately decorated and had a culturally familiar feel to students.

In addition, the main local contact was a Band Council funded teacher assistant / cultural advisor. Funding for this position showed a good level of local commitment to the project.

Two Grade 12 equivalent credit courses were developed: Ditidaht Ceremonial Dance and Ditidaht Textiles. An education consultant provided the framework for testing these courses and the elders did the testing. A Ditidaht computer-based language program was created in which students video-taped interviews with community elders. The community responded enthusiastically to this program and it was so significant to language preservation that this component of the project was expanded into a separately funded program with its own computer lab.

Sustainability

Community response to the program was good; 97 percent wanted it to continue at Nitinaht. The project was expected to become a part of School District 79's program but changes in BC's Ministry of Education and the transfer of the project's champion to another School District, made this uncertain. It now appears that the Nitinaht learners will become part of the Port Alberni program.

Major factors in project success were the community vision and the community-led decision-making structures. Culturally sensitive adult education is now a part of the vision of the Nitinaht community. The project coordinator notes: "*Measurable specific outcomes, like course completions, may be important for project organizers... It is only when a new activity or practice is integrated into the community value system that we can be assured of a program's continuity.*" ■

ConnectABILITY - www.communitylivingtoronto.ca

Community Living Toronto (CLT) supports individuals who are affected by intellectual disabilities and their families, serving more than 5,000 persons per year. CLT's goal is to provide maximum independence and a life with dignity for the intellectually disabled. The need for these services far exceeds the ability to meet them using the current staff-mediated, face-to-face support services that are the cornerstone of CLT.

To better meet this need using information technology, CLT applied to the Office of Learning Technologies (OLT) for support. The result, *ConnectABILITY*, was a virtual learning centre that allowed self-directed access to information, supports, and resources. It was intended to complement, not replace, face-to-face support, and increase independence for individuals and their families while decreasing reliance on the service system.

During project development, a project team of staff that were comfortable with technology and could assist both staff and clients promoted *ConnectABILITY*. To minimize disruption to work schedules, the project was designed in three phases with the same project team overseeing all phases. The first phase focussed on early childhood programs, the second on youth, and the third on adults with intellectual disabilities.

Project Outcomes

The major project outcome was the development of *ConnectABILITY*. This virtual community had three important aspects:

1. The database and database management system had extensive resource links, and the library included multi-media learning tools and information on preparing for school, building job skills, and developing life skills. Content modules, which used visual prompts, included toilet training, positive behavior management, a music workshop, a communication workshop, a toy shop, an early challenges workshop, and a "money magic" series of games and simulations.
2. Interfaces were customized, delivering specialized tools and information to each individual. People with different cognitive and physical disabilities could use touch screens, screen readers, audio prompting, a voice mail utility, or specialized software.
3. The web site also had text messaging; facilitated chats, both in bulletin format and with real-time capability; and audio streaming.

An unexpected outcome of the online learning tools was an increase in the concentration levels of clients, even of young children who typically have attention span difficulties. Using the online tools gave clients peer support from individuals or parents in similar situations; this was especially important for busy and often isolated urban dwellers. The new connections included mentoring relationships between more and less experienced families and direct communication links with professionals and researchers.

Challenges

The tight timeline made sustaining the momentum on short-term projects difficult when team energy and infrastructure moved to the next project. The best support for changes in work processes would have been situational coaching and mentoring. CLT staff initially provided technical help, but a hardware partner would have been a better arrangement. A system of buddies or mentors to help clients with the technology was more effective than training exercises. CLT lacked the resources to develop this project as a Research and Development initiative linked to regular programming, so they balanced the research with program delivery. The project coordinator noted that it was frustrating to be *“involved in the research, at the same time as actually converting a program, all the while knowing that the new program was in a precarious long-term funding situation.”*

Sustainability

ConnectABILITY was intended to be an investment into a new strategy for social service delivery. The project funding from OLT was only a portion of the total budget of 5 million dollars for the period 2001-05. By the fall of 2003, 55 percent of the funding target, including the OLT contribution, had been realized. CLT is on course to achieve its long-term sustainability goals. New funding sources are still being confirmed.

One strategy CLT used to attract corporate donors was to develop a prototype before finding a donor. For instance, the prototype for *Money Magic*, which taught money management, was successfully presented to a bank for sponsorship, including the cost associated with prototype development.

Evaluation

Feedback from clients and staff — through on-site input, focus groups, and evaluation activities — assisted in project development. This slowed development, but was, said the project manager, *“ultimately our strength and also gave us confidence.”* External evaluation at two different points helped to give an objective overview of the project.

Through the course of the project, CLT learned about the emerging international focus on technology-enabled supports for individuals with intellectual disabilities. The work done by CLT was, in fact, considered as a highly innovative development. CLT established contacts with several organizations that hold great promise for ongoing growth and development in this field.

ConnectABILITY permitted CLT to learn while operating outside of the service box; it represented a fundamental shift from the way social service agencies have done business in the past. The project coordinator was grateful for OLT’s role in developing ConnectABILITY. *“The project has been very valuable and is a key element in our vision for the future of our organization and its service delivery. Information communication technology is now imbedded into the ongoing program of the organization.”* ■

Enterprise Online -<http://enterpriseonline.ca/>

The Peace River Region in Northeastern British Columbia is large and sparsely populated. A large percentage of the population is unemployed or underemployed. The Kiwanis Enterprise Centre, dedicated to developing an entrepreneurial culture in the community of Dawson Creek in British Columbia, has 16 years of experience in training, fostering, and supporting new businesses in the community.

The Centre requested support from the Office of Learning Technologies (OLT) for a project that would test the effectiveness of using web technology to deliver entrepreneurial, technical, and employability skills training. Using the web would reduce problems with program access and, the Centre anticipated, help learners to move away from dependence on public funding toward self-sufficient participation in the economy. Unemployed and underemployed individuals in the Peace Region of British Columbia — including youth, women, and First Nations individuals — were the targeted learners.

Project Highlights

Enterprise Online (EOL) supported Kiwanis Enterprise Centre goals and expanded the reach of this organization throughout the Peace River Region. While using and becoming more familiar with technology, users learned how technology could be helpful in their future plans.

During program production, focus groups participated in beta testing, and their feedback resulted in design improvements and a more user friendly site.

Three modules for entrepreneurial training were developed.

1. YouBIZ! — In 12 sessions YouBIZ! presented a self-directed business plan development method with detailed information on important aspects of developing a strong business plan. Users could navigate quickly or work carefully through each unit.
2. YouTECH! — Because technology skills are so important, these modules enabled the user to develop the technical skills needed for success in the new economy.
3. YouCAN! — These modules assisted with career development, stressing employability skills, resume writing, job search techniques, and personal health and fitness.

The format was flexible and client-driven with a self-paced design that let users take charge of their own learning. Assignments supported outcome-based learning, and users were expected to apply the skills learned to develop their own business or career plan. Extensive links to other online resources were provided.

Staff at the Enterprise Centre were trained to provide on-site facilitation to EOL users. During office hours they provided individual learning assistance, feedback on business or career plans, encouragement, mentoring, and support. The Centre also hosted special events featuring EOL; these included a trade show, an aboriginal youth conference, an Industry Canada E-Business Basics course,

and the official EOL launch. These events helped to encourage participation, collaboration, and networking and to instil a culture of entrepreneurial activity in Peace Region communities.

Sustainability

Training modules were integrated into the Centre's regular programs and into the curriculum of a local secondary school. On the subject of sustainability, a project coordinator explained: *"Because the online program is entirely in keeping with the Centre's work, it has been easy to integrate it into our regular budget. In fact, because the new modules replace the need to purchase other training tools, in this sense we have saved ourselves money. Initially we talked about getting advertisers, but we didn't follow through. Most of our clients couldn't afford to pay for accessing the program, so we've kept it free."*

Evaluation

Evaluation included the focus groups during development and an advisory committee of a variety of stakeholders that tracked month-to-month progress. An outside evaluator was contracted to determine overall success in meeting project goals and to advise on any improvements that could be made. A project coordinator explained: *"He assured us that what we accomplished was as good or better than the products offered by other organizations and/or businesses that create online training tools for a living."*

Outcomes

Although the long-term impact on the clients' employability cannot yet be tracked, a demographic survey indicated that the programs reached the target groups. Of the survey respondents, 77 percent were female and 21 percent were visible minorities.

Some outcomes were unexpected. In the course of the project, Kiwanis Enterprise Centre staff began to understand and use new learning about technology, project management, web design, partnership building, strategic alliances, effective youth employment, and related skills development. New partnerships emerged; they included the establishment of the Kiwanis Enterprise Center as the administrative organization and one of six members of Industry Canada's "Peace Region Community Access Program (CAP) Site Network." This strengthened relationships with region CAP sites and contributed to the EOL marketing strategy by providing access to Internet users who were a target market for EOL. Other partnerships included the Chetwynd Secondary School, the Chetwynd Public Library, and the Sci-Tech North Young Entrepreneurs Program.

The EOL project provided a complete and functioning learning tool with a tremendous amount of easy-to-read information and output-oriented activities for users. Using site links they could navigate almost 100 useful and important local, regional, provincial, national, and international web sites. Users appreciated the convenience, organization, and opportunity to access a site that assisted them in new business start up at their own time and pace, and at a price that they could afford. ■