



## **Indigenous Learners Online: The Future Isn't What It Used To Be!**

**Jessica Ball, M.P.H., Ph.D.**  
**School of Child and Youth Care**  
**University of Victoria**



### **Abstract**

Blogging, self-selected online communities, mobile devices, the You-Tube-ification of information exchange... There is an explosion of possibilities for knowledge creation and sharing among communities of learners that cross traditional boundaries and borders. To what extent are prospective Indigenous participants in post-secondary education involved in new online communication technologies? Is the era of the 'digital divide' - whereby Indigenous communities have had more sparsely distributed connectivity, access to computer hardware, and exposure to communication software - now over?

Given widespread understandings that Indigenous learners value Elders' cultural knowledge and prefer 'hands-on' approaches to teaching and learning, how receptive is the current generation of prospective Indigenous learners to pursuing post-secondary education 'virtually'? Can we harness the potential of new technologies to increase Indigenous peoples' access to post-secondary education while also ensuring relevance of the students' learning to local needs and incorporating local and cultural specific knowledge? Do educators have more to learn about online communication technologies than our learners have to learn from their coursework? How can educators keep up with the rapid pace of change in communication technologies and online learning software? This paper opens up discussion about these questions within the context of efforts at Canadian universities to increase recruitment, retention, and success of Indigenous learners across disciplines.

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## Introduction

There is an urgent need in Canada to increase access to accredited, effective post-secondary education to Indigenous learners through a variety of modalities to meet a range of learners' needs, goals, prior learning histories, and life circumstances. Indigenous adults represent a growing population seeking post-secondary education, particularly accredited courses (Kateines & Chignecto, 2006; Malatest, 2004; Mayes, 2007). Gaps between Indigenous and non-Indigenous Canadians in terms of education outcomes have been documented by Crossing Boundaries (2004), Downing, (2002), and Nickerson & Kaufman (2005), among others. Barriers have been documented by the Association of Canadian Community Colleges (2005), Human Capital Strategies (2005), Malatest (2002), Malatest (2004), and Merkel (2006), among others.

Information and communications technologies would seem to have the potential to overcome some of the barriers to post-secondary education faced by Indigenous adults. Yet, to date, online learning technologies have been an under-explored approach for overcoming barriers and meeting needs of Indigenous learners. E-learning is often dismissed on the basis of preconceptions about the lack of interactivity possible through online learning platforms or assumptions that Indigenous learners always prefer to learn through face-to-face encounters that rely on visual and oral communications. This paper calls for a critical examination of the validity of these preconceptions and assumptions, and a program of research on the feasibility, desirability, and effectiveness of providing a introducing online learning to the array of post-secondary education opportunities available to respond to the diverse needs and learning styles of Indigenous learners.

### **Online learning technologies in Indigenous contexts: What do we know?**

Rapid developments in online learning technologies would seem to offer new avenues for increasing access to post-secondary education for Indigenous learners, particularly those who live in rural and remote areas of Canada. E-learning also seems to hold promise for Indigenous learners who have work, family, or community roles that preclude them from participating in on-campus programs of study, or who have personal or financial reasons for choosing not to join classroom-based learning environments. The literature discussing the potential of e-learning to improve Indigenous adults' access to post-secondary education in includes cautionary messages about the extent of the "digital divide" between cities and remote communities that may still lack reliable, affordable access to broadband Internet service. Updates on the Indigenous Canada Portal (Government of Canada, 2005) indicate that online connectivity is steadily increasing, with nearly one hundred per cent access to high speed internet at the level of Indigenous *communities* expected within the next decade (Indian and Northern Affairs Canada, 2002). While significant progress is being made, connectivity is currently a problem in many locations and for many Indigenous individuals in Canada (Daniels, 2003; Downing, 2002).

Beyond connectivity at the community level, almost nothing is known about the extent and stability of access to computers or high speed connectivity at the level of Indigenous *individuals*. In a "Review of Indigenous Post-Secondary Education, Programs, Services and Strategies/Best Practices and Aboriginal Special Projects" published by the B.C. Ministry of Advanced Education (2005), Indigenous community leaders identified gaps and barriers to participation in post-secondary education. In this review, access to technology and access to online learning for community members, especially in Canada's North, were identified as especially important gaps to be filled. This report offers little detail on the issues and possible strategies. Further, no published research has been found that explores the receptivity of Indigenous high school graduates to online learning technologies, their familiarity with online learning, or their personal readiness to successfully engage in post-secondary learning online.

There are prevalent preconceptions that online learning technology may be particularly ill-suited to Indigenous learners, compared to non-Indigenous learners, particularly ‘mature’ learners re-entering education after years out of school. Again, there is no evidence. E-learning introduces new opportunities and challenges that require careful consideration before beginning to plan, design and deliver online programs intended to meet the needs of Indigenous learners.

### **Successes of innovative campus-based and community-based modalities**

There have been some recent successes in supporting Indigenous students’ education through innovative on-campus programs (Battiste & McLean, 2005; Canada Millennium Scholarship Foundation, 2004). These approaches are familiar and have intuitive appeal for both learners and instructors because of the traditional value placed on teaching and learning in the context of relationships. In particular, community-based program delivery models have proven effectiveness for Indigenous learners (e.g., Ball & Pence, 2006). For example, the School of Child and Youth Care at the University of Victoria has completed 10 successful partnerships with First Nations in Saskatchewan and B.C. for the community-based delivery of an accredited, two-year diploma level program. The First Nations Partnerships Program has benefited a total of 152 First Nations students to date, making it one of the most successful post-secondary initiatives in Canada in terms of Indigenous recruitment, retention, and credential completion (Ball & Pence, 2006). The program’s ‘Generative Curriculum Model’ is well known in Canada (Ball, 2003a) and internationally (Ball, 2003b; Ball & Pence, 1999; Ball & Pence, 2000) and was selected by UNESCO as one of 20 best practices in education and training that incorporates Indigenous Knowledge (Ball & Pence, 2002). Tri-annual research evaluations of this innovative program yielded clear understandings of the effective components and potential of community-based, cohort-driven delivery of post-secondary programs (Ball, Definney, & Pence, 1999; Ball, Leo, & Pence, 2001; Ball & Pence, 2001a; Human Capital Strategies Final Report on Aboriginal Post-Secondary Education Programs, Services and Strategies/Best Practices and Aboriginal Special Projects Funding Program (2005); Millennium Foundation Report on Indigenous Education (2004).

### **Limitations of community-based delivery**

While there are unequivocal benefits of the community/classroom-based, cohort driven model, there are also a number of limitations that provided impetus for the preliminary exploration reported in this paper. Foremost, community-based delivery models rely either on the establishment of ‘satellite campuses’ which are only feasible in large communities supplying a steady intake of students, or on cohort-driven delivery where a group of students enter and move through a course or program together. Our First Nations Partnerships Program is a cohort-driven model and relies entirely on face-to-face instruction and Elders’ participation in co-constructing and co-instructing courses in communities that host the program in community-owned facilities (Ball & Pence, 2001b; Ball, Pence, Pierre, & Kuehne, 2002). Community-based delivery is cost-effective only when there are groups of community members ready and wanting to enroll in a program. Members of the student cohort have to live within geographic proximity to the host community. Each delivery of a community-based education program (at any level) requires special fund-raising in order to pay for Elders’ participation and locally recruited instructors to teach in community-based classrooms. In a cohort delivery, all students must move through the program in a lock-step manner. Students who drop or fail even a single course for whatever reasons typically forego their prospect of timely program completion.

A large number of requests received by the First Nations Partnerships Program team have been from Indigenous individuals who are either geographically isolated or members of very small communities lacking the numbers or relationships with other communities to be able to mount a full

partnership program. Thus, as Mendelson (2006) notes, there remains a significant population of Indigenous adults in Canada who are not reached through either community-based or on-campus programs as a result of geographic location, family or community responsibilities, or personal preference.

### **The call for online learning technologies to support Indigenous post-secondary education**

The potential of e-learning to benefit Indigenous learners is a recurring theme in the Canadian adult education literature (Battiste & McLean, 2005; Corrigan & Robertson, 2004; Crossing Boundaries National Council, 2006; Daniels, 2003; Epstein, Gonzalez & Matheos, 2005; Facey, 2001; Greenall & Loizides, 2001; McCue, 2006; Voyageur, 2001; Walmark, O'Donnell & Beaton, 2005). Advocates emphasize the need to provide e-learning that matches the needs of the learners, recognizes and addresses the barriers, and builds on insights gained from projects from which “best practices” have been drawn (McMullen & Rohrbach, 2003). For example, in a review of the state of First Nations learning in Canada completed for the Canadian Council on Learning, Battiste and McLean (2005, 12) remark: *“Many rural, remote, and northern communities face difficulties in access to learning opportunities. As a result, there is growing interest in distance learning as a means of overcoming the challenges of geography and isolation.”* The federal Aboriginal Canada Portal (2005) has called for actions to reduce the digital divide between Indigenous and non-Indigenous individuals and communities, not only by securing connectivity, but also by developing program models that familiarize Indigenous people with the use of technology for meaningful purposes. The Canada Millennium Scholarship Foundation (2004) has pointed to the potential of online learning technologies to help fill the persisting large gap in Indigenous post-secondary participation, retention and success in Canada. The B.C. Aboriginal Post-Secondary Education and Training Policy Framework (2006) calls for increased efforts to promote post-secondary education that is culturally meaningful, community relevant, and offers an alternative to traveling to attend post-secondary institutions. There have been increasing requests from Indigenous Education Coordinators and individuals throughout B.C. for online delivery of training especially in education and human service professions such as child and youth care.

As a new approach to Indigenous adult learning, online delivery of courses offers flexibility for individual learners who wish to pursue studies at their own pace rather than ‘lock-step’ as part of a student cohort. Recent developments in online learning technologies have increased the potential for real-time (synchronous) interactions using video and audio. Electronic text, graphic communication, and online media including library data bases provide key learning supports and modalities for varying content foci and learning styles. Learners can be independent with respect to their funding for tuition paid directly to the post-secondary institutions, rather than depending upon a host community to form a consortium with other communities in order to raise sufficient funds to commit to a multi-year partnership with an institution. Thus, online learning would seem to have the potential for becoming at least part of the solution to the problem of extending post-secondary access to Indigenous peoples. Research is needed to explore the potential for meeting the needs of diverse Indigenous students across an array of content disciplines and credential levels.

### **The need for a program of research**

The existing research literature on the effectiveness of online learning for Indigenous learners is sparse, and the few available case studies include high school programs and delivery models that use other distributed learning technologies (Bale, 2005; McMullen & Rohrbach, 2003). A program of research would make much-needed contributions to adult educators’ understanding of the conditions that enhance the effectiveness of Indigenous-specific university courses, delivered online. Specifically,

research is needed to identify factors that post-secondary learners and Indigenous Education Coordinators think are important to consider when designing online learning courses. Research that includes samples of both Indigenous and non-Indigenous learners could generate hypotheses about the extent to which there are differences in the kinds of learning supports, online learning design components, or delivery models that are likely to benefit non-Indigenous compared to Indigenous learners. Research could also examine whether differences in readiness, receptivity, or learning outcomes are associated with other learner characteristics such as gender, age, and residence in rural or remote locations. Findings from a program of research could inform decision-making in education policy, design and delivery about the necessary conditions for online learning to become an effective component of national, provincial, territorial and community strategies to enhance Indigenous participation at the post-secondary level and in subsequent continuing professional development programs.

### **Preliminary clarification for a program of research**

In May 2006, the author and an Indigenous faculty member at the University of Victoria, Shanne McCaffrey, began to explore the feasibility of establishing a fully-online 'Indigenous Diploma in Child and Youth Care' offered at the University of Victoria. This project was envisioned as a possible first step in developing a cost-effective, sustainable, fully ladderred and career-latticed approach to strengthening Indigenous capacities to deliver health and social services. Exploratory steps included a survey of current Indigenous learners enrolled at the University of Victoria, as well as conversations with Education Coordinators in Aboriginal communities and with representatives of post-secondary institutions in B.C. offering to share their stories of online learning pilot projects (e.g., Nicola Valley Institute of Technologies Online Web-based Learning pilot project, First Nations Education Steering Committee Speech-Assistance Program). This exploration suggested that there is a wealth of creative thinking and anecdotal evidence from online post-secondary learning pilot projects targeting Indigenous learners that could be tapped in a more extensive program of research.

The search for cases yielded few examples of Indigenous-specific courses and programs at Canadian universities and colleges developed for online delivery or for delivery using hybrid models that combine e-learning with more traditional face-to-face instruction or distributed print materials. Most courses that have been developed specifically for Indigenous learners are in the category of professional development for individuals who are employed by Indigenous organizations. These include, for example, a certificate in Indigenous Employment Development offered by Saskatchewan Indian Institute of Technologies and certificates and diplomas in First Nations Public Administration offered by Nicola Valley Institute of Technology. The Indigenous Financial Officers Association of Canada offers online professional development courses for its members. Cisco Systems has partnered with public-sector organizations to offer a First Nations Distance Learning Program, an IT essentials program that is delivered using both instructor-led classroom sessions and online learning. The Council for the Advancement of Native Development Officers has developed an introductory level pilot distance learning project for economic development officers delivered via print materials, discussion boards, e-mail, and conference calls.

It is noteworthy that mainstream colleges and universities are absent from the short list of Canadian providers of online education specifically for Indigenous adults. There are, however, dozens of Indigenous-specific programs, in many subject areas, being offered face-to-face by Canadian colleges, both on-campus and off-campus (Association of Canadian Community Colleges, 2005). Indigenous-specific programs are also being offered face-to-face, both on-campus and off-campus, by Canadian universities. Many Canadian post-secondary institutions offer off-campus and e-learning courses that

serve students in rural and sparsely-populated regions and students who cannot or prefer not to attend on-campus classes, though these are not specifically customized to serve Indigenous learners. The Canadian Virtual University is the portal to distance education and online learning offered by universities. It is probable that Indigenous adults are accessing post-secondary education and training via these programs.

Indigenous institutions that were contacted for the current exploratory survey reported serious challenges encountered in their pilot online courses for Indigenous learners. Most often they reported that most Indigenous learners had difficulty securing regular access to computers, were not familiar with online learning platforms and therefore required preparatory orientation and ongoing technical support, and experienced difficulty with time management and motivation as independent learners. Echoing issues raised by members of education institutions, serious doubts were raised by Aboriginal Education Coordinators about the probability of success of a fully-online approach for Indigenous learners at the post-secondary level. Several respondents underscored the importance of developing expertise in Canada about how to deliver online learning effectively to Indigenous learners in ways that encompass a number of 'special' considerations and the need to offer 'extra' supports.

The survey of Indigenous learners enrolled at the University of Victoria yielded important clues about the kinds of challenges, needed supports, personal readiness, and options that should be considered to support Indigenous participation in post-secondary education. The survey asked 34 respondents to report on the learning conditions, experiences, and needs of members of the First Nations communities whose educational needs they represented. Areas of inquiry in a telephone interview included: (1) learners' access to high speed internet, computers, printers, and alternative resourcing (e.g., Personal Digital Assistants such as Palm pilots and Blackberries; Satellite access for mobile computing); (2) learners' work space challenges and opportunities; (3) learners' receptivity to and familiarity with learning technologies; (4) learners' need for preparatory training to enable them to participate effectively in an online learning community; (5) types of mentoring and social supports learners were likely to require in order to succeed in online teaching and learning environments; and (6) the feasibility and potential for incorporating voice and video technology in online learning to enhance individual and group interaction and mentoring.

Only 10 of the 34 communities where respondents worked had access to high-speed internet, and three had no access at all. Most respondents reported limited access to technical assistance. They reported that nearly all learners had access to computer for at least a few hours each day through their work or a community centre, but that most did not have a personal computer in their home. They estimated that a majority of prospective learners had used internet communication, including email, msn, You Tube, chat rooms, web cams, and discussion boards. A recurrent theme in their reports of experiences among Indigenous community members who had tried online learning was the unwanted sense of isolation that they experienced or anticipated in an online learning environment. They described how Indigenous learners craved interaction with other learners and with the instructor. About half of the respondents described learners in their communities as 'hands on' learners, wanting to 'do' and/or 'be shown' as part of their learning style. These respondents expressed doubt about whether online course work could provide members of the communities they represented with opportunities to engage with other learners, or to learn by doing. Many were uncertain about learners' skills in navigating online learning platforms, and their overwhelming fear being lost in cyberspace. Overall, the survey underscored the need for: (1) preparatory training in the use of an online learning platform; (2) innovative online instructional strategies that engage Indigenous learners in an interactive community of learners; and (3) learning activities that take them into their communities to learn by doing and from sources of cultural and locally relevant knowledge residing in their communities of reference.

The Indigenous community partners involved in this scan also raised important questions about Indigenous learners' readiness for fully online post-secondary programs. They suggested instead the need to explore 'hybrid' delivery models, perhaps beginning with face-to-face course work while Indigenous learners become confident in their ability to succeed in post-secondary education, get to know other learners and the instructors, and develop their online communication skills. Online learning opportunities would then be increased over time until the learner is offered fully online learning as one of several learning modalities.

### **Innovative instructional designs for Indigenous learners online**

It is axiomatic in education that learners need to situate their learning with reference to a meaningful context. They need to know that what they are learning matters, to whom, and for what purposes. In particular, research about Indigenous post-secondary learners has underscored the importance of locating and drawing upon sources of cultural and community-based knowledge (Ball, 2004). This poses a particular challenge for instructional designers and for online learners. Curricula must invite and guide Indigenous learners to learn from and contribute to their own communities through learning activities that involve them in dialogue and service learning in their local settings. Learners could be asked to begin their coursework by identifying mentors, social supports, Elders, and community service workers in their own setting, and thereby to begin to populate a real-time, on-the-ground community of support for their learning while they are also part of a virtual community of learners comprised of their classmates and instructor and tutors. Throughout their course, learners can be asked to reach out in person to these individuals and communicate with them about course readings and assignments, as well as receiving their guidance and mentorship. In this approach, learners would be asked to think about the circle of support available to them, and to situate themselves cognitively as well as in reality with reference to this support system, which they will need in order to succeed in their learning journey. Promising practices for developing effective pedagogical practices and curricula designs for Indigenous learners online are suggested by the pilot work done within the University of Victoria School of Child and Youth Care (Ball & McCaffrey, 2007) and the Indigenous Early Childhood Development Virtual University (Pence & Marfo, 2004; Shaefer & Pence, 2006). Educators can also draw upon the work of Australian researchers who have reported their experiences designing e-learning courses for Indigenous adults (Dyson, 2003; McDonald & O'Callaghan, 2007; McLoughlin & Oliver, 1999).

### **Conclusion: Many paths up the mountain**

Post-secondary institutions must provide a variety of alternatives for Indigenous learners to participate in post-secondary education. The BC Ministry of Advanced Education's Discussion Draft *Proposed Aboriginal Post-Secondary Education Strategy* presents "access and choice" as guiding principles (Merkel, 2006, 11). On-campus and community-based programs are known contributors to the landscape of effective approaches. However not all Indigenous learners are served by either of these delivery modalities. Some Indigenous learners are deterred from classroom-based learning, whether on-campus or in community facilities, because of very negative experiences in classrooms in the past (Archibald & Urion, 1995). Some are deterred because of perceptions of persisting racism and lack of cultural safety or appropriate supports on post-secondary campuses (Ball & Pence, 2006; St. Denis & Hampton, 2002). Some are unable to leave their responsibilities at home. Some are too geographically remote to be able to participate. Given the challenges associated with providing access and choice via face-to-face instruction, either on-campus or off-campus, increased research and innovation needs to be invested in developing online post-secondary education environments and pedagogy that respond to

Indigenous learners' needs as connectivity improves. As Marie McCallum, a Cree administrator at the Meadow Lake Tribal Council advises: "*Finding our way to wellness among diverse communities of children and families requires many paths up the mountain. No one approach, no one program model, will reach or work for everyone.*"

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