# Report Investigating the Learning Styles of Aboriginal Students

Prepared for the Northern Labour Market Information Clearinghouse

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#### A. INTRODUCTION

This Northern Labour Market Information Clearinghouse Report discusses the research conducted on Aboriginal learning style(s) and describes the cultural and environmental factors that affect Aboriginal learners. It then examines the benefits and challenges of distance education for Aboriginal learners before looking at the success of several post-secondary institutions in delivering innovative distance education programs. This leads to a review of distance delivery best practices related to media, learning environment, instructional approaches, and support services. The report concludes with recommendations to the Northern Alberta Colleges for designing and delivering effective distance education programs aimed at Aboriginal students.

### B. ABORIGINAL LEARNING STYLES

### 1. Defining Learning Styles

The term "learning styles" has a variety of definitions. Sanchez and Gunawardena define learning styles as "people's characteristic way of information processing, feeling and behaving in and toward learning situations" (1998, p.49). According to Arthur J. More, "learning styles is defined as an individual's characteristic strategies of acquiring knowledge, skills, and understanding" (cited in Castellano, 2000, p. 159).

#### 2. Distinct Aboriginal Learning Style or Styles

In her review of learning styles research Hodgson-Smith writes,

Researchers have investigated the learning styles of various age and cultural groups across the continent and have employed a variety of methods and tools with which to do so. A large portion of the learning styles research has been conducted with middle and upper year students or adults. Few of the studies identified gender, nationality (i.e. Swampy Cree, Métis, Wyandot) or region (urban/rural). Few primary studies have been undertaken in the last decade, and those that have been conducted in the last twenty years support the findings of earlier studies. Furthermore, research assesses a variety of modalities, making comparison very difficult. (2000, p. 159)

According to Sawyer, "even a cursory review of the literature suggests some of the problems in the learning style debate: wildly differing definitions, the inclusion of cultural and personal factors beyond the usual view of learning style as cognitive patterns, dangerously generalized conclusions, and a confusion between student learning styles and teacher behaviors" (1991, p. 102).

Hodgson-Smith notes that "the most important criticism, however, is that the research on the learning styles of Aboriginal students does not yield results that are significantly different from what is found in non-Aboriginal students" (2000, p. 162). This is supported by Sanchez and Gunawardena who write, "Although each ethnic and racial group may exhibit statistically significant differences with clusters of specific learning style variables, each group also contains individuals with widely diverse learning styles" (1998, p. 50).

On the question of whether there is a unique Aboriginal learning style, More and Hughes (1997) conclude:

While there is not evidence for a single Aboriginal learning style, there are some recurrent learning styles which are more likely among Aboriginal students. Similarly there are also recurrent learning styles which appear to be more likely among Non-Aboriginal students. However there are wide variations amongst individuals in any cultural group and these must be taken into account. Further we submit that the recurrent styles among Aboriginal learners occur often enough to warrant careful attention by teachers provided teachers also attend to individual differences between students.

### C. CULTURAL FACTORS AND THEIR IMPACT ON HOW ABORIGINAL STUDENTS LEARN

According to Arthur J. More (1989), "The relationship between traditional Native Indian cultures and contemporary Native Indian cultures is complex. Contemporary Native Indian cultures do not duplicate traditional cultures, but they draw extensively from tradition."

More (1989) further notes that little attention has been paid to traditional Native Indian learning styles and even less has been paid to the relationship between traditional and contemporary learning styles in Native Indian children.

More describes the major features of traditional learning for Aboriginal children as:

- The use of legends and stories as a primary means of teaching values and attitudes.
- The use of symbolism, anthropomorphism (giving human characteristics to animals, gods and objects), animism (giving life and soul to natural phenomena such as rocks, trees, wind, etc.) and metaphors appears to have been an extremely effective method of teaching very complex concepts.
- "Watch-then-do" was a primary method whereby the child acquired skills within the family group. Explanations and questions in verbal form were minimized. Supervised participation was a major characteristic of skill learning. Talking

- about oneself, even in a learning situation, was often considered boastful and inconsiderate.
- Children were expected to constantly observe the world around them and learn from it. Children were allowed to explore and be independent as soon as they were able. They were allowed to learn from their mistakes. A policy of non-interference existed unless there was real danger. Often misbehaviour was ignored so that the child would learn the natural consequences of misbehaviour and learn to be in charge of his or her own behaviour. (More, Ibid.)

Other traditional cultural factors among Aboriginal people that are cited in the research literature as significant to learning include:

- The importance of non-verbal communication. Communication was both verbal and non-verbal, but the non-verbal was much more important than in contemporary Western society. Silence was also used as a means of communication. Eye contact and quiet calmness were important methods of discipline and communication. Children were not tested or questioned after a learning situation—they were expected to self-test (More, Ibid.).
- The role of the teacher. The notion of "teaching" was conceptualized in a completely different manner in many traditional Native Indian cultures. A major characteristic of traditional Native life was that grandparents and other elders in the extended family were responsible for much of the teaching of the child. According to Hodgson-Smith, "In traditional Aboriginal communities, learning was an intimate process in that 'traditionally, teachers loved their students dearly'. Teachers were moms, dads, grandparents, and other loved ones. Student motivation was most often not individually oriented but, rather, family-and community-oriented" (2000, p.163).
- The importance of kinship relationships. Facey writes, "Although generalizations are necessarily limited, there is a wealth of evidence in anthropology to show that, for example, peoples whose societies forefront kinship relationships do have a more group-than individual-oriented identity" (2001, p.122).

While it is important to acknowledge that there are individual learning styles and ways of learning among Aboriginal nationalities, the research literature does identify a number of "learning preferences" among Aboriginal students. These include:

- A significant preference for visual aids (diagrams, encoded symbols, imagery).
- A preference to follow a model or learn by observation rather than to receive verbal instruction.
- A preference for hands-on experience and for being oriented to the whole before moving on to the parts.
- A significantly greater desire for frequent student/teacher interactions than non-Aboriginal students.
- A tendency to be more peer-oriented than non-Aboriginal students.

- Personal educational priorities appear to be always subjugated to family priorities, matters such as illness or a funeral taking precedence over attending class, meeting an assignment deadline, and so forth.
- A tendency to weigh community's needs for example, needing certain categories of Native workers such as nurses, foresters, or social workers alongside his or her own personal interests in taking certain programs or training.
- A preference for collaborative learning and small group tasks.
- A desire for using oral tradition in the classroom such as storytelling and extensive examples. (Hodgson-Smith, 2000, pp. 160-161; Facey, 2001, p. 122)

### D. ENVIRONMENTAL FACTORS AND THEIR IMPACT ON HOW ABORIGINAL STUDENTS LEARN

A variety of environmental factors affect how Aboriginal students learn. Those that are mentioned most frequently in the literature include:

- **Difficult economic and social conditions**. Aboriginal communities have experienced difficult socio-economic conditions that include, higher rates of unemployment, poor housing conditions and overcrowding, and poor relative health conditions. In such conditions, the ability of students to focus on learning opportunities is greatly impaired. (Downing, 2002, p. 7).
- Limited success of mainstream, government-run education systems. According to Sheila Watt-Cloutier (2000), the programs of the government schools "had nothing to do with our language, culture, or the adaptive challenges faced by our people...Rather than making us stronger, they tended to undermine our confidence and identity." Forty-one percent of Aboriginal people between the ages of 25 to 34 did not complete high school in 1996, compared to 18% of non-Aboriginals. The proportion of Aboriginal people enrolling in and completing post-secondary education is much lower than the rest of the population. (Downing, 2002, pp. 7-8)
- **Need for family supports.** The majority of current Aboriginal participants in postsecondary programs (distance or on-site) are women with children. Support services, co-operative housing and child care programs for these students improve their retention rates and completion of courses/programs (Baker, 1994, p. 210).
- The "Digital Divide". Aboriginal communities have less access to, use of, and training in information/communication technologies and Internet resources on reserves and among Aboriginal people generally. A 2001 Indian and Northern Affairs study on Aboriginal connectivity found that less than seven percent of Aboriginal communities in Manitoba, Nunavut, B.C. and Saskatchewan had access to high speed Internet (cable or xDSL services). (Downing, 2002, p.12, Indian and Northern Affairs, 2001)

• A 1998 research study commissioned by Athabasca University to determine core technological competencies in the First Nations settings interviewed 60 reserve-based agency employees across six sites to capture their insights into community technology use. The least available technologies across all six sites included e-mail, modem, fax modem, voice mail, computer networking, and electronic bulletin boards. (Voyageur, 2000, p. 110).

#### E. ABORIGINAL LEARNERS AND DISTANCE EDUCATION

### 1. Key Definitions

There are many definitions of distance education. The following definitions are widely accepted and utilized:

Distance education is planned learning that normally occurs in a different place from teaching and as a result requires special techniques of course design, special instructional techniques, special methods of communication by electronic and other technology, as well as special organizational and administrative arrangements (Moore and Kearsley 1996, p. 2).

Distance education is a planned teaching/learning experience that uses a wide spectrum of technologies to reach learners at a distance and is designed to encourage learner interaction and certification of learning (University of Wisconsin-Extension. Distanced Education Clearinghouse, 2003)

Instructional delivery that does not constrain the student to be physically present in the same location as the instructor. Historically, distance education meant correspondence study. Today, audio, video, and computer technologies are more common delivery modes. (Ibid.)

Keegan (1990) describes distance education as having the following characteristics:

- Independence of the learner
- Separation of teacher and learner
- Influence of educational organization
- Use of technical media
- Provision of two-way communication
- Usually absence of groups but possible meetings

A term frequently used in the distance education research literature is "learning technologies." These are defined as electronic information and communication technologies (ICT) that deliver learning, knowledge and skills on a one-way

or two-way basis. They include "asynchronous" and "synchronous" technologies that are defined as follows:

**Asynchronous technologies:** These allow learners to access information at different points in time and at their convenience. Interactivity is limited. These include:

- E-mail
- Self-directed learning applications available on:
  - digital video disk (DVD)
  - CD-ROM
  - audio/visual
  - film
  - video

**Synchronous technologies:** Learning takes place for all students at the same time through real-time information exchange and interaction. These are highly interactive. These include:

- Satellite broadcast
- Video teleconferencing
- Internet conferencing
- Chat rooms (Greenall and Loizides, 2001, pp. 7 8).

### 2. Key Benefits and Challenges of Distance Learning For Aboriginal Students

A number of major benefits are cited in the literature on Aboriginals and distance learning. These include:

- Distance education presents potential advantages that relate particularly to the Aboriginal community. The use of distance education provides Aboriginals with the opportunity to be educated without having to abandon their life-style or culture. It allows Aboriginal learners a learning environment in which they can take advantage of what mainstream culture has to offer while living physically on their own. As a result, they can avoid both the problems of being a minority culture within a mainstream institution and the consequences of lack of access to educational resources (Gruber and Coldevin, 1995, pp. 50-51).
- Salish Kootenai College (SKC) in Montana has done considerable research with a
  view to building degree programs to serve Indian students who do not have a
  tribal college in their community. They see obvious advantages to distance
  education whereby not every reservation can develop a tribal college, but most of
  them potentially could receive courses from tribal colleges and universities
  (Facey, 2001, p. 120).
- Distance education addresses the problem of enhancing the resources of bandcontrolled schools on reserves with teachers. Distance education can facilitate the sharing of Aboriginal teachers among many more students than would be possible if teachers were teaching in traditional classrooms (Gruber and Coldevin, 1995, p. 51).

- Distance learning can be offered to the smallest Aboriginal settlements that otherwise would have no access (Ibid., p. 52).
- Delivering distance learning programs makes sense. Many obstacles such as loneliness, lack of familial support network, housing, child care and transport that are faced by students who leave their home communities to obtain academic training can be alleviated when students can remain in the community (Voyageur, 2000, pg. 110)

Aboriginal educators also note a number of challenges that go with distance education. Voyageur (2000) suggests "Distance learning is the answer for people who are ready, willing and able to gain academic qualifications, but having an appropriate experienced student support network in place is essential" (p. 110). Gruber and Coldevin state, "Distance education, in and of itself, will not necessarily answer the educational needs of aboriginal communities. Success is dependent upon the effective design and implementation of the program....More work remains to be done to establish the most appropriate and effective ways to implement distance education for aboriginal learners" (1995, p. 58). Cardinal (2003) views distance education as one learning tool among many while Davis (2000) sees it as "one viable delivery option in Aboriginal education" (p. 247).

### 3. Examples of Successful Post-Secondary Distance Delivery Educational Programs for Aboriginal Students

Since the mid-1970s, Aboriginal agencies and communities in Canada have been working with universities, colleges, and institutes to design and deliver Aboriginal training and education programming. As a result, these institutions have established Native Studies programs, encouraged greater participation by Aboriginal students in other on-campus programs, and also mounted Aboriginal-oriented programming off-campus using the "field centre" model. (Spronk, 1995, p. 87)

According to Spronk, the field centre model has been described as "a supportive community which develops students' self-confidence, nurtures the development of a cohesive group of peers and provides a vehicle for solving problems" (Ibid. p. 86).

The programs using the field center model share a number of common features:

- They are fully collaborative, in most cases jointly offered by Aboriginal agencies and non-Aboriginal institutions;
- They are community based, bringing programs to the learners in their communities rather than requiring learners to relocate to urban centres;
- They incorporate Aboriginal perspectives in program and curriculum design, learning materials, pedagogical approaches, learner support, and administrative procedures;
- They have flexible entrance requirements and frequently offer intensive coursework in reading, writing, and math skills, which enable adults disadvantaged by previous, inadequate schooling to work successfully at the post-secondary level; and,

• They maintain the same rigour and standards in their exit requirements that exist in their campus-based programs, so the students who complete these community-based programs can readily move into further programs or immediately into jobs. (Ibid, p. 87)

Spronk identifies the following postsecondary institutions that utilize field centre models in distance delivery mode:

- Simon Fraser University
- Athabasca University
- Memorial University
- Arctic College
- University of Victoria. (1995, pp. 88-90)

Two examples of innovative distance education programming at Simon Fraser University and Athabasca University are described below.

The Secwepemc (Shuswap) Cultural Education Society/Simon Fraser University has reported growing success with distance education delivery since the summer of 1993. The project has adopted a policy stating that only students in good academic standing can enroll. Of 35 initial enrolments, 32 have completed their programs with passing marks. The most successful venture has been a first-year course in the spring of 1994, delivered by video-conferencing, using fibre optics technology. Students were able to interact with the instructor using voice and screen. Audiographics and audiovisual materials were also used. The students embraced these technologies, and all five completed the program. (Davis, 2000, p. 230)

Athabasca University is Canada's largest on-line and distance university serving approximately 25,000 students across Canada. It offers approximately 500 individually delivered study and group courses, including Aboriginal-related courses. Of special note is the Aboriginal Management E-Class Project. Launched in Athabasca University's Undergraduate School of Business in September 2001, the 13-week course will recruit up to 50 Aboriginal students over four terms and run for two years. Students as a group work with an instructor in a paced, electronic study environment. The E-Class brings students and instructors together using synchronous and asynchronous activities. There are no classes to attend. The project will be evaluated in 2003 to determine if it fits the needs of Aboriginal students. If successful, Athabasca University plans to expand access to greater numbers of students through partnerships with Aboriginal institutions and other organizations.

Although not mentioned by Spronk, another example where the field centred model is used in distance delivery education for Aboriginal students is Salish Kootenai College in Montana. It is one of only 32 tribal colleges existing among the 575 federally recognized tribes in the United States (O'Donnell, 2000).

**Salish Kootenai College** (**SKC**) determined in the mid 1990s that it wanted to build degree programs to serve reservations that had no tribal colleges. In less than two years, and with a limited number of courses, SKC enrolled 452 Aboriginal students, of whom

86% successfully completed their respective programs. SKC has developed courses that have received international attention. The Commonwealth of Australia has nominated SKC's innovative distance education health care education for a World Health Organization prize. In Fall 2001, SKC launched two Internet-based bachelor degree programs (Bachelor of Science in Environmental Science and Bachelor of Arts in Tribal Human Services).

SKC seeks to provide state of the art distance delivery facilities and education. These include a state of the art switched network, an interactive video conferencing system, a satellite uplink site, and a broadcast television station (SKC TV) that has been on air since 1988 broadcasting programming 19 hours per day (Ambler, 1999; O'Donnell, 2000).

### **4.** Learnings and Best Practices in Teaching and Presenting Distance Educational Material to Aboriginal Students

Across different studies, there is substantial agreement that first-generation distance education programs – correspondence courses - have not been very successful with Aboriginal learners. Correspondence courses have been characterized by very high attrition rates and low completion rates (Davis, 2000, p. 230).

According to Barbara Spronk,

The home study model does not work with Aboriginal learners. Given these learners' heritage – the centrality of oral traditions, the need for group solidarity, and the kind of 'watch, prepare, then do' that ensured learning survival in earliest times, this should come as no surprise. Correspondence materials, no matter how sophisticated their design, are text-and prose-based, and involve the learner in – at best -a fictionalized relationship with faceless and largely unknown authors. Nothing in Aboriginal learners' previous experience prepares them for the kind of learning these materials demand. Even if English is their first language- and for many it is not- if they have been raised in an Aboriginal community their language patterns will still be predominantly Cree or Athabaskan or Micmac. Further the comprehension of English prose demands a particular mind set, one that Scollon and Scollon (1981) have labeled "modern consciousness" for which Aboriginal learners' previous education has not prepared them. Finally, for people for whom one-to-one relationships are central to learning, the decontextualized nature of correspondence learning materials renders them alien in the extreme. (1995, pp. 91- 92)

Spronk concludes "with a few remarkable exceptions, the independent home study mode has proven a dismal failure for Aboriginal students at Athabasca." (Ibid.)

Media that appear to work best for Aboriginal distance learners include:

- On-site, classroom tutoring (according to Spronk this has proven to be by far the most successful mode for Athabasca University's Aboriginal learners.
- Teleconference also appears to have its uses, not just in terms of making course content meaningful, but also to bring students together as a group.
- In most situations where audioconferencing has worked well, learners already know the instructor personally in on-site contexts.
- Delivery modes with higher levels of interactivity (such as two-way audio-and TV-conferencing) create the conditions for forming a "virtual community" that supports learning. (Ibid., p. 88)

#### According to Davis,

The most frequent distance education design combines delivery by radio or television signal together with packaged curriculum, audio-teleconferencing with the instructor and other students, audiographic technologies, tutoring on-site or by hotline, and some personal contact (either by an itinerant instructor or by occasionally bringing students together at one site." (2000, p. 230)

The environment that appears to best support Aboriginal distance learners includes such features as:

- A safe and comfortable learning environment (e.g. in a community learning centre) must be provided for learners. Learners need a supportive environment in which to undertake this difficult challenge in their lives. Most of them probably lack both the necessary physical space and the moral support to undertake the challenges within their own homes. (Gruber and Coldevin, 1995, p. 58) According to Davis, "The community learning centre has emerged as the model of choice in a number of examples in defining a home base for distance delivery. It allows students to come together either to engage in collective learning or to provide mutual support. (Davis, 2000, pp. 246-247)
- Providing on-site course facilitators who take care of technical matters as well as assisting with student-teacher communications and course organization (Facey, 2001, p. 122). According to Gruber and Coldevin

Identification of qualified on-site facilitators, or persons willing to undergo appropriate training, is critical to the success of distance education in Aboriginal communities. The facilitators develop the critically important supportive learning environment that includes access to any required tutoring. They also function as the "eyes and ears" of the remote instructors in the community." (1995, p. 58)

Davis notes, "In many documented cases, the local site coordinator is seen to play a key role in creating a positive learning environment and providing immediate support so that students continue their studies." (2000, p. 247)

• Peer support is essential. Program design and assignments should emphasize group projects and peer tutorial systems in which Aboriginal students work and study collaboratively (Baker, 1994, p. 216). The Saskatchewan Indian Institute

of Technology reports that peer support and teamwork contribute to higher retention rates (Davis, 2000, p. 230).

Scheduling of distance delivery programming is also important. Some suggestions of how to improve success in this regard include:

- Starting dates should harmonize with important community activities such as hunting and fishing (Gruber and Coldevin, 1995, p. 58)
- Establishing deadlines for the completion of courses. Success is significantly aided by monitoring the progress of the project at regular intervals and by responding appropriately and quickly to any findings produced by the monitoring. (Gruber and Coldevin, 1995, p. 58)
- Devise workloads that Aboriginal learners can actually manage, given the many demands that are made by others in their lives. Even more so than most learners, those in Aboriginal communities tend to be already charged with a number of responsibilities. They face the challenge of dealing with both Aboriginal and non-Aboriginal worlds within the confines of a single course.

At Athabasca University, the most effective approach has been to require the learner to spend an entire day at the learning centre for each course she/he is taking, and to reserve part of that day for supervised and supported study and reading. Otherwise, students tend to come to class unprepared, or not to come at all, because they are not prepared. (Spronk, 1995, p. 94)

Suggestions in both the literature and by those interviewed in preparation of this report identified the following instructional approaches that work well with Aboriginal students:

- At a minimum, it is critical to have instructors and tutors who are experienced in working with Aboriginal learners, or at the least, sensitive to the issues involved. According to Spronk "At the moment, the best we can do is screen non-Aboriginal candidates for experience with, or at least predisposition toward, holistic and participatory educational approaches such as dramatic techniques and collaborative work. Another strategy is use Aboriginals as resource people for the courses." (1995, p. 93)
   Cardinal (2003) expands on this by recommending that Aboriginal elders be invited to speak to learners.
- Emphasize face-to-face contact with instructors, tutors, counselors, supervisors, mentors, or other students, and supplement these contacts with self-study print material (Spronk, 1995, p. 92).
- Be approachable and easy to understand in the language you use (Windsor, 2003)

It is important to Aboriginal students that they connect with their instructor beyond simply the instructor role. These students need to see and know the instructor as a person (Ferguson, 2003). Marjane Ambler (1999) writes,

Cultural gulfs can endanger any non-Indian instructor trying to reach Indian students, especially when they are separated by not only culture but also geography. Based upon solid scholarship about Indian student learning, the Montana Consortium has carefully designed its system to bridge these gulfs. For example, the Montana Consortium encourages instructors to travel to reservation tribal colleges and visit their students in person. The value of this cultural bridge was demonstrated earlier by the University of Alaska-Fairbanks off-campus Bachelors of Education degree. Starting in 1974, the university has placed faculty members in Native communities to reduce the cultural distance and to give the faculty the opportunity to learn about indigenous knowledge."

- Cardinal (2003) suggests that in a classroom setting the class members, together with the instructor, sit in a circle. This puts everyone at the same level so people are more relaxed and talk more.
- Because Aboriginal people have an oral tradition they often prefer oral assignments rather than written ones. Unfortunately, there is usually not much room given for presentations in most college courses. (Ferguson, 2003)
- Sawyer (1991) puts forward a number of suggestions that successful instructors of Native students tend to do, including:
  - Reduce formal lecturing
  - Allow students to retain control of their learning
  - Accommodate visual learning preferences, especially for new and difficult material
  - Use more student-directed small groups
  - Utilize warmer and more personal teaching styles
  - Accept silence
  - Listen as well as talk
  - Use experiential learning techniques.
  - Avoid stereotyping
  - Negotiate a culture of the classroom
  - Utilize slower, more personal helping modes
  - Actively demand by remaining personally warm (pp. 102-103)

Many of those interviewed for this report or researchers studying Aboriginal distance learning, point to the need for supports to Aboriginal learners. They offer the following suggestions:

- Assessment and advising: sensitive recruitment and accurate academic placement at the appropriate skill level. Aboriginal advisors are essential, and assessment instruments should be free from cultural bias (Baker, 1994, p. 211)
- Academic and counseling support are crucial (Davis, 2000, p. 246)
- Adequate funding so that students and their families can meet their daily needs during their studies (Ibid., pp. 246-247)

- As Aboriginal Student Coordinator at Athabasca University, Pauline Windsor emphasizes the importance of providing extra support to students. She utilizes phone and e-mail to build relationships with Aboriginal students. Pauline contacts students when they start and midway through the course. She leaves it open for students to contact her when they require support.
- A sense of support and "community" within the postsecondary institutional environment is important for Aboriginal students (Kurszewski, 2000, pp. 58-59).

## F. SUGGESTIONS TO NORTHERN ALBERTA COLLEGES FOR DESIGNING EFFECTIVE EDUCATIONAL PROGRAMS AIMED AT ABORIGINAL STUDENTS

Drawing upon the research literature and interviews with key Aboriginal educational contacts, the following recommendations are proposed to the Northern Alberta Colleges for designing and delivering effective distance education programs aimed at Aboriginal students.

1. Obtain input and participation from Aboriginal communities into program choices, curriculum design, and delivery of distance education programs.

According to Gruber and Coldevin (1995):

Support of the band council and local community is necessary for program success. Support is established by giving community leaders real ownership of the program from the outset, by responding directly to community needs, and by outlining and agreeing upon the responsibilities of various community members for implementing the program. (p. 58)

One example of incorporating community feedback into the design of distance education programs is a community-based process including Elders that resulted in Laurentian University's bachelor of social work program (Davis, 2000, p. 229)

2. Incorporate the multinational character of Aboriginal peoples into the design of distance delivery programs.

Cardinal and Ferguson emphasized the distinct nations and nationalities that comprise Aboriginal peoples. There are currently 71 Aboriginal nationalities represented at the University of Alberta alone. (Cardinal, 2003))

Traditional practices can even vary within a single Aboriginal nation. When incorporating cultural or traditional learning examples, course examples should always include representation from more than one Aboriginal nation or community. (Ferguson, 2003)

### 3. Adopt the practice of developing Aboriginal curricula for Aboriginal distance learning programs.

A number of researchers have written of the problems fraught with adapting mainstream materials to Aboriginal learners. According to Spronk

The experience at Athabasca University, for example, is that courses that are written for "mainstream" learners seldom serve Aboriginal learners effectively. For one thing, they are written for the more-or-less independent learner, not for the interdependent learners that populate Aboriginal classrooms, and need at least to be reformatted. More often, however, they need to be completely regenerated, since the materials are inevitably culture-bound in viewpoint and strategy. (Spronk, 1995, p. 94)

Gruber and Coldevin argue that "if resources permit, new materials should be designed specifically for the particular program. However, as distance education is increasingly used in this context, the sharing of materials between various programs could help to reduce the high costs of production." (1995, p. 59)

On the other hand, Lynne Davis quotes Margaret Haughey who argues that distance education is becoming increasingly flexible, multimodal and interactive, and suggests that education is becoming less content-focused and more dialogical. This opens up space to accommodate more styles of learning and ways of knowing. (Davis, 2000, p. 230).

It is important to note that there have been some important efforts to design specialized curricula for distance delivery to Aboriginals. For example,

- Language courses (e.g. AVC-Lesser Slave Lake in Cree, Wahsa in Oji-Cree and Ojibwa) have been developed for different levels of fluency.
- Also examples of specialized curricula for distance delivery, including the
  First Nations Fisheries Technician Program at Malaspina College; the
  Aboriginal Resource Management Technician program at Sault College
  (Ontario) and a human resources management course by Atii Training
  Incorporated for Inuit and Innu managers.
- In Alberta, the Yellowhead Tribal Council, in partnership with Athabasca University, has produced a number of courses in the health development administration certificate program (Davis, 2000, p. 247).
- 4. Consider the development of a Northern Alberta college consortium or partnership to share the costs of distance learning technologies and curriculum development for Aboriginal distance delivery programs.

Distance learning delivery spans boundaries. Aboriginal communities increasingly have options to partner with institutions outside their region, provincial or even country to develop high quality, culturally based programs

(Davis, 2000 p. 247). One such example is Salish Kootenai College in Montana, which delivers college courses and degree programs to Aboriginal students in Alberta, British Columbia, and Australia. (O'Donnell, 2000)

Given the international nature of Aboriginal distance learning delivery, coupled with the high costs of distance learning technologies and curriculum development of distinctly Aboriginal programming, the Northern Alberta colleges may wish to consider forming a consortium or partnership to share such costs.

Campus Saskatchewan offers a related partnership model for consideration. This partnership of educational institutions, directed and managed by its members, is designed to support them in developing and advancing inter-institutional initiatives to achieve shared goals and priorities for the use of technology enhanced learning. Institutions maintain their mandates, responsibilities and authorities while participating in any collaborative efforts through Campus Saskatchewan. Campus Saskatchewan is not a legal entity. (www.campussaskatchewan.ca)

5. Distance learning development for Aboriginal people needs to focus more on Aboriginal values, perspectives, and learning needs and less on innovative learning technologies.

The vast majority of researchers of Aboriginal distance learning, and all those interviewed for this report, viewed distance learning as a useful tool for Aboriginal learning, not as an end in itself. Davis writes,

Despite the current preoccupation with finding the most successful configuration of technologies and support services, the most demanding challenge will be to find ways to infuse educational programs with Aboriginal values and perspectives. If distance education is to fulfill its promise, then it will need to evolve in ways that enable Aboriginal communities to define their own educational priorities and to determine the values and perspectives that pervade the educational experience. (Davis, 2000, p. 248)

6. Whether the focus of programming for Aboriginal students is on campus or distance delivery, it is critical that a variety of Aboriginal-focused supports be available to Aboriginal students.

According to Pauline Windsor, it is vital that post-secondary institutions be easily approachable and understood by prospective Aboriginal students. This includes the language used, the accessibility of the institution's web page, course descriptions, program counseling, registration processes, and follow-up support services. Aboriginal advisors within each institution, and preferably each campus, are essential. Many post-secondary institutions now have Aboriginal Student Centres that offer Aboriginal students and prospective students important supports and a sense of community.

## 7. Learning opportunities about Aboriginal culture and traditions should be an integral, on-going requirement for Alberta post-secondary instructors and administrators.

Given the current shortage of Aboriginal instructors, it is apparent that non-Aboriginals will, for the foreseeable future, teach the vast majority of Aboriginal post-secondary students. It is therefore vital that non-Aboriginal instructors, along with institutional administrators, have regular opportunities to learn more about the history of Aboriginal nations, Aboriginal learning preferences, and ways to continually enhance the learning experience of Aboriginal students. These learning opportunities could have greater value if they include Aboriginal elders in the teaching of such courses. This would actively demonstrate respect and valuing of Aboriginal culture as well as begin to develop crucial relationships that can be further enhanced through consultation on education programs, curriculum, and methods of delivery.

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