

Aboriginal Learning: A Review of Current Metrics of Success



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ABORIGINAL LEARNING

Knowledge Centre

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The Aboriginal Learning Knowledge Centre (AbLKC) is one of five knowledge centres established in various learning domains by the Canadian Council on Learning (CCL). CCL is an independent, not-for-profit corporation funded through an agreement with Human Resources and Social Development Canada. Its mandate is to promote and support evidence-based decisions about learning throughout all stages of life, from early childhood through to the senior years. The AbLKC is co-led by the First Nations Adult and Higher Education Consortium (FNAHEC) and the Aboriginal Education Research Centre (AERC) College of Education, University of Saskatchewan.

The AbLKC is guided in its work by a Consortium of over 100 organizations and institutions, a steering committee, and six Animation Theme Bundles (Bundles) led by members of the Consortium. The Bundles are:

1. **Learning from Place**—*Narcisse Blood, Red Crow Community College, Cardston, Alberta*
2. **Comprehending and Nourishing the Learning Spirit**—*Dr. Marie Battiste, College of Education, University of Saskatchewan, Saskatoon, Saskatchewan*
3. **Aboriginal Language and Learning**—*Dr. Leona Makokis, Blue Quills First Nations College, St. Paul, Alberta*
4. **Diverse Educational Systems and Learning**—*Saskatchewan Ministry of Education (Ted Amendt), Regina, Saskatchewan*
5. **Pedagogy of Professionals and Practitioners and Learning**—*Dr. Sákéj Henderson, Native Law Centre, University of Saskatchewan, Saskatoon, Saskatchewan*
6. **Technology and Learning**—*Genesis Group, John and Deb Simpson, Yellowknife, Northwest Territories*

From the start, the AbLKC recognized that the reporting and monitoring function of the Canadian Council on Learning required a dialogue with Aboriginal people to define successful learning from Aboriginal Peoples' perspectives. Together with CCL, the national Aboriginal organizations and interested individuals who have taken up this work in communities and institutions across the country were invited to share their philosophies and understandings of successful learning. The result was three holistic learning models with shared philosophical values and principles. It is the view of the AbLKC that the iterative models, which can be found at www.ccl-cca.ca/aboriginallearning/, will serve as a framework for development of indicators to report and monitor successful learning, as a framework in planning for successful learning for individuals and communities, and in discerning what is, indeed, 'a promising practice'. We believe there are many other potential applications of these models.

In working toward addressing gaps in understanding what constitutes successful learning and what Aboriginal Peoples aspire to and need to succeed in their learning endeavours, AbLKC wishes to acknowledge that what is available as evidence of success in the existing literature is often unclear and undefined, and perhaps not representative of Aboriginal Peoples' perspectives. Responding to the aspirations and needs of Aboriginal learners means valuing their collective intellectual traditions and identities as Aboriginal peoples.

This publication, *Aboriginal Learning: A Review of Current Metrics of Success*, is available in French and English electronically on CCL's Aboriginal Learning Knowledge Centre website at www.ccl-cca.ca/aboriginallearning.

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A commitment to new approaches and to new ways of thinking about measuring success and quality education for Aboriginal learners is needed. Current indicators now widely used by governments and researchers must be broadened to measure more than simply years of schooling and performance in standardized tests. (Discussion paper: Redefining success in Aboriginal learning workshop, 2007)

This publication was commissioned by the *Canadian Council on Learning (CCL)*'s *Aboriginal Learning Knowledge Centre (AbLKC)*, co-led by Dr. Marie Battiste, Director of Aboriginal Education Research Centre (AERC) at the University of Saskatchewan and Dr. Vivian Ayoungman, Director of the *First Nations Adult and Higher Education Consortium (FNAHEC)* and is part of a larger project focussed on redefining success in Aboriginal learning. Specifically, this document examines critically the measures/metrics of Aboriginal learning success currently employed by academic researchers as well as by education practitioners. In addition, it identifies the extent to which evidence exists to support the efficacy and effectiveness claims of "promising" educational practices. Finally, it provides a critique of both the evidence and the practices themselves, with the intent to inform future research related to success in Aboriginal learning.

This project has been rather unique in my experience. Over the years, I have conducted a variety of literature reviews, research studies, and meta-analyses related to a broad range of topics, but I have never before had the opportunity to work alongside so many wonderful research teams with such diverse interests and specialties. These teams, referred to in this project as *Animation Theme Bundle (ATB) Working Groups of the AbLKC*, conducted fascinating and thought-provoking literature reviews which, in turn, provided me with a wealth of information which I added to my own research as I prepared this document.

At the outset of the work on this document, the ABLKC sponsored my attendance at two key meetings: *Redefining Success in Aboriginal Learning Workshop* and *Modern Knowledge, Ancient Wisdom: An integration of past and present for a new tomorrow—First National Conference*. These meetings were also important sources of information for this publication. The formal sessions during both of these events as well as the informal conversations with workshop participants and conference delegates provided a critical lens through which to view the research associated with this project.

In addition, many critical friends including Rita Bouvier (AbLKC), Cort Dognier (Saskatoon Public Schools), Patricia Prowse (Saskatoon Public Schools), Larry Sackney (University of Saskatchewan), and Bill Gowans (Beaufort Delta Education Council, Northwest Territories) among others, provided suggestions, shared their insights, and challenged my findings and conclusions.

Finally, my dual role as both an education researcher and a public education practitioner provided another lens through which the literature cited in this publication has been viewed and critiqued.

Dr. Scott Tunison

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Introduction

We can, wherever and whenever we choose, successfully teach all children whose schooling is of interest to us. We already know more than we need to do that. Whether or not we do it must finally depend on how we feel about the fact that we haven't so far. (Edmonds, 1979, p. 23)

Historically, in First Nations communities learning was not compartmentalized away from “real life”; rather, First Nations' epistemological structures viewed learning simply as a fact of life. In other words, “First Nations have stated the belief that education is a lifelong process that must be shared in a holistic manner given the spiritual, emotional, physical, and intellectual dimensions of human development” (Battiste and McLean, 2005, p. 3); or, according to Elder Danny Musqua, “we were put on this earth to learn; learning is what makes us human beings”.

While the connection between living and learning described above might seem like a self-evident truth, we are still left with two key questions:

1. What does it mean to learn?
2. What processes, structures, and conditions best facilitate learning—especially for First Nations, Métis, and Inuit? Whatever the answers to these and other questions related to educational success for Canada's Aboriginal people might be, there is clear historical and contemporary evidence of what does not or has not worked.

One educational enterprise that clearly did not work, at least for most First Nations, Métis, and Inuit, was the residential school initiative. Quoting from numerous sources, CCL's *Report on Learning in Canada; No Time for Complacency* (2007) stated:

Although it was not the experience of all [residential school] students, many children were separated from their families and communities, and suffered from sexual, physical, and mental abuse while attending residential schools. The 1996 Royal Commission on Aboriginal Peoples concluded that many of the current challenges facing Aboriginal communities, including violence, alcoholism, and loss of identity, spirituality and language, can be tied to the residential school experience.

An estimated 80,000 Aboriginal people alive today attended residential schools. In 2002, approximately one in three First Nations youth (age 12–17) and one in six First Nations children (age 11 and under) had one or more parents who attended a residential school. (p. 67)

Despite the legacy of the residential school debacle, there are signs of recovery and improvement. In a report for CCL on the current state of First Nations learning, Battiste and McLean (2005) observed:

First Nations communities across Canada have begun the process of restoring traditional belief systems and practices that rest on a renewal of First Nations languages, cultural identities, and a reconstruction from the history of colonization. While many factors contribute to the revitalization of First Nations knowledge, the renewal and Indigenous renaissance taking place throughout Canada can be attributed, in part, to the work done in the last few decades within First Nations education and among Indigenous leaders, Elders, and scholars. (p. 1)

Nevertheless, many First Nations, Métis, and Inuit retain a deep-seated distrust of Eurocentric education.

This document began with a quotation from Ronald Edmonds' 1979 landmark article for *Educational Leadership*. In this article, Edmonds queried, "Are there schools that are instructionally effective for poor [minority] children?" (p. 20).

He framed his examination of the issue around the opinion that "an effective school bring[s] the children of the poor to the mastery of basic school skills that now describe minimally successful pupil performance for the children of the middle class" (p. 16). He discovered that there are, indeed, schools that provide quality education to poor children and that those schools are characterized by: i) strong leadership, ii) high expectations for all students, iii) positive atmosphere, iv) an emphasis on the development of reading skills, and v) a culture of regular and appropriate student assessment. In other words, the factors that impact most on learning are, in large part, within the control of the adults in the school community.

While not all Aboriginal people in Canada are poor, a significant majority do live at or below the poverty line (Statistics Canada, 2001). As Pattnaik (2005) pointed out "... being Indigenous increases an individual's probability of being poor ..." (p. 315). If Edmonds' assertion that we know how to educate all children effectively is true, one must truly wonder why we have not yet done so, at least for many Aboriginal children in Canada.

During the last three decades, the impact of globalization, new technologies, and demands for a well-educated society continue to put pressure on schools to improve student learning outcomes—particularly for First Nations, Métis, and Inuit learners. While, "there was a time in education when decisions were based on the best judgments of the people in authority" (Earl and Katz, 2006, p. 1), school governing bodies and the public are increasingly requiring schools to provide quantifiable "proof" from a variety of data sources that their children are learning successfully and, at the same time, are becoming successful learners.

Given the history of Aboriginal peoples in Canada, public demand for data to "prove" successful learning may be interpreted as paternalism and seem like just one more way to impose external control of Aboriginal education. It is true that, in today's political climate, data are often used as clubs to browbeat educational systems into conformity because they are typically gathered under the guise of the "accountability" movement through standardized tests and other large-scale assessments:

Standards frame accepted or valued definitions of academic success. Accountability compels attention to these standards as educators plan and deliver instruction in the classroom. Assessment provides the evidence of success on the part of students, teachers, and the system. (Stiggins, 2002)

While these assessments—often referred to as summative assessments or "assessments of learning" (Stiggins, 2007)—have their place in measuring successful learning, they are not sufficient in painting the whole picture of learner progress. Particularly for First Nations, Métis, and Inuit learners, the learning colour palette is incomplete without some consideration of importance of experiential learning via interaction with Elders, other members of the community, and the land. "The home is a child's first classroom; parents and other family members are a child's first teachers" (CCL, p. 80). These learning experiences build on each other over time to provide the learner with the insight and skills to live in and with this world. Learning of this kind is not appropriately measurable through formal tests. Rather, successful learning in this context is measured through successive experiences throughout one's life and learning gaps are filled through those experiences and with the guidance of others. In traditional Eurocentric education vernacular, these learning experiences are often referred to as formative assessments, or as "assessment for learning" (Stiggins, 2002) in contemporary research. Thus, as pointed out by Chappuis and his colleagues:

A balanced assessment system takes advantage of assessment **of** learning and assessment **for** learning; each can make essential contributions. When both are present in the system, assessment becomes more than just an index of [learner] success. It also serves as the cause of that success. (p. 25; emphasis in original)

In the context of assessment for learning, the intent is to help the learner develop a deeper understanding of his or her own learning journey in order to become a better learner. An important aspect of this learning environment is the belief that *all* members of the learning community (children, adults, Elders, the extended community, etc.) are both learners and teachers (Mitchell and Sackney, 2000). Critical to this learning environment, according to Stiggins, is the clear articulation of goals or standards and definite signposts of progress along the road, permitting the learner not only to know where he or she is going but also to understand where he or she is on the road and how to progress farther down the road. In other words, when they assess *for* learning, teachers use assessment and the continuous flow of information about student achievement that it provides to advance, not merely to check on learning. They accomplish this by:

- understanding and articulating *in advance of teaching* the achievement targets that their students are to hit;
- informing their students about those learning goals *in terms that students understand* from the very beginning;
- becoming assessment literate so they can transform those expectations into assessment exercises and scoring procedures that *accurately reflect student achievement*;
- using classroom assessment *to build student confidence* in themselves as learning, helping them take responsibility for their own learning so as to lay a foundation for lifelong learning;
- translating classroom assessment results into *frequent, descriptive (versus judgmental) feedback* for students, providing them with specific insights regarding their strengths as well as how to improve;
- continuously *adjusting instruction* based on the results of classroom assessments;
- engaging students in *regular self-assessment* with standards held constant so they can watch themselves grow over time and thus learn to become in charge of their own success;
- actively *involving students in communicating* with their teachers and their families about their achievement status and improvement; and
- making sure that students understand *how the achievement targets* that they strive to hit now *relate to those that will come after*. (Chappuis et al., p. 35; emphases in original).

Assessment data from various sources also have ancillary uses. Johnson (2002) pointed out that data must be used to dispel myths about who can learn, what they can learn, and to create urgency to effect change. Further, Earl and Katz (2006) viewed data as a potential policy lever for educational reform; suggesting that accountability should be viewed as the platform for improvement to ensure successful learning rather than as a surveillance mechanism:

As we see it, [learning] leaders can take charge of change and use data as a powerful tool for making wise and timely decisions that are consistent with the exigencies of their local contexts and responsive to their unique perspectives, not by slavishly applying external standards to their work or by plotting to ensure that they meet their targets. Rather, they can create their own future through careful planning, honest appraisal, and professional learning always focussed on improved conditions for teaching and learning as a way of being. (Earl and Katz, p. 23)

As Stiggins (2002) pointed out, a balanced assessment system that includes both assessments of learning and assessments for learning is required to ensure maximum learner success. Thus, in the spirit of a balanced assessment system that includes both assessment of learning and assessment for learning, we examine herein the current and potential indicators of learning success for First Nations, Métis, and Inuit as well as the measures or assessments of those indicators.

Definition of Success: What Does it Mean to be Successful?

Since our epistemological predilections frame our perceptions, we must first examine our beliefs about and definitions of success before we can assess the extent to which we have been successful. In general terms, success is commonly defined as: i) the achievement of a particular level of social status, ii) achievement of an objective/goal, and/or iii) the opposite of failure (Wikipedia).

In the educational context, the two latter definitions are, perhaps, most instructive when defining success. Typically, Western society considers a learner to have been successful if he or she has completed kindergarten to grade 12 (K-12) education in a reasonable length of time, has fulfilled a significant measure of his or her potential, and seeks further learning when necessary to achieve a particular level of economic and social well-being. In more recent times, we have extended our definition of successful learning to incorporate the concepts of “lifelong learning” and the development of an appreciation of the intrinsic value of learning or “learning for its own sake.” Chappuis and his associates (2004) defined successful learning as an amalgam of these views:

1. The mission of school is to promote maximum student success—it is not merely to produce a rank order of students.
2. All students can learn—but they will not all start at the same place, learn at the same rate, or ascend to the same ultimate level of achievement, and;
3. Learning doesn’t happen merely because adults demand it; rather, learners must want to learn, feel able to learn, [and] see learning as worth the effort needed to achieve it. (Chappuis et al., p. 40)

While these definitions of successful learning are relatively universal in that they are worthy goals for all learners, it is incumbent upon us to consider the unique perspectives of successful learning that are held by FMI societies as we elucidate the structures, indicators, and matrices currently being used to assess the extent to which successful learning has taken place.

Richardson and Blanchet-Cohen (2000), for example, suggested that FMI people uniquely see learning success as “cultural reintegration in and through educational and collective self-actualization for [aboriginal people]” (p. 172). The Royal Commission on Aboriginal Peoples (1996) concluded that:

Despite the painful experiences Aboriginal people carry with them from formal education systems, they still see education as the hope for the future and they are determined to see education fulfill its promise. (3:434).

Corbiere (2000) went one step further suggesting that Indian education should be seen as *sui generis*; in other words, a unique entity that “is based on the learning styles and teaching methods employed by Native people in historic and contemporary times” (Hampton as cited in Corbiere, p. 4). Whatever the case:

Public education is currently in an era of accountability, high-stakes standardized testing, and standards-based reform. However, there is an absence of meaningful discussion on how to achieve equitable outcomes that do not unfairly penalize the most underserved students. Despite countless school reform efforts during the last two decades of the 20th century, we begin the 21st century with the continuing gaps in academic achievement among different groups of students. The gaps in achievement appear by income and by race and ethnicity. Large percentages of ... [Aboriginal] students are at the low end of the achievement ladder, and large percentages of middle- and high-income white and Asian students are at the top of the achievement ladder. (Johnson, 2002, p. 4)

Thus, one is left with at least two fundamental questions:

1. What does it mean to be a successful First Nations, Métis, and Inuit learner?
2. How do we know whether one has learned successfully?

This paper provides an examination of both the definitions of success and the evidence used to support assertions of successful learning in light of a broad spectrum of educational research. The intent of this report is threefold. Firstly, it identifies the indicators and measures currently being employed to assess educational success for Aboriginal learners in five of six Animation Theme Bundles (ATB) identified by the Canadian Council on Learning in its wide-ranging examination of the state of learning in Canada (2007) including:

1. Comprehending the learning spirit/identity in and through learning units (family, community, peers, etc.);
2. Aboriginal language learning;
3. Diverse educational systems and learning;
4. Pedagogy of professionals and practitioners in learning; and
5. Technology and learning.

The sixth Animation Theme Bundle—Learning from Place—was not explored in this review since its work was initiated at the same time this paper was commissioned.

Further, it provides a review of the sources of information used to inform those measures. Finally, it provides an analysis of the efficacy of the measures and data currently being used as well as the gaps between what and how learning is currently being measured and what might be potentially valuable avenues for further research.

Comprehending the Learning Spirit/Identity in and through Learning Units

(family, community, peers, etc.)

In many Indigenous cultures and communities, the role of finding self is a self-regulated and directed journey, often assisted or guided by others, although without intrusion or interruption ... The learning journey that each person travels [should help them] to arrive comfortably at their own awareness of their strengths, gifts, capacities, which can broadly be seen as their learning spirit ... the life journey is one that draws each person to certain strengths and motivations, and is constantly evolving, emerging, transforming and yet remains with us throughout our lives (Aboriginal Learning Knowledge Centre, n.d., Appendix 1, p. 2)

The “learning spirit” is a conceptual rather than a concrete entity that emerges from the exploration of the complex interrelationships that exist between the learner and his or her learning journey. All beings, both animate and

inanimate, colour and breathe life into one's learning spirit (Offet-Gartner, 2003). As such, the learning spirit itself is not quantifiable. But, when the spirit is absent, learning becomes difficult, unfulfilling, and, perhaps, impossible.

The research in this domain is largely qualitative in nature and the indicators of success as well as the measures of the indicators are largely conjectural. When studying the learning spirit or the spiritual aspects of learning, researchers tend to focus on the factors that inhibit the learning spirit or on those that enhance the learning spirit. Nevertheless, when considering the research that has been conducted in this area, one is left with a question akin to the quintessential "chicken or the egg" conundrum: must the learning spirit be present to facilitate learning or can the spirit be "attracted" by developing a love of learning? What is clear, however, is that there is a definite relationship between the learning spirit and the discourse used to describe it.

Factors that inhibit the learning spirit

The research literature relevant to this ATB identifies a wide variety of factors that appear to inhibit or damage the learning spirit. These include; lack of identity, lack of voice, low self-esteem and multiculturalism activities that characterize First Nations, Inuit and Métis among the many cultures that have been transplanted to Canada—rather than as Indigenous cultures.

It is true that many students (not just First Nations, Métis, and Inuit) face barriers (e.g., funding, child care, etc.) to the development of their learning spirit. But, Lickers (2003), in a case study of the Six Nations Literacy Achievement Centre in Ontario, found that Aboriginal students typically face additional unique barriers such as "mental, emotional, and spiritual dysfunction" (p. 56) leading to an identity crisis for many Aboriginal learners. This identity crisis, she discovered, is founded on the fact that many Aboriginal students must leave their homes (reserves) to pursue educational opportunities in urban areas. This leads to a loss of connection with family and culture; yet, at the same time, they do not really fit in the city; thus withering their learning spirits.

Along with the lack of identity, Aboriginal students often feel that they lack a voice because there are often few other Aboriginal students in the learning environment. Bazylak (2002) described the phenomenon in the following terms: "individually the [Aboriginal students'] voices were but a whisper in the wind" (p. 135). But, he found, in learning environments where there were other Aboriginal people their voices joined together and "as a collective the voices offered support and strength for each other" (p. 135).

When one perceives that he or she lacks both identity and voice, he or she becomes vulnerable to factors that damage his or her learning spirit. Low academic achievement, high dropout rates, depression, and high rates of substance abuse among Aboriginal people are well documented in the media and lead to what Daes (2001) calls "spiritual erosion." Similarly, Lickers asserted that "intergenerational welfare recipients, a low work ethic, and academic indifference contributed to a defeatist attitude. They do not believe that there is even a reason to try" (2003, p. 57). In other words, as our spirit erodes, so does our belief in ourselves.

Schools, themselves, have also been found to damage the learning spirit in some cases. "Schools were not and are not neutral institutions; they remain instruments of assimilation to Western culture" (Hookimaw-Witt, as cited in Berger, Ross-Epp, Møller, 2006). As a result of this assimilationist paradigm, "Native peoples ... have accepted many of the racist stereotypes of themselves and, as a result, frequently suffer low self-esteem and negative feelings about themselves and their culture" (Pauls, 1996, p. 37).

Finally, policies and practices that are based on multiculturalism have been found to marginalize Aboriginal people further as they serve to obscure the special status of Aboriginal people (Mattson and Caffrey, 2001). The participants in Bazylak's study indicated that while they valued the concept of harmony promoted by multicultural activities, these activities highlighted their cultural differences and led to the creation of groups that were marginalized. (p. 142). In other words "multiculturalism as a tool for achieving equity often falls short if its objective ... [these activities] often serve to perpetuate differences among racial groups" rather than creating unity and mutual understanding. (Bazylak, 2002, p. 142).

Factors that enhance the learning spirit

The following quotation from Samuel Sam, a Coast Salish Elder, is indicative of the "spirit" of this ATB. "If you talk to young people who are strong in their culture and ask them about their academics, you will find they have graduated and some are going to college and university" (Richardson and Blanchet-Cohn, 2000, p. 169). In other words, the factors that enhance the "learning spirit" also lead to success in other areas of learners' lives.

A common theme throughout the research literature is the connection among culture, community, literacy, and the learning spirit. The development of oral literacy through storytelling and ceremonies led by Elders, as well as one's own dreams and experiences, has traditionally been the primary means of developing the learning spirit in Aboriginal cultures. A respondent in Cordoba's (2006) study of Aboriginal literacy stressed "Literacy is who we are ..." (p. 2). She observed that Aboriginal literacy is holistic, integrating learning through body, mind, heart, and spirit, and that "acknowledging and owning this literacy as a valid, valued, and valuable alternative perspective" (p. 5) strengthens the learning spirit. Cooper's research goes one step farther to emphasize the importance of community in developing one's learning spirit. She found that "the importance of the community, how self-awareness is a pre-cursor to self-determination, the value of being both a teacher and a learner, and the part Indigenous knowledge play in the learning ... journey of the literacy learner" (p. ii).

Reflections

Success—and the indicators of success in this domain—is defined in qualitative terms. Researchers tend to focus on narratives or on document research in an attempt to identify what ought not to be done. While instructive, this orientation views the development of the learning spirit from a deficit perspective—a practice that is damaging to learning by continuing to dwell on the negative rather than highlighting the positive.

Research in this domain depends largely upon qualitative case studies. Often the case studies seek to describe practices and initiatives that are currently in place and seek to show how initiatives were successful or not. However, Bazylak found that "few studies focus on Aboriginal students' perceptions of their own issues and in particular on how they perceived success and the reasons for it." (p. 135), leading us to pose an important question: how do we help Aboriginal learners develop and articulate their own stories, goals, and aspirations?

Success with respect to the *Learning Spirit* is typically seen through the lens of protecting and reclaiming language, culture, and tradition while focussing on long-term goals such as graduation and transitions to work and post-secondary institutions. Further, a key measure of success in this domain appears to be the extent to which Aboriginal people develop healthy lifestyles.

Further research is needed in this ATB in order to gain a better understanding of the nature of success in this domain as well as the processes and orientations that enhance success. The following are some research questions that may help us gain a better grasp of success within this ATB:

1. How can Aboriginal cultural values be taught, celebrated, and nurtured within the Canadian educational system?
2. Is there a relationship between the learning spirit and the respect, parenting, teaching and evolution of Aboriginal cultures? If so, what is the nature of this relationship and how can it be enhanced?
3. To what extent are Aboriginal cultures and spirit an evolving entity? To what extent should it be grounded in traditional ancestral teachings? While evolution and tradition are perhaps not diametrically opposed, what is the nature of the gap between these and how can it be bridged?
4. Are there relationships among language, spirituality, culture and the learning spirit? What is the nature of these relationships? How can they be made more explicit? How can they be enhanced?
5. If cultural and spiritual education are, indeed, influential in Aboriginal people's quest to overcome the impact of racism and the aftershocks of colonialism, and the family and Elders are critical guides in this journey, what pedagogical considerations will facilitate learners' studies?

Aboriginal Language Learning

Canada is richly and uniquely the home of many diverse nations of First Nations, Métis, and Inuit who continue to speak many of the Indigenous languages. In communities where First Peoples' languages are thriving, without a foundation of language learning and second language learning, many students have had greater difficulties developing their capacity in English and/or French [than might otherwise be the case] ... An analysis of learning cannot avoid seriously thinking about the future of Aboriginal linguistic diversity and ways to preserve it in a context where the informational revolution may lead to the risks of standardization (sic) and generalized (sic) formatting ... Aboriginal languages are an important vehicle in learning and translating knowledge ... [because they facilitate the creation] of shared meanings on the basis of difference, the capacity to create resemblance where diversity exists, and comprehension that arise out of confusion. (Aboriginal Learning Knowledge Centre, n.d., Appendix 1, p. 3)

The study of Aboriginal language learning is wide-ranging, cutting across many research disciplines and contexts. Linguists, anthropologists, psychologists, sociologists, and educational researchers, among others, have been exploring various aspects of language learning in settings such as pre-school, K-12 schools, adult education/post-secondary environments, and Aboriginal communities for many years.

Nevertheless, literature concerning the state and import of language learning tends to follow two main streams: research (case studies, literature reviews, and meta-analyses) and apologetic position papers and books. The research stream consists primarily of small-scale qualitative case studies examining promising practices that exist either in individual First Nations, Métis, and Inuit communities or at particular educational institutions. The apologetic stream tends to focus on rhetorical accounts of authors' opinions regarding the potential impact of failing to preserve and/or revitalize the Aboriginal languages on both communities and individuals.

In any case, the foundation for nearly all Aboriginal language literature—whether research or apologetic—is tied to the epistemological assertion that preservation, revitalization, and use of traditional languages among all FMI learners are closely linked to individuals' success in learning and correlate strongly with self-determination (Kipp,

1999; Martinez and Strong, 2005; Skutnabb-Kangas, 2000) and well-being (Assembly of Manitoba Chiefs, 2006; wa Thiongo, 1986) both for communities and individuals.

Whether or not the above assertions are true, testing these assertions through formal research is very difficult and defining success in this domain is even more difficult, in part, because language is so closely aligned with culture and identity and, in part, because the unit of research is not clear. In wa Thiongo's opinion, "language, any language, has a dual character; it is both a means of communication and a carrier of culture." (1986, p. 13). Thus, conducting research related to the extent to which preserving and revitalizing Aboriginal languages is advisable, important, or, for that matter, whether it has a positive impact on Aboriginal learners in a broader context (beyond simply language for language's sake) is controversial because it calls into question the very identity of Aboriginal peoples. Further, since language does not exist in a vacuum, isolating distinct factors regarding the value and impact of language on both individuals and communities can be very difficult as well.

Nevertheless, research and, therefore, success in this domain tend to follow two themes. They are typically defined either in terms of language's impact on the learning of the individual or on the well-being of the community. Thus, the following examination of research and other literature related to language learning is organized according to these two typical units of measure: the individual and the collective.

Indicators of success: The individual

When considering research and rhetorical literature focussing on the individual as the unit of study, one is struck with the complexity of defining and measuring success in this context. There seems to be some disagreement and/or tension between two distinct camps (although they are not always seen as being mutually exclusive): i) language as a means or ii) as an end itself. Notwithstanding, both camps ascribe uncritically to the position that developing personal efficacy with one's traditional (ancestral) language is valuable and, perhaps, essential to one's success in life.

The "means" camp views Aboriginal language learning as the vehicle for something else—usually to enhance self-awareness and self-concept—to further the development of intergenerational relationships and/or, to facilitate other learning.

The process of revitalizing traditional definitions of Aboriginal literacy not only involves transformation from subjugation to empowerment, but (sic) at the same time reaching an harmonious, as opposed to comparative and cooperative, relationship between native and non-native cultures that live side-by-side. (Paulsen, 2003, p. 24)

This view leads some researchers to argue that there is a link between efficacious use of Indigenous language and facility with English. Paulsen (2003) pointed out that, for Aboriginal people, language is not restricted to the written word; it also includes "intergenerational [oral] teachings" (p. 23). Thus, it follows that as the learner develops mastery of oral, aural, and written language skills; he or she recognizes that there is a strong link between the symbols inherent in oral storytelling and written representations of those stories and symbols. Zepeda (in Silentman, 1995) observed:

This [process] involves the creative writer and how s/he transforms oral speech from the native language into a graphic representation which, in turn, becomes part of children's *second*-language literacy experiences ...

uniquely link[ing] orality and literacy. [Through this process] children also develop pride in, and a positive attitude toward [their] Indigenous language, as well as in their abilities as writers of English.” (p. 180).

The “end” camp, on the other hand, sees language learning as being valuable for its own sake. This camp is made up largely of the apologists who argue that it is essential to preserve and revitalize the languages to prevent their extinction.

Some researchers advocate for the development of policies requiring school systems (both band-controlled and provincial) to provide Aboriginal language instruction either as stand-alone courses or as immersion programs (e.g., Battiste, 2000). However, according to Brandt and Ayoungman (1989), policies of this type may have some credibility problems, even among Aboriginal people themselves, because many in the Aboriginal population still hold a belief that English is superior and that learning Indigenous languages will set children back in schools.

Nevertheless, there are three main models of Aboriginal language instruction advocated in the literature: i) full immersion, ii) early immersion with English introduced gradually, and iii) dual language stream in which students are taught core subjects in their first (Aboriginal) language and learn English as a second language. The Government of Nunavut, in its Bilingual Education Policy (2004–2008), indicated that the choice of model should be dependent on the needs of individual communities. The success of this approach, however, is unclear. As Silentman pointed out, “a policy alone is insufficient for any tribe, no matter what its size or population” (1995, p. 181). In other words, examinations of the impact of policy on language learning ought to recognize that, in order for languages to flourish, there must be a practical use and/or need for the language in the first place.

Indicators of success: The collective

Researchers who focus on the collective as the unit of measure usually follow the research traditions of the socio-linguists and anthropologists. Typically, these researchers focus on the lexica, syntax, and speech patterns typical of Aboriginal languages and examine the extent to which these have been established and articulated as indicators of success.

Ruiz (1995), for example, believed that an examination of the “state of the nation” with respect to the place and status of individual languages is an important step toward establishing indicators of success in this domain. Specifically, “language planning encompasses the various roles language plays in the building of communities and nations (Ruiz in Silentman, 1995, p. 179). Thus, the indicators of success would include an examination of education and language policies (and politics) in the Nation(s) (i.e., Cree, Sioux, Dakota, etc.) and extend to a study of the extent to which those policies have been successfully implemented (Silentman, 1995).

Statistics Canada (http://www.statcan.ca/english/freepub/89-589-XIE/language.htm#lang_strength), on the other hand, offers a typology that sees the “health” of the languages themselves as indicators of success. The typology has seven indicators of success measured as:

1. The percentage of First Nations, Métis, and Inuit who speak an Aboriginal language well enough to carry on a conversation;
2. The number of First Nations, Métis, and Inuit who use Aboriginal language at home;
3. The number of First Nations, Métis, and Inuit who have an Aboriginal language as their mother tongue;
4. The number of First Nations, Métis, and Inuit children who speak an Aboriginal language;

5. The number of First Nations, Métis, and Inuit who choose to learn an Aboriginal language as a second language;
6. The person(s) who facilitate language learning; and
7. The number of First Nations, Métis, and Inuit who believe that language retention and revitalization are important.

From a research perspective, an amalgam of these indicators would likely serve well as indicators of success in this domain. As the status of the languages is assessed and articulated, a baseline from which to measure progress could be established. Further, the establishment, implementation, and assessment of policies related to Aboriginal languages could also be benchmarked and assessed as markers of progress toward success.

Research findings in this area are also rather difficult to cite with any degree of precision because most Aboriginal languages are oral in nature and, for some languages, very little has been documented—especially in cases in which there are very few living speakers or even more so if the language has become extinct. In general, many of the Aboriginal languages spoken by North American Indian and Métis people in both reserve and non-reserve settings are on unsteady ground. Aboriginal language retention and transmission is often difficult due to few opportunities to practice these languages and, often, even fewer opportunities for people to learn an Aboriginal language.

Descriptions of case studies of specific programs and/or efforts either to revitalize local languages or to measure the link between language acquisition and student success in more traditional ways (retention in school, number of graduates, etc.) have found some promising results in some communities. However, according to Fisher, Matthews, Stafford, Nakagawa, and Durante (2002), there has been no comprehensive or systematic examination of current efforts in this regard. Documentation of these studies tends to be spread by word of mouth; the stories are often shared at conferences, meetings, and other gatherings, and authors of rhetorical texts tend to cite them in general terms rather than as specific research findings.

Reflections

Further assessment regarding the “health” of the Indigenous languages in use in Canada (i.e., the number of languages that have existed, the number still in use, and/or the number of living speakers of individual languages) is likely no longer needed, at least beyond the census data collected by Statistics Canada. Continued formal examinations of these issues simply perpetuates a deficit or, perhaps, even a defeatist view and does little to address the fundamental problems facing Canada’s Indigenous languages.

Of more importance in this field is to identify specific initiatives and programs that appear to be turning the tide of language loss. However, there is a great deal of risk involved in research of this sort both for the subjects of research and for researchers themselves. Systematic research in this field may result in findings that are not palatable in a political and/or practical sense. For example, it may be found that there is no direct correlation or, perhaps, a negative correlation between individuals’ efficacy with Indigenous languages and successful learning in the broad context. It may also be found that a particular program does have a positive impact but is too cumbersome and/or expensive to continue.

While complex and difficult, systematic formal research regarding the place of Indigenous languages in the broader discourse of individual First Nations, Métis and Inuit learner success as well as the impact of widespread efficacy with Indigenous languages on communities (both urban and rural) and individuals is essential. While there is a large body

of literature concerning Aboriginal language learning, an examination of the existing literature leaves us with several key questions:

1. What constitutes success in this area?
 - While language is typically seen as the carrier of both identity and culture, is this simply language for language's sake?
 - Are we interested merely in the survival of the languages or are we hoping to see those languages become "living" languages that form the foundation of the communities' and individuals' identities?
2. Does efficacy with ancestral languages lead to greater student success in formal learning settings (i.e., pre-school, K-12, post-secondary)?
 - While we believe that this is true, what evidence has been gathered to support this assertion?
3. What is the nature of the relationship between minority languages (in this case, Aboriginal language) and access to and/or success in both minority and majority contexts?
4. Is it valuable, important, advisable, to incorporate aspects of traditional ancestral languages into the mainstream culture?
 - Is this practical?
 - What might this look like?
 - What impact might this have on both Aboriginal and non-Aboriginal people

Diverse Educational Systems and Learning

Many diverse systems of learning currently exist that are mandated to deliver institutional schooling to students (Aboriginal and non-Aboriginal), through learning programs, curricula, materials, and teacher training across Canada. These systems have created systems of education that touch the lives of Aboriginal people in significant ways. In most they have created specific policies and practices for Aboriginal populations, and in some others these are embedded in their regular programming, while others are directed to entrance or transitional programming. Many learning- and knowledge-related asymmetries exist in these diverse educational systems, whose accumulation creates a learning- and knowledge-divide or schism. (Aboriginal Learning Knowledge Centre, n.d., Appendix 1, p. 4)

When reviewing the literature related to diverse educational systems and learning one finds that the research that has been conducted in this area typically has two main foci: i) the identification and examination of promising practices; and, ii) rhetorical descriptions of practices that writers believe ought to be followed or deficiencies that ought to be addressed. As implied by this bundle's title, there is great diversity both in learner needs and the vehicles used to meet those needs. Consequently, the promising practices and theories documented in the literature meander across all ATBs examined in this document.

While the term "meanders" has several definitions, the one offered by the Worldvillage Encyclopedia is most applicable to the current view of this bundle delineated in educational research literature:

Meanders are looping changes of direction of a stream caused by the erosion and deposition of bank materials. Typically, over time, the meanders don't disappear but gradually migrate downstream. However, if some resistant material slows or stops the downstream movement of a meander, a stream may erode through the neck between two legs of a meander to become temporarily straighter. (<http://encyclopedia.worldvillage.com>)

As this definition implies, progress, and, therefore, success, does not flow in straight lines. Rather, it follows the ebb and flow of governmental legislative processes, educational institutional reform, and the evolving needs of First Nations, Métis, and Inuit peoples in Canada. Consequently, developing definitions, indicators, and measures of success within this context presents a major challenge. Nevertheless, they are organized here according to three main themes: policy factors, cultural factors, and pedagogical factors.

Policy factors

Bell (2004) saw the challenges in this domain as being multifaceted and complex. He observed that the conceptualization, development, implementation, and maintenance of the diverse educational systems necessary to serve the plethora of educational needs and requirements currently facing Aboriginal people must include:

- Governance structures that include partnerships with other school districts (provincial and band schools);
- Funding equity from the federal government;
- A focus on language and literacy that retains both traditional languages and cultures;
- Working conditions that attract quality teachers;
- Attention to overcoming transition problems; and
- Rigorous and relevant educational curricula, programs, and teaching materials.

A recent report from the Aboriginal Institutes Consortium (AIC) highlighted that local, provincial, and federal governance and policy structures are major factors influencing First Nations, Métis, and Inuit communities' abilities to develop effective educational programs. The report's authors argued that a lack of support through clearly articulated policy puts long-term planning for Aboriginal education systems on shaky ground, in part, because funding is not explicitly guaranteed which, in the authors' view, simply extends external control over Indian education. As an illustration of this lack of policy support and direction, Auditor General Sheila Fraser, in her 2004 report, observed that "the Department [Indian and Northern Affairs Canada] does not know whether funding to First Nations is sufficient to meet the education standards it has set."

In addition, the lack of policy support leads, in many cases, to poorly trained faculties and inadequate, poorly-conceived curricula. The ability to provide professional development for faculty as well as learning resources can be haphazard because it is directly tied to ongoing funding structures. In other words, "the lack of policy support for Aboriginal-controlled [educational] institutions is a blatant display of paternalism and exposes the discriminatory practices that exist between Aboriginal and mainstream institutions" (AIC, 2005, p. 48).

However, there have been recent developments at Indian and Northern Affairs Canada (INAC) that appear to be having a positive impact on First Nations, Métis, and Inuit students and educational institutions. The Post-Secondary Student Support Program (PSSSP), for example, appears to be a move in the right direction. This program consists of two parts: i) the provision of improved student funding; and, ii) support for the First Nations' University of Canada and the development of programs for Aboriginal students at other institutions through the Indian Studies Support Program (ISSP). In addition, the Saskatchewan Indian Institute of Technologies (SIIT), the Nicola Valley Institute of

Technologies, and the Institute of Indigenous Governance have been issued degree-granting status by their respective provinces.

Cultural factors

Promising practices with respect to bridging the cultural gap between Aboriginal learners and mainstream education have also been highlighted in several studies. In general, the practices that seem to be the most successful in bridging this gap are community-based, locally-developed, and involve hands-on activities making them much more relevant and engaging for learners. Ignas (2004), for example, documented a science curriculum developed for North Coast Indigenous people called *Forests for the Future*. According to Ignas, students find this curriculum relevant and meaningful because it blends local (Indigenous) knowledge and epistemologies with Western scientific knowledge. Ignas also pointed out that the curriculum materials developed by the *Forests for the Future* project provide an example of how anthropological research, combined with community needs, can benefit all parties: researchers, students, and community members. In developing the curriculum, “community Elders and other knowledge holders were interviewed and asked to discuss their local ecological knowledge ... particular attention was paid to local knowledge that might help achieve practical ends such as economic development, environmental responsibility, and cultural resilience” (p. 50). These curricular ingredients have helped students “engage more fully than has traditionally been the case ... [leading to] an inquiry and inductive reasoning approach” (p. 51).

Similarly, in a research project conducted in several Winnipeg inner-city high schools, Silver, Mallett, Greene, and Simard (2002) concluded that learning outcomes for Aboriginal students are enhanced when the entire community is engaged and involved in students’ education—from curriculum development and delivery to role modelling and local economic development. They found four key characteristics of effective and engaging learning environments for Aboriginal students. These include:

1. Facilitating parental and community involvement,
2. Creating adult learner centres,
3. Developing community economic development centres (e.g., Head Start programs, adult literacy programs, after school programs, etc.) each with hiring strategies for employing Aboriginal people; and,
4. Instituting programs to enable Aboriginal students to gain part-time jobs.

The report concluded with the following recommendations that, while intended for the Winnipeg context, appear to be broad enough in scope to be illuminating for other Aboriginal education contexts as well:

- Establishing an autonomous, recognized Centre for Urban Aboriginal Education;
- Implementing a strategy designed to produce Aboriginal teachers in numbers proportionate to the Aboriginal student population;
- Securing appropriate funding for adequate training of teachers;
- Revamping high school curricula to integrate Aboriginal teachings and knowledge into traditional Western courses;
- Including courses with specific Aboriginal content;
- Instituting artists-in-residence and Elders-in-the-schools programs; and
- Creating and delivering anti-racist courses.

Finally, the importance of partnerships in the development of high-quality educational experiences for Aboriginal learners is consistently underlined in the literature. For example, some promising practices in this area include:

- Partnerships between Aboriginal groups (Tribal councils, bands, Métis organizations, etc.) and educational institutions (pre-kindergarten or pre-school to grade 12 and post-secondary);
- Partnerships between educational institutes and industry;
- Partnerships among post-secondary institutions; and
- Partnerships between educational institutions and government departments.

Pedagogical factors

Finally, there are many promising practices with respect to pedagogy documented in research literature. While it is beyond the scope of this report to identify all of them, Katz and McCluskey (2003) identified seven critical pedagogical practices for effective learning environments for Aboriginal people that are illustrative of the themes identified in the literature. These include: i) storytelling as a mode of expression; ii) experiential learning; iii) curricula that are relevant in daily life; iv) cooperative learning; v) constructivist orientation that allows students to build on their strengths; vi) teacher demonstration, role modeling; and vii) positive constructive feedback.

Some authors argue that effective pedagogy for Aboriginal learners must consider both the immediate needs of the learners (curricula content) and the long-term needs of the Aboriginal graduate. Mason (1998), for example, observed “whether [students] finish school or not, is not the issue. The issue is that somebody needs to be present to give students direction in terms of student career planning and vocational development” (p. 17). He went on to suggest that local employment opportunities directly impact school enrolment, attendance, and graduation rates as well as transitions to post-secondary institutions and the working world. Thus, instructional pedagogy must reflect these factors.

Reflections

The terms used in a 1990 document from Indian and Northern Affairs implied that the practice of devolving local control/administration of education to the individual reserves would be almost a “magic bullet” that would resolve all of the challenges associated with administering education for Aboriginal peoples. The document touted the following benefits of doing so:

- Improved attendance and graduation rates;
- Increased parental participation and ownership of education;
- Increased number of school programs enriched with culturally relevant courses (i.e., Native Studies, culture and language learning, etc.);
- Improved positive self-concept among students;
- Increase in the number of Native teachers and teacher aides;
- Improved management and administration of education due to on-site personnel,
- Wider use of Native languages in early primary grades;
- Increase in the number of post-secondary graduates; and
- Faster implementation of new curricula.

However, in the last 17 years, these benefits have certainly not been realized in all cases.

From an *Assessment for Learning* perspective, a key component that is missing from the collective research in this area is clearly defined and articulated goals or targets. It is true that there is a number of initiatives in place that appear to be successful but when the goals/objectives are not explicit, progress along the road is difficult to measure, making it difficult to learn from experience.

Many well-meaning researchers and practitioners are busily developing and implementing programs and using various pedagogical approaches in the belief that they are either effective and meet the needs of their target audiences or are in the “best interests of the learners”. At the same time, however, there is “The [widespread] feeling that [formal] education is a threat to Native cultures and traditions” (Birchard, p. 47). Perhaps this has led to some reticence with respect to conducting “formal” research in this and other domains as well. However, these fears may be inhibiting the potential growth and improvement that that could result from examining the factors influencing success more critically.

The body of knowledge in this ATB is growing by leaps and bounds throughout the research community. While continuing to explore promising practices, however, we are left with several questions:

1. What policies best facilitate positive learning outcomes for First Nations, Métis, and Inuit learners? In what ways do they do this? For whom are they effective and how might they be made to be effective for all?
2. To what extent do current governance structures in INAC and other institutions expedite or impede learning outcomes? Specifically, what aspects are effective and are producing the desired outcomes and which are not?
3. What funding structures best facilitate positive learning outcomes for First Nations, Métis, and Inuit learners? In what ways are they effective? For whom are they effective? In what settings are they most effective?
4. Though interesting, what specific student learning outcomes do promising practices like *Forest for the Future* facilitate? Are programs like these the most effective way to facilitate these learning outcomes?

Pedagogy of Professionals and Practitioners in Learning

Aboriginal people in the professions are the most visible manifestations of Aboriginal vanguard and intellectual capacity. They have demonstrated accomplishments in diverse fields in Canadian society as they also pursue a deep belief in knowledge and learning. They have been essential to creating foundations for learning from within Aboriginal contexts, linking languages, cultures, worldviews, histories, etc. to schooling and are responsible for structuring the future of business and work, working to eliminate systemic obstacles to educational access and achievement, and creating the Aboriginal learning renaissance in Canada in multiple professions and workplaces. (Aboriginal Learning Knowledge Centre, n.d., Appendix 1, p. 6)

Indicators of success defined in the research literature are, in many ways, not particularly unique to this bundle. Indicators identified in the educational literature reviewed for this project include:

- The number and structure of affirmative action programs specifically targeting Aboriginal candidates in both the professional colleges and in the professions themselves;
- Recruitment efforts (i.e., program entrance and retention rates);

- Number and structure of programs offering financial support specifically allocated to Aboriginal students;
- Number and structure of training programs that specifically cater to or address learning styles and epistemological views of Aboriginal candidates; and
- Lifelong learning indicators such as participation in re-accreditation programs, attainment of additional profession-related training.

When reviewing the literature associated with this bundle, one thing that becomes immediately evident is that there has been very little research conducted in this domain and even less has been documented. While there are several indicators of success related to the strategies being used to attract, educate, and retain Aboriginals in the professions, virtually no research has been conducted as to the extent to which these strategies have been successful and no specific targets or standards have been set as benchmarks against which to measure success or growth. In addition, indicators of success in this ATB are difficult to define, thus making measurement of success problematic as well.

For example, does/should success mean that there is an increase in the number and type of affirmative action programs among the professional colleges and training programs? Should it mean that more students enter the programs via those affirmative action programs? Should it mean that affirmative action programs become unnecessary because Aboriginal candidates have reached the point at which they are just as qualified with respect to attaining the prerequisites required for entry to professional programs and are able to compete directly with all other candidates, or that the professions have reached the point at which there is a representative work force? Or, should the definition be a composite of these and other potential indicators?

Indicators of Success

Indicators of success, currently, tend to be defined by the identification of barriers faced by First Nations, Métis, and Inuit peoples with respect to the professions and initiatives touted to ameliorate the challenges associated with those barriers. Barriers tend to fall into two primary categories: socio-cultural and socio-economic:

Socio-cultural barriers

- Prerequisite educational attainment (i.e., literacy, secondary education course requirements, etc.);
- Career counseling, perceptions of the viability of careers in the professions and role modeling;
- Dedicated recruitment and retention of Aboriginal people both as potential students and as instructors;
- Education and employment equity programs;
- Flexibility and diversity in educational program delivery;
- Funding to foster a culture of lifelong learning in the professions;
- Emotional and professional support systems;
- Spiritual and cultural support systems; and
- Acknowledgment of the importance of place.

Socio-economic barriers

- Levels of financial assistance for education;
- Levels of funding for education, debt reduction and repayment; and
- Levels of financial assistance and/or tax relief for in-service education.

Measures of Success

Typically, measures in this domain are focussed on the promising practices that may influence positively the various barriers that have been identified above. For example, some professional organizations and colleges have begun to develop transition supports such as free introductory sessions, courses that bridge students' current academic status with the content necessary to enter the professional training programs, and mentoring supports to shepherd students through the maze of matriculation into the professional colleges. Some of these supports have also begun to be developed for delivery via correspondence and/or distance learning to permit students to access programs without leaving their home communities, at least in the early stages of their studies.

Another recently developed strategy believed to enhance student success with respect to the professions is to blend traditional and Western teaching methodologies and epistemologies. This is particularly true in some of the health-related fields. For example, the Aboriginal Nurses Association of Canada (A.N.A.C.) recognized the need for "a fully accredited Aboriginal nursing specialization that would embody the wisdom of Aboriginal cultures towards the safeguarding of both traditional healing and knowledge and the advances of practice-based research" (McGrath, 2002, p. 6).

The practice of "reserving seats" for Aboriginals in professional training programs is another strategy that is fairly widespread and is touted to impact positively on the challenges associated with attracting and retaining qualified FMI individuals to the professions. Typically, this practice is measured in several ways. Sometimes, success is measured by the number of seats that are reserved for Aboriginals in any given professional college or training program. In other cases, success is measured by the number of colleges that follow this practice. Still another measure focuses on the extent to which the reserved seats are filled by qualified applicants.

Differentiated entry and graduation requirements also appear to be strategies used in the belief that they serve to break down the barriers for Aboriginals to participate in the professions. A respondent from a recent national study regarding nursing student selection said, "[seats for Aboriginal students] are for students who would not meet the usual criteria for admission. [The professional college] takes the best five in that cohort ... [and] other Aboriginal students are admitted on their own merit" (Paul, Day, Boman, McBride, and Idriss, 2005, p. 24).

Reflections

While these and other promising practices may well be having the desired effect in that they are enhancing the opportunities for First Nations, Métis, and Inuit students to participate in the professions, there has been virtually no systematic qualitative or quantitative research conducted to support the claims that the promising practices are, indeed, successful. In addition, as pointed out earlier, we are not clear, at this time, about the precise effects or outcomes we hope to achieve through these initiatives. For example, key research questions such as the following appear not to have been examined carefully:

1. Which of these practices are successful? To what extent are they successful? In what ways are they successful? What, exactly, are they successful in accomplishing?
2. Are some of them more successful than others? For whom? How?
3. What particular academic (skill, prerequisites, etc.) barriers exist and how could they be addressed?
4. Are there pedagogical approaches that best facilitate learning in the professions for Aboriginal people?

Moreover, since we do not at this time have a clear vision, our good intentions may actually be having unintended outcomes that may be working contrary to the “spirit” of the initiatives in this bundle. For example, Bazylak’s (2002) findings confirmed a widely-held assertion that “Aboriginal teachers play an important role in the educational success of Aboriginal [learners]” (p. 144). He also found, however, an unintended outcome when Aboriginal teachers are part of a staff that includes non-Aboriginal teachers. He pointed out that Aboriginal teachers sometimes form their own staff sub-groups rather than become part of the larger staff community. He observed, “there is an irony ... regarding [Aboriginal] teacher groups and student cliques as both serve to marginalize (sic) a group” (p. 144).

Furthermore, we appear not to have baseline data against which to gauge success or improvement in this domain. Fralik (2006), argued that we do not have a clear understanding of the number of Aboriginals who are either currently employed in the professions or are in professional training programs, in part because many educational institutions and professional governing bodies and associations do not ask people to self-declare. In addition, at this time only six of 27 national professional organizations contacted by research associates in connection with this project indicate that their mandates specifically address issues related to the education and employment of Aboriginal people and have devised structures to investigate the extent to which these mandates have been fulfilled—and even those investigations appear to be largely undocumented.

Technology and Learning

Knowledge and learning are in a stage of transformations and upheavals so momentous that some people claim we are in the throes of a learning revolution, created by new information and communication technologies and associated with a change in knowledge systems and patterns ... The magnitude of those technological transformations has been affecting the access of information and the new ways of learning and acquiring knowledge ... Aboriginal learning societies reveal a shift in focus from the possessors of traditional knowledge to those who are seeking to acquire new practical learning ... At a time when increasingly rapid changes are rocking old models of learning to their very foundations, and “learning by doing” and the ability to innovate are on the rise, the cognitive dynamics of Aboriginal people have generated an innovative “learning” dimension. (Aboriginal Learning Knowledge Centre, n.d., Appendix 1, p. 7)

Technologies of various kinds are a ubiquitous presence in contemporary life. While it is true that the concept of “technology” is not limited simply to computers and assorted hardware and software, rapid changes in our society have focussed our attention on these “information technologies” (ITs), in large part, because of the widely-held view that contemporary society has transitioned from an Industrial Age to an Information Age.

This transition is very important in defining successful learning. Cortada (2001) opined that “over 60% of the ... economy is involved in the creation and use of information as value-added activities” (p. xxi); and, according to Thornberg (2002), “the quality jobs of the future will belong to ‘symbolic analysts’—people who solve, identify, and broker problems by manipulating images [and information]” (p. 32). Thus, a common assertion in research related to the role of technology in education—whether specifically aimed at Aboriginal people or not—is that it is imperative to foster in learners the development of the technological and literacy skills necessary to become both knowledgeable consumers of and expert creators of information in order to participate and excel in whatever the current and future job markets hold.

While the above definition of success may be accurate, use of information technology can be a double-edged sword, particularly for Aboriginal people. If, as pointed out elsewhere in this paper, an important indicator of success for First Nations, Métis, and Inuit peoples is their ability to participate fully in both First Nations, Métis, and Inuit and

mainstream society, the challenge will be to foster among Aboriginal people the development of a high level of efficacy with technologies of all kinds so that they can compete for and gain quality jobs. And yet, to avoid using technology to continue the mis-education of people that results from using information simply as a commodity (Ott, 1998). In other words, in developing their information-age skills and knowledge sets, it seems vitally important for First Nations, Métis, and Inuit individuals to establish parameters for the proper use of technology and information, because uncritical use of technology may reduce the stories, cultural practices, Elders' teachings, songs, and other sacred aspects of the Aboriginal identity merely to "information"; stripping away their sacredness and minimizing their value and importance as part of the Aboriginal identity.

Indicators of Success

Defining success as well as identifying indicators and measures of success in this domain is challenging because the objectives for technology's place in Aboriginal learning are ill defined. While there has been a great deal of research related to a broad spectrum of the intersection between technology and learning, very little research has been focussed specifically on this intersection for Aboriginal learning beyond relatively small-scale case studies. Nevertheless, the research literature related to this bundle tends to highlight two main roles that ITs play in facilitating Aboriginals' learning: e-learning and cultural preservation.

E-learning

A common definition or, perhaps, indicator of people's success identified in the research literature with respect to distance education appears to be the creation of various technological solutions for information exchange between and among Aboriginal people and in the public domain. While these solutions are not necessarily indicative of individual learner success per se, it appears that many researchers see the development of these technological solutions that are specific to Aboriginal people's interests and needs as a measure of success in itself. Nevertheless, there are two main types of e-learning solutions that appear in the research literature: distance learning and computer-assisted learning.

Distance learning

An oft-identified and important distance education solution is the online or "cyberschool". The development of the cyberschool is important because, as Cooke-Dallin, Rosborough, and Underwood (2000) pointed out, it is very difficult for the small, often remote, schools typical on reserves to address the diverse educational needs of all learners. Thus, many Aboriginal learners come to believe that "urban adaptation is the logical outcome for all ... particularly for 'natives' in adjusting to the demands of the modern technological society" (p. 172). Consequently, many learners leave the family and community support of their homes (which are often in rural settings) to seek secondary and post-secondary educational opportunities in urban areas.

The cyberschool provides a unique opportunity for First Nations, Métis, and Inuit learners to access relevant educational opportunities while still remaining in their home communities. McMullen and Rohrback (2003) argued that:

While accessing valuable learning opportunities, distance learning allows people to remain in their home communities and maintain (sic) close contact with families, support networks, and retain employment. This approach has untold positive impact on the remote communities as these students then become role models for

younger generations. Students are also able to immediately apply (sic) their learning in the community thus increasing the social and economic impact of learning on the entire community. Consequently, the self-esteem and independence of the community grows while youth have access to options that they would not otherwise have.” (2003, p. 107).

In other words, distance learning can provide learners with the opportunity to learn *in place*.

The potential of online learning is currently being explored in a variety of contexts, particularly in secondary and post-secondary settings. As an example of the success of post-secondary online learning for Aboriginal students, Zapf, Bastien, Bodor, Carriere, and Pelech, (2000) chronicled the development and delivery of a University of Calgary Bachelor of Social Work program via a hybrid between online courses and face-to-face learning opportunities both at the university and through professors' visits to students' communities at critical stages of their learning. According to Zapf et al., this program was successful because:

- It improved access for students;
- It provided a relevant curriculum that was developed in collaboration with stakeholder groups (potential students, community members, Elders, etc.);
- It was organized around themes important to rural, remote and Aboriginal communities; and
- It challenged the student “to integrate his or her professional and lived experience ... into a reflective project involving supported independent study.” (p. 89)

While distance learning seems to have a great deal of potential for Aboriginal learners, it cannot be seen as a panacea for all that ails learning for people in the communities. Although most secondary school students are very familiar with technology and computer use, they are much less familiar with using the internet for learning opportunities. In a recent study, Tunison and Noonan (2001) found that online learning is appealing to some students because it enables them to be more self-directed and to manage their own time. Although this is desirable, research has shown that many students still prefer more traditional face-to-face instruction. For example, Tunison and Noonan (2003) found that when accessing e-learning, “students appreciated the autonomy of working at their own pace but wanted instant access to a teacher” (p. 509). Research has also found that students require more direction from the teachers than might be expected (Tunison and Noonan, 2001).

This raises the question regarding the appropriate role of the teacher in online learning. Despite the fact that students may be quite technologically literate in many respects (e-mail, internet, etc.), that is less so for online learning. Dolence and Norris (1995) opined that, in order to be successful online learners, students must be self-directed learners who have selected online learning as their first choice of educational program delivery. In remote areas, it may not be possible for students to make this choice because online programming may be the only option available to them.

One method to address this challenge is for local ‘bricks and mortar’ schools to provide structured guidance or mentoring services to students who are accessing online learning. Keewatinook Okimakanak Internet High School (KiHS), for example, has developed a unique distance/face-to-face learning hybrid. As is the case with most online learning settings, students are able to access all courses required for grades 9 and 10 from their home communities via the internet. However, students enrolled in KiHS “attend” the school on their reserve at which they are provided with support and mentoring from an accredited teacher (Walmart, 2005).

Cultural preservation

As a means to preserve culture, video and audio recording technology is being used to chronicle important ceremonies, celebrations, and teachings as well as to retain auditory records of Aboriginal languages. For example, the Grouard Native Cultural Arts Museum created a multi-media presentation called “Elders’ Voices” (http://www.northernlakescollege.ca/our/our_native_cultural_arts_museum.cfm). According to Davies (2001), the intent of this project is to create a large body of digitized oral history material to facilitate community building as well as to preserve Elders’ knowledge, insights, and teachings.

Websites are also being used as a means of cultural preservation. Educational research literature is rife with descriptions of the various types of websites that have been created to serve the needs of Aboriginal communities and individuals (e.g., Barnett, 2005; Barnett, and Buck, 2003; Barnhardt, 2005; Barnhardt, and Kawagley, 2000; Davies, 2001; Dyson, and Underwood, 2005; Yeoman, 2000). For example, there are websites that provide historical accounts of significant developments or incidents concerning both Aboriginal people in general as well as individual communities (e.g., national information <http://www.thepeoplespaths.net/lists/treatylist.htm#CA-Treaties> ; local tribal councils <http://www.pagc.sk.ca/> ; individual bands <http://www.cariboolinks.com/ctc/canim/index.html> ; etc.).

Reflections

While having a great deal of potential, there has been little research regarding the extent to which technology has enhanced or is enhancing success for First Nations, Métis, and Inuit learners. For example, it is widely stated that authentic and experiential learning through oral, visual, and tactile means is foundational to successful learning for Aboriginal peoples (Care, Gregory, Courtenay, Russell, Hultin, 2005). In part, this method of learning helps build social networks and strong relationships among members in the community, a phenomenon Putnam (2000) calls “social capital”. While it is possible to facilitate the development of social capital through online educational program delivery (Tunison, 2003)—particularly using webcams and other recently developed technologies—it is not a simple matter to do so. The use of these sophisticated tools requires reliable broadband internet, which is often not available in remote communities.

Further, there has been virtually no research regarding the impact—positive or negative—of recording Elders’ stories and teachings on culture. For example, it is possible that, because the stories are recorded, younger community members may not feel the urgency to engage fully in listening to the stories and to learn the language while Elders are still alive.

Thus, we are left with many questions in this ATB as well. For example:

1. What is the nature of an appropriate relationship between successful learning and technology for Aboriginal people?
2. To what extent does electronic preservation (audio and video taping) of cultural material (Elders’ teachings, language, ceremonies, etc.) affect either positively or negatively learners’ (both Aboriginal and non-Aboriginal) understanding of and attitudes toward this material?
3. What do ITs contribute to Aboriginal learner success that other modes of educational program delivery do not?
4. To what extent does Ethernet bandwidth (i.e., speed of and access to the internet) affect learners’ attitudes toward and success with e-learning?

5. What specific aspects of ITs (e-learning, etc.) appeal to Aboriginal learners? To what extent are these aspects similar from one setting to another? How can effective learning in this context best be facilitated?

Summary Statements

The goals, standards, and long-term outcomes for students are important and must be clearly stated so they are measurable. This involves both quantitative and qualitative measures to get authentic information about the [state of learning and culture of the learning environment]. Measures are needed to assess the progress of all students—in both the short and the long term. The school community must ask the right questions to create a climate of high academic achievement that is good for students and adults. Measuring and monitoring outcomes, program effectiveness, and policies and practices at all levels ... should be interwoven into the everyday life of the [educational enterprise]. When policies and practices are analyzed, there is a very high probability that institutional biases and other uncomfortable issues may surface. Surfacing the issues provides the potential for problem solving and improved practices related to student achievement. (Johnson, 2002, p. 10)

Ruth Johnson, a widely respected educational researcher, argues above that wise use of assessment data coupled with clear goals and standards can help close the achievement gap in terms of educational outcomes between African Americans and Caucasians in the United States. While the cultural and social challenges for Aboriginal people in Canada are somewhat different, she raises key issues that are relevant in defining and measuring successful learning for First Nations, Métis, and Inuit.

First, and perhaps the most important, is the articulation of clear and measurable goals. As pointed out in the review and analysis of the research literature relevant to each ATB, currently goals tend to be indistinct at best. For example, there seems to be an uneasy relationship between the educational objectives typical of Eurocentric culture (e.g., graduation from high school, attendance at and convocation from post-secondary institution, etc.) and the “culturally appropriate” outcomes typical of First Nations, Métis, and Inuit peoples (e.g., ancestral language efficacy, cultural events, etc.). While most Aboriginal people acknowledge that both of these goals are important, there is little consensus as to which is more important or what form this relationship should take.

When goals are indistinct, articulation of standards is difficult. Thus, identifying appropriate measures and/or assessments becomes virtually impossible. Perhaps this has contributed to the tendency to conduct qualitative case studies rather than large scale quantitative research.

While instructive to a point, the nature of case-study research does not lend itself to broad application of findings. In the context of assessment for learning, the foundation upon which this document is built, a balance of quantitative and qualitative evidence is required for adequate assessment of progress (Johnson, 2002, Stiggins, 2002, etc.). As such, although findings can be seen as valid and reliable within the context of the study’s setting, researchers cannot make the claim that their findings are transferable to other settings. Consequently, a comprehensive definition of success as well as an articulation of the means to achieve success in a broader sense also becomes problematic.

Given the importance of a balanced assessment system, one must wonder why there has been so little quantitative research related to teaching and learning outcomes for Aboriginal learners. Perhaps the issues at hand do not lend themselves to quantitative research. Blanchard points out that this may be true because there is a widespread belief among First Nations, Métis, and Inuit that measurement is a threat to native cultures and traditions. On the other

hand, Gallagher-Hayashi (2004) argues that this is so because Aboriginal people wish to have guidance without interference.

Another possibility may have its roots in fear, either on the part of researchers or on potential research subjects. Johnson points out above that close analysis of present practice may highlight institutional biases and surface uncomfortable issues. For example, in one of the very few quantitative studies conducted thus far in Canada, Brade, Duncan, and Sokal (2003) made several findings that challenge contemporary notions of “culturally appropriate” educational practice. In an examination of the relationship between certain First Nations school environments and student achievement measured by the Ontario provincial achievement test, they found statistically significant negative relationships between First Nations, Métis, and Inuit students’ scores on this test and

- Participating in traditional cultural events;
- Being able to speak, read, or write Aboriginal languages; and,
- Being taught by or exposed to Aboriginal teachers.

While this study may well be shown over time to be an outlier, it does raise uncomfortable questions that we as a society may not yet be willing to explore.

Given the ambiguity and indistinctness of the current definitions and measures of successful learning as well as the standards and objectives of the learning enterprise for First Nations, Métis, and Inuit, one is left to ponder several questions. In particular, what do First Nations, Métis, and Inuit desire from learning and, if that desired future materialized, what would it look like? Further, what is the proper nature of the relationship between the learning objectives (standards, goals, measures, definitions of success, etc.) for Aboriginal and non-Aboriginal people? The answers to these and other questions must be clearly articulated by both groups in order to move the learning agenda forward. On one hand, First Nations, Métis, and Inuit define success by their ability to participate in the economic and political spheres of the dominant culture and on the other hand, they express a need for a totally unique and transformed educational system based on their cultural and epistemological orientations, which may or may not fit with the norms of the majority culture.

Nevertheless, research is beginning to show that the two orientations—Aboriginal and non-Aboriginal—are miscible. At times, they appear to be related about as well as are oil and water. However, given the appropriate space to mediate between these two seemingly opposite epistemologies, it may be possible to reconcile the knowledge systems to a place of convergence thereby creating change for all who engage in this process.

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