

Strength in Numbers: Learning Together in Online Communities— A Learner Support System for Adult First Nation Students and Practitioners

Heather Sanguins
Wilfrid Laurier University (Canada)
sang3140@mylaurier.ca

Abstract

Longstanding calls for return to self-government and continuing alienation of First Nations' youth from mainstream educational systems point to the need for provision of adult education that serves First Nations' needs. An adaptable and culturally coherent learner support system for adult education programs for First Nation students and practitioners is proposed that can be adapted for use by different groups and for different subjects to support self-determination and self-government. Using online Communities of Interest (for learners) and Communities of Practice (for practitioners) is culturally appropriate and would facilitate engagement of students and practitioners, particularly in view of the importance that First Nations place on community. Establishment and evaluation of a pilot project to test the approach is recommended. Because of its relevance to self-determination and self-government, bookkeeping is recommended to be the first curricular subject to demonstrate the learner support system.

Keywords Adult education; Bookkeeping; Communities of Interest; Communities of Practice; Constructivist learning; Sociocultural theory

Introduction

Longstanding calls for self-determination and return to First Nation self-government (Canada Library of Parliament, 1999), and continuing alienation of First Nations' youth from mainstream educational systems in Canada (Battiste, 2004, p. 2; Belhumeur, Closs & Kaun, 2005; Canadian Council on Learning, 2009; Kovacs, 2009; Statistics Canada, 2001, 2006a, 2006b, 2011, 2013) point to the need for provision of adult education that serves First Nations' needs while being politically relevant and culturally coherent. First Nations' experience of conventional education strongly suggests that adult learners will need support both from educational programming and from each other in order to succeed. Accordingly, an adaptable and culturally coherent learner support system of online communities for First Nation adult students and practitioners is proposed. The objective is to support First Nation adult learners in order for them to engage in running their own affairs for purposes of self-determination and self-government. The proposal is innovative as it provides a culturally relevant way to support adult learners (who are great in number because of the high school leaving rate) to practically advance First Nations' self-deterministic movement.

The importance of community for First Nations is discussed. It is argued that use of serial online communities of interest (for learners) and communities of practice (for practitioners) is culturally appropriate and will facilitate engagement of students and practitioners in rural and remote, as well as isolated urban, locations. Issues associated with the digital divide (for example, see Canadian Council on Learning, 2009) are recognized since implementing online communities and e-learning requires the infrastructure required to deliver broadband/high speed Internet access. An excellent example of broadband provision is the Kuhkenah Network (K-Net) in North-Western Ontario (K-Net Services, n.d.). Further, the Canadian government recently announced plans to spend \$305 million

over five years to extend broadband Internet service into rural and northern communities (Canada Department of Finance, 2014). Accordingly, as a result of these and other measures, it is assumed that broadband access will be available.

Background

The relationship between conventional education and First Nations is complex. Scholars have pointed to insufficient First Nations content in curricula (Godlewska, Moore & Bednasek, 2010). Reports have reported a lack of First Nations input into curricula and pedagogies (Standing Senate Committee on Aboriginal Peoples, 2011; National Panel, 2012). Researchers have argued that omission of Canada's treatment of Aboriginal populations from curricula perpetuates self-serving ignorance among Canadians, and perpetuates injustices (Godlewska, Moore & Bednasek, 2010).

While agreeing that these injustices and omissions should be addressed in Canadian education systems, given the more than 35 years of reports concerning the inadequacy of primary and secondary education for First Nation students (Standing Senate Committee on Aboriginal Peoples, 2011, p. 1), the challenges inherent in First Nation adult education (Haig-Brown, 1995), and the need for change in post-secondary education (Stonechild, 2006), it is argued that we should move forward with adult education initiatives immediately rather than waiting for a (less im-)perfectly educated generation of First Nation citizens. Continuing high school leaving rates (Statistics Canada, 2001, 2006a, 2006b, 2011, 2013) lead to illiteracy and innumeracy among Aboriginal adults who are, therefore, ill-equipped to contribute to community self-government, for example, through managing band finances. The literacies and confidence required for First Nation adults to build capacity for increased self-determination and self-government may be strengthened by undertaking culturally appropriate approaches to education and online communities to support learners.

Definitions

The online communities will support learners first, while they are students, and later, when they are practitioners. It is anticipated that students' curriculum will be delivered online as well. Accordingly, brief definitions of three relevant terms are provided next. The term e-learning refers to distance education that is made available to students using Internet technologies (Rana, Rajiv & Lal, 2014, p. 20). E-learning is considered to have many benefits because it promotes self-directed learning; it provides asynchronous and synchronous open access that are very advantageous to many adult learners; and it can engage students and practitioners in ongoing professional development (Lewis, Cidon, Seto, Chen & Mahan, 2014, p. 150). An early study of the evolution of distance education observed that distance education is appropriate for all students who may have been marginalized for a variety of reasons, and who themselves are already distanced from traditional education for psychological, geographical, or cultural reasons (Ohler, 1991, p. 25). Waite and Fowler (2002) have pointed to the benefits of synchronous and asynchronous availability of Internet-based distance education delivery (p. 8). Distance education has the potential to reduce financial and other barriers (Sanchez, Stuckey & Morris, 1998, p. 3, as quoted in Al-Asfour & Bryant, 2011, p. 45). Early Canadian research links distance education and sustainable economic development (Wall & Owen, 1992, as quoted in Al-Asfour & Bryant, 2011, p. 45). A related concept is open learning. Bureau (2000) reported that a key aspect of open learning is independent study (p. 280). For First Nation adult learners, independent study does not mean learning in isolation from, or at the exclusion of, community, but instead means the ability to choose how to engage with a community of learners. Since many First Nation adult learners would need supplementary education in order to participate in self-determination and self-government, it is important to consider some principles and assumptions of adult education.

Adult Education Principles and Assumptions

In a foundational discussion of androgyny or adult education, Knowles (1980) identified four primary differences between adult and child learners that have significant implications for adult education: the concept of the learner, role of learners' experience, readiness to learn, and orientation to learning (pp. 43–44). Of these implications, the concept of the learner as variably dependent and self-directed, and orientation to learning as needing to be readily applicable (Knowles, 1980, pp. 46, 53) continue to have particular relevance to designing and delivering educational programs for adult First Nation learners. First, it is possible that because of many students' early withdrawal from traditional education, that, in fact, these concepts may need to be addressed in the program directly in order to reduce learners' anxiety sufficiently for them to move forward with their learning precisely because of having internalized "failure." Second, like other adult learners, adult First Nation learners may approach educational activities from a problem- or performance-centred viewpoint (Knowles, 1980, p. 53), because of their social responsibilities within their families and communities, regardless of the nature of their experiences in the educational system. Merriam (2001) reported that andragogy and self-directed learning are consistently represented in models and definitions of adult education (p. 3). Self-directed learning provides a clear link between adult education, constructivist learning, and online education.

The Need for More Research

Despite its important potential, little research on this topic has been conducted to date. In the context of the United States, a small study found that learning online through the Montana Digital Academy (MTDA) was effective for the eight college-bound Native American students who participated (Butler Kaler, 2012, p. 60). The author noted that "research on this topic is practically non-existent" (Butler Kaler, 2012, p. 60). Another small study in the United States explored the experiences and perceptions of Lakota Native American students taking a college-level online course in business (Al-Asfour & Bryant, 2011, p. 43). The authors of this study also noted that, although considerable research has been carried out concerning online education, theirs is the first study regarding online education at any Lakota tribal college (Al-Asfour & Bryant, 2011, p. 43). It was reported that family obligations and commitments must be met before a Native American individual undertakes online education (Sanchez, Stuckey & Morris, 1998, p. 3, as quoted in Al-Asfour & Bryant, 2011, p. 45). Online education brings education to adults in a way that can accommodate adult learners' family and community responsibilities and their specific cultural values. The next section considers the term community and its importance to First Nation learners.

Importance of Community

The term community has many meanings. Some definitions have to do with geography, others with place, and still others with shared ethnicity. One useful definition of "community" (2014) is "the people of a district or country considered collectively, especially in the context of social values and responsibilities." Since, for many First Nation peoples, collective relationship is more important than individualism, First Nations have their own concepts of, and contexts for, community. Battiste (2000) noted that "collective community" is a traditional attitude of many Aboriginal peoples (p. 207).

Serving community is understood to be one of the ethical responsibilities of First Nation people (Manitoba First Nations Youth Council, 2002). In addition to their immediate family responsibilities, adult First Nation learners also will have "community obligations" that have to be met from time to time, such as a death within the community (British Columbia Ministry of Advanced Education

(AVED), n.d., p. 21). Online communities for learners can implement, recognize, value, and support many aspects of First Nations' values and customs. Next, a conceptual framework for the communities is presented.

Conceptual Framework

The learner support system is usefully understood as dynamically changing over time in relation to learners' needs, as is demonstrated in Lowe's (2011, p. 77) Providing Academic and Relational Support (PARS) model (figure 1). A learner-focussed conceptual framework, the PARS model recognizes that the need for academic support declines as relational support and self-directedness increase (Lowe, 2011, p. 77). In this model, the term self-directedness means both self-direction and "learning how to learn" skill development (Lowe, 2011, p. 77). The PARS model is informed by Vygotsky's (1978) concept of scaffolding (Lowe, 2011, p. 82), which derives from his socio-cultural theory of mind and concept of zone of proximal development (ZPD) (Shabani, Khatib & Ebadi, 2010, p. 240).

The PARS model suggests that academic support declines, and the need for relational support rises and then falls during four phases: guiding, clarifying, encouraging, and monitoring (Lowe, 2011). Over the same timeframe, learners' self-directedness grows as they pass through stages of being dependent, independent, and inter-dependent. The concept of interdependence points to the cultural appropriateness of this model since relationship and connectedness are inherent in many First Nations' worldviews. For example, Kirkness and Barnhardt (1991) described "[t]he [f]our

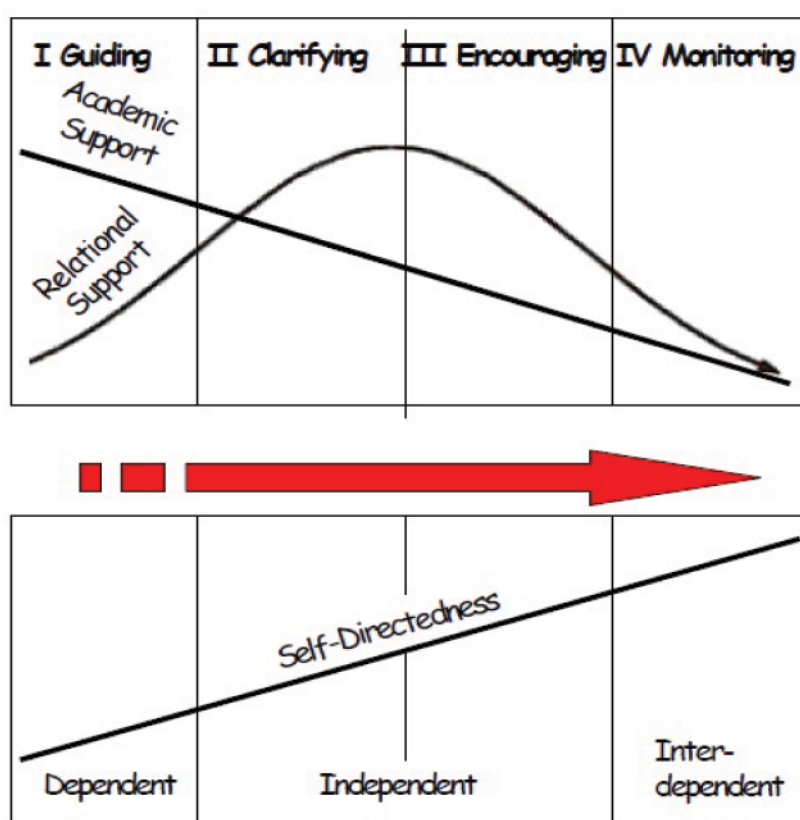


Figure 1: Providing Academic and Relational Support (PARS) model

Source: Lowe (2011) (Reproduced with permission of author)

R's- Respect, relevance, reciprocity, [and] responsibility" of First Nations and higher education (p. 1). Baskin (2006) confirmed that "[i]n Aboriginal world views, a focus on individual and collective responsibility for all members of one's community is highlighted." In the context of Native American communities, Weiterman Barton (2013) has reported that "sharing is a valued characteristic" (p. 142). Further, the PARS model is also useful because of the cultural appropriateness of constructivist theory for First Nation learners.

Cultural Appropriateness of Constructivist and Sociocultural Theories

As increasing numbers of educators explore the use of virtual places for learners, it is important to consider which approaches can provide culturally appropriate and effective ways to reach learners in all their diversity. The large numbers of school leavers demonstrate that traditional mainstream Canadian education is not well suited to many First Nation learners. The social and cultural needs of adult First Nation learners, many of whom left school early, also challenge traditional education. Through its focus on distinguishing between observers, participants, and agents; analysing communication from symbolic, imaginative, and real perspectives, and demand for practitioners' critical reflection, interactive constructivism allows educational programs "to take into account the different versions of knowledge constructed in different contexts of time and place" (Reich, 2007, pp. 7, 8). Hung, Lim and Jamaludin (2011) have argued that constructivism addresses how "identity interplays with learning from the point of view of the learner and his/her social community" (p. 161). This interplay is especially relevant for the cultural context of First Nation learners, for whom "[s]elf and community cannot be divorced" (Hung, Lim & Jamaludin, 2011, p. 161). Constructivism is not limited to formal, classroom-based traditional education, but is extensible to informal learning, such as that which can take place in an online community. In a study of the virtual world of Second Life, Girvan and Savage (2010) found that, as use of "Communal Constructivism" grew, "learners collaboratively constructed knowledge for themselves as a group and for others" (p. 342). This finding confirms the importance of engaging a constructivist approach in the design and delivery of an educational program for adult First Nation learners.

Like constructivist theory, sociocultural theory provides a culturally coherent approach for First Nation learners. Scholars have found that socio-cultural theories accord with an indigenous pedagogical paradigm (Sanchez, Stuckey, & Morris, 1998), and with indigenous ways of learning, which are influenced by culture and, as such, are social and collective rather than individual in nature (McLoughlin & Oliver, 1998, p. 127, both as quoted in Weiterman Barton, 2013, p. 44).

Further, Internet-based approaches to learning are consistent with culturally appropriate pedagogies. Weiterman Barton's (2013) Standard Model of Indigenous Learning comprised five "model threads" –place, storytelling, intergenerational interaction, experience, and interconnectedness (pp. 1, 56–68)– all of which are accommodated by online communities.

Online Communities of Interest and Practice

The purpose of the learner support system is to support and instantiate the values of a First Nation as its members develop their abilities to govern themselves. Since the success of this initiative requires more than straightforward skills transfer, knowledge building is essential to develop the people and the processes that will help their respective First Nation survive and then thrive. In this way, knowledge building supports the value of self-reliance (National Indian Brotherhood, 1972, p. 2).

The learning support system needs to engage and sustain online community-building by creating an online environment that fosters the adult learners' sense of community, first as students and

then as practitioners. Since members' level of expertise and pressing day-to-day concerns will differ, two online communities will be established: a Community of Interest (CoI) for the students and a Community of Practice (CoP) for the practitioners.

Community of Practice has been defined as "a persistent, sustained social network of individuals who share and develop an overlapping knowledge base, set of beliefs, values, history and experiences focused on a common practice and/or mutual enterprise" (Lave & Wenger, 1991, as quoted in Barab, 1998). Barab (1998, n.p.) identifies CoP characteristics that are important for the learner support system: "(1) shared knowledge, values, and beliefs; (2) overlapping histories among members; (3) mutual interdependence; and (4) mechanisms for reproduction."

The difference between the CoI and the CoP will be the transience of the participants in the CoI. The CoI members are students who eventually will graduate and become practitioners. For the CoI, the community continues while the members migrate. Following graduation, CoI members will migrate to the CoP to join their new practice community. Co-creating learning and practicing within online communities will build capacity within First Nations to meet calls for autonomous functioning and self-government (Canada Library of Parliament, 1999) and for increased self-determination in education (Assembly of First Nations, 2010; Chiefs of Ontario, 2012).

Recommendations and Next Steps

Canadian governments at various levels are beginning to consider First Nations' claims to self-determination and self-government as alternatives to the status quo, which evidence suggests is not working. The scarcity of research into adult education points to the need to propose such an undertaking. The next step would be to pilot the proposed learner support system to support the students of a curricular program such as bookkeeping. This recommendation derives from First Nations' desire for self-government and the importance of community, which naturally intersect in online communities.

Aboriginal Affairs and Northern Development Canada [AANDC] (2014) stressed that accountability commitments are key features of Aboriginal self-governments' relationships with their citizens as well as with provincial/territorial, and federal levels of government. As a result, self-government agreements "must address the need to strengthen key elements of governance, including fiscal and management regimes" (AANDC, 2014, n.p.). Accordingly, since bookkeeping is fundamental to fiscal regimes and since fiscal regimes are necessary to achieve self-government, then bookkeeping is a suitable subject to be taught to adult First Nation learners.

In a recent systematic scoping review of evaluation frameworks in, i.a., ecohealth, health care, education, and business, McKellar, Pitzul, Yi and Cole (2014) found that the frameworks they examined were not generalizable because of limited applications; however, their findings could be used to refine CoP evaluation frameworks. Like pedagogical approaches, evaluation must be culturally appropriate and specific to the First Nation involved. A culturally appropriate CoI/CoP evaluation framework should be incorporated within the pilot project. Finally, both the educational program and the learner support communities need to be culturally appropriate, because it is not the role of the CoI/CoP to redress deficiencies in curriculum or pedagogy.

Conclusion

In conclusion, this paper describes a proposal for an innovative means of supporting adult First Nations learners from being students to practitioners, as they gain knowledge that will let them

engage in increasing self-determination toward eventual self-government. In order to be culturally appropriate and pedagogically effective, the learning support system is informed by a learner-centred conceptual framework, Lowe's (2011) Providing Academic and Relational Support (PARS) model that is informed by Vygotsky's (1978) concept of scaffolding (Lowe, 2011, p. 82), which derives from his socio-cultural theory of mind and concept of zone of proximal development (ZPD) (Shabani, Khatib & Ebadi, 2010, p. 240). Employing scaffolding and engaging in constructivist approaches within the communities will maintain a culturally appropriate focus on the learners.

Since relationships, connectedness, and community are fundamental to First Nations' worldviews—which Graham (2002) has termed “relational” (as quoted in Hart, 2010, p. 3)—providing online communities for adult First Nation students and practitioners is culturally appropriate and situationally appropriate and useful for communities' work towards self-determination and self-government.

Note

- ¹ The *Constitution Act, 1982* defines Aboriginal peoples in Canada as Indians, Inuit, and Métis (Aboriginal Affairs and Northern Development Canada, 2014).

References

- Aboriginal Affairs and Northern Development Canada. (2014). *Fact sheet: Aboriginal self-government*. Retrieved November 27, 2014, from <http://www.aadnc-aandc.gc.ca/eng/1100100016293/1100100016294>
- Al-Asfour, A. & Bryant, C. (2011). Perceptions of Lakota Native American students taking online business course at Oglala Lakota College (OLC). *American Journal of Business Education*, 4(10), 43–50.
- Assembly of First Nations. (2010). *First Nations control of First Nations education: It's our vision, it's our time*. Retrieved February 5, 2014, from http://www.afn.ca/uploads/files/education/3._2010_july_afn_first_nations_control_of_first_nations_education_final_eng.pdf
- Barab, S. (1998). *Theoretical inspirations—Communities of practice*. Retrieved November 27, 2006, from <http://inkido.indiana.edu/research/community.htm>
- Baskin, C. (2006). Aboriginal world views as challenges and possibilities in Social Work education. *Critical Social Work*, 7(2). Retrieved from <http://www1.uwindsor.ca/criticalsocialwork/aboriginal-world-views-as-challenges-and-possibilities-in-social-work-education>
- Battiste, M. A. (2000). Maintaining Aboriginal identity, language, and culture in modern society. In Marie Ann Battiste (Ed.), *Reclaiming Indigenous voice and vision* (pp. 192–208). Vancouver, BC: University of British Columbia Press.
- Battiste, M. A. (2004). *Animating sites of postcolonial education: Indigenous Knowledge and the Humanities*. Plenary Address, May 29, 2004. Winnipeg, MB: Canadian Society for Studies in Education (CSSE).
- Belhumeur, J., Closs, R. & Kaun, M. (2005). *Voices of the dropout: A study of early school leavers at one First Nations school*. Partially funded by Dr. Stirling McDowell Foundation for Research into Teaching. Project #106. Retrieved February 28, 2014, from http://www.mcdowellfoundation.ca/main_mcdowell/projects/research_rep/106_voices_first_nations.pdf
- British Columbia Ministry of Advanced Education [AVED]. (n.d.). *Aboriginal post-secondary education and training policy framework and action plan: 2020 Vision for the future*. Ministry of Advanced Education Aboriginal Programs Unit. Retrieved November 16, 2014, from http://www.aved.gov.bc.ca/aboriginal/docs/Aboriginal_Action_Plan.pdf

- Bureau, M. (2000). Open learning and distance education in Canada. *Korea Observer*, 31(2), 261–300.
- Butler Kaler, C. (2012). A model of successful adaptation to online learning for college-bound Native American high school students. *Multicultural Education & Technology Journal*, 6(2), 60–76. <http://dx.doi.org/10.1108/17504971211236245>
- Canada Department of Finance. (2014). *Budget 2014: Chapter 3.4: Supporting families and communities*. Retrieved February 28, 2014, from <http://www.budget.gc.ca/2014/docs/plan/ch3-4-eng.html>
- Canada Library of Parliament. (1999). *Aboriginal self-government*. Current issue review 96-2E. Prepared by Jill Wherrett, Political and Social Affairs Division. Ottawa, ON: Government of Canada, Library of Parliament, Parliamentary Research Branch (PRB). Retrieved November 27, 2014, from <http://www.parl.gc.ca/Content/LOP/ResearchPublications/962-e.htm>
- Canadian Council on Learning. (2009). *The state of Aboriginal learning in Canada: A holistic approach to measuring success*. Ottawa, ON: Canadian Council on Learning (CCL). Retrieved February 18, 2014, from http://www.ccl-cca.ca/pdfs/StateAboriginalLearning/SAL-FINALReport_EN.PDF
- Chiefs of Ontario. (2012). *Our children, our future, our vision: First Nation jurisdiction over First Nation education in Ontario*. Retrieved February 5, 2014, from <http://www.peopleforeducation.ca/wp-content/uploads/2012/02/COO-Education-Report-Feb-8-20121.pdf>
- community. (2014). *community*. Oxford English Dictionary Online. Retrieved February 18, 2014, from <http://www.oxforddictionaries.com/definition/english/community>
- Girvan, C. & Savage, T. (2010). Identifying an appropriate pedagogy for virtual worlds: A Communal Constructivism case study. *Computers & Education*, 55(1), 342–349. <http://dx.doi.org/10.1016/j.compedu.2010.01.020>
- Godlewska, A., Moore, J. & Bednasek, C. D. (2010). Cultivating ignorance of Aboriginal realities. *The Canadian Geographer*, 54(4), 417–440. <http://dx.doi.org/10.1111/j.1541-0064.2009.00297.x>
- Haig-Brown, C. (1995). *Taking control: Power and contradiction in First Nations adult education*. Vancouver, BC: University of British Columbia Press
- Hart, M. A. (2010). Indigenous worldviews, knowledge, and research: The development of an indigenous research paradigm. *Journal of Indigenous Voices in Social Work*, 1(1), 1–16. Retrieved from <http://hdl.handle.net/10125/15117>
- Hung, D., Lim, S. H. & Jamaludin, A. B. (2011). Social constructivism, projective identity, and learning: Case study of Nathan. *Asia Pacific Education Review*, 12(2), 161–171. <http://dx.doi.org/10.1007/s12564-010-9116-y>
- K-Net Services. (n.d.). *K-Net [Kuhkenah Network] services home*. Retrieved November 27, 2014, from <http://services.knet.ca/>
- Kirkness, V. J. & Barnhardt, R. (1991). First Nations and higher education: The four R's - Respect, relevance, reciprocity, responsibility. *Journal of American Indian Education*, 30(3), 1–15. Retrieved from <http://jaie.asu.edu/v30/V30S3fir.htm>
- Knowles, M. S. (1980). What is andragogy? Chapter 4 in *The modern practice of adult education: From pedagogy to andragogy*, revised ed. (pp. 40–59). Englewood Cliffs, NJ: Prentice Hall/Cambridge.
- Kovacs, P. (2009). *Synthesis report of the Aboriginal Learning Knowledge Centre's literature reviews: Responsive educational systems*. 978-1-926612-33-1. Saskatoon, SK: University of Saskatchewan, Aboriginal Learning Knowledge Centre, and Calgary, AB: First Nations and Adult Higher Education Consortium. Retrieved February 18, 2014, from http://www.ccl-cca.ca/pdfs/ablkc/ResponsiveEduSys_en.pdf

- Lewis, K. O., Cidon, M. J., Seto, T. L., Chen, H., Mahan, J. D. (2014). Leveraging e-learning in medical education. *Current problems in pediatric and adolescent health care*, 44(6), 150–163. <http://dx.doi.org/10.1016/j.cppeds.2014.01.004>
- Lowe, S. D. (2011). Responding to learner needs in distance education: Providing academic and relational support (PARS). Chapter 8 in S. Joseph Levine (Ed.), *Making distance education work: Understanding learning and learners at a distance* (pp. 73–87). Retrieved November 22, 2014, from <http://learnerassociates.net/learners/chap08.pdf>
- Manitoba First Nations Youth Council. (2002). *Traditional First Nations Code of Ethics*. Retrieved April 10, 2010, from <http://www.mfnyc.mb.ca/code.html>
- McKellar, K. A., Pitzul, K. B., Yi, J. Y. & Cole, D. (2014). Evaluating communities of practice and knowledge networks: A systematic scoping review of evaluation frameworks. *EcoHealth*, 11(3), 383–399. <http://dx.doi.org/10.1007/s10393-014-0958-3>
- Merriam, S. B. (2001). Andragogy and self-directed learning: Pillars of adult learning theory. *New Directions for Adult and Continuing Education, Special Issue: The “New” Update on Adult Learning Theory*, (89), 3–14. <http://dx.doi.org/10.1002/ace.3>
- National Indian Brotherhood. (1972). *Indian control of Indian education: Policy paper*. Ottawa, ON: National Indian Brotherhood.
- National Panel on First Nation Elementary and Secondary Education for Students on Reserve [National Panel]. (2012). *Nurturing the learning spirit of First Nation students: The report of the National Panel on First Nation Elementary and Secondary Education for Students on Reserve*. A joint undertaking of the Assembly of First Nations and the Aboriginal Affairs and Northern Development Canada (launched June 21, 2011, panel met from September to December 2011, report published in February 2012). Retrieved February 18, 2014, from <http://www.afn.ca/uploads/files/education2/national-panel.pdf>
- Ohler, J. (1991). Why distance education? *The Annals of the American Academy of Political and Social Science*, 514(1), 22–34. <http://dx.doi.org/10.1177/0002716291514001003>
- Rana, H., Rajiv, R. & Lal, M. (2014). E-learning: Issues and challenges. *International Journal of Computer Applications*, 97(5), 20–24. <http://dx.doi.org/10.5120/17004-7154>
- Reich, K. (2007). Interactive constructivism in education. *Education and Culture*, 23(1), 7–26. Retrieved from <http://docs.lib.purdue.edu/eandc/vol23/iss1/art3>
- Shabani, K., Khatib, M. & Ebadi, S. (2010). Vygotsky's zone of proximal development: Instructional implications and teachers' professional development. *English Language Teaching*, 3(4), 237–248.
- Standing Senate Committee on Aboriginal Peoples. (2011). *Reforming First Nations education: From crisis to hope—Report of the Standing Senate Committee on Aboriginal Peoples*. Retrieved February 18, 2014, from <http://www.parl.gc.ca/Content/SEN/Committee/411/appa/rep/rep03dec11-e.pdf>
- Statistics Canada. (2001). *2001 census*. Ottawa, ON: Industry Canada.
- Statistics Canada. (2006a). *2006 census*. Ottawa, ON: Industry Canada.
- Statistics Canada. (2006b). *2006 census: Aboriginal peoples in Canada in 2006: Inuit, Métis and First Nations, 2006 census—An increasingly urban population*. Ottawa, ON: Industry Canada. Retrieved February 5, 2011, from <http://www12.statcan.ca/census-recensement/2006/as-sa/97-558/p3-eng.cfm>
- Statistics Canada. (2011). *The educational attainment of Aboriginal peoples in Canada*. Data from National Household Survey (NHS), 2011. Ottawa, ON: Industry Canada. Retrieved February 18, 2014, from https://www12.statcan.gc.ca/nhs-enm/2011/as-sa/99-012-x/99-012-x2011003_3-eng.cfm

- Statistics Canada. (2013). *The education and employment experiences of First Nations people living off reserve, Inuit, and Métis: Selected findings from the 2012 Aboriginal Peoples Survey*. Analytical paper prepared by Evelyne Bougie, Karen Kelly-Scott and Paula Arriagada, Social and Aboriginal Statistics Division. Catalogue no. 89-653-X—No. 001. ISBN 978-1-100-22737-5. Retrieved February 28, 2011, from <http://www.statcan.gc.ca/pub/89-653-x/89-653-x2013001-eng.pdf>
- Stonechild, B. (2006). *The new buffalo: The struggle for Aboriginal post-secondary education in Canada*. Winnipeg, MB: University of Manitoba Press.
- Waite, R. S. & Fowler, C. H. (2002). Using web-based training in adult education. *Journal of Adult Education*, 31(1), 8–16.
- Weiterman Barton, S. D. (2013). *Web walkers—A phenomenological study of adult Native American distance learning experiences: Toward a standard model of indigenous learning*. Unpublished doctoral dissertation. Carbondale, IL: Southern Illinois University Carbondale, Graduate School Department of Workforce Education and Development.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.