Indigenous Higher Education: Current Issues and Recommended Courses of Action

Prepared for the First Nations/Indigenous units/departments/services in Ontario's publicly-supported colleges

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1. Introduction

This report surveys the existing literature on current challenges and innovative practices related to Indigenous post-secondary education, with an emphasis (where possible) on both Canada and Ontario. Based on this survey, the report recommends specific courses of action that Ontario publicly-supported colleges should consider following in order to better attract, retain, graduate and support Indigenous students.

This report's sections cover the concentrations of knowledge and concern in the existing literature.

Unfulfilled Aspirations

Indigenous post-secondary enrollment is increasing (Gordon & White, 2014), and Indigenous youth and their parents both aspire to youths' post-secondary enrollment at about the same rates as do those in the non-Indigenous population (Canada Millennium Scholarship Foundation, 2005, p. 2). Moreover, both youth and their parents are optimistic about youths' ability to complete post-secondary:

> For Aboriginal people between the ages of 16 and 24, 72% say it is likely or very likely that they will obtain the level of education they desire. Parents are just as likely (70%) to believe that their children will get the post-secondary education they want. (p. 2)

However, the post-secondary enrollment and completion realities are discouraging. The 2005 Canada Millennium Scholarship Foundation report found at that time that "only 39% of those [who are Indigenous] between the ages of 25 and 64 have graduated from some form of post-secondary education" (p. 3), and a 2010 report states that "the [post-secondary] attainment rates of Aboriginal people remain significantly lower than those of the overall Canadian population" (R. A. Malatest & Associates Ltd., 2010, p. 15). Historically in Canada, "about a quarter [of Indigenous students have] earn[ed] a degree compared to about half of the non-Aboriginal students" (Richardson & Blanchet-Cohen, 2000, p. 46). Similar problems exist with the Indigenous populations in Australia (Bandias et al., 2013, p. 11; Nguyen, 2010, p. 10; R. A. Malatest & Associates Ltd. 2004, p. 7; Shah & Widin, 2010, p. 28), New Zealand (R. A. Malatest & Associates Ltd., 2004, p. 8), and the United States (Minthorn & Marsh, 2016, p. 5; R. A. Malatest & Associates Ltd., 2004, p. 8; Wells, 1997, p. 2).

The College Exception?

Interestingly, the research paints a more optimistic picture of non-university post-secondary success in Canada for Indigenous students. Gordon & White (2014) claim that, "colleges are relatively successful in

attracting and retaining Indigenous students," and the 2001 census data suggest that, at that time, Indigenous students' non-university success was close to parity with that of non-Indigenous students (Mendelson, 2006, p. 10; p. 16). A literature review by the Atlantic Evaluation Group (2010) similarly notes that "the [postsecondary] gap is shrinking when it comes to completion of non-university … credentials" (p. 19). This trend does not obtain in Australia (Bandias et al., 2013, p. 14; p. 26; Nguyen, 2010, p. 9).

Non-public information about contemporary Indigenous student graduation rates from Ontario colleges suggests that, contrary to the optimistic picture painted by some sources about college completion, these rates are very substantially below the rates of students' non-Indigenous peers. In Ontario, Indigenous students show a marked preference for enrollment in the non-university sector (R. A. Malatest & Associates Ltd., 2010, p. 15), so determining accurate measures of achievement in that sector is especially important.

Recommendation 1:

Investigate whether the research claim about achievement parity in the non-university sector still holds true, and track precise data on Indigenous students' graduation from the Ontario colleges

Data Problems

Unreliable Quantitative Data Sets

Typically, the quantitative components of reports on Canadian Indigenous education rely on data from the 2006 and 2011 long-form censuses (the Aboriginal results for the 2016 long-form census have only very recently been released and have not yet been analyzed in the literature, and the long-form census was suspended between 2011 and 2016). Some sources also use the 2011 National Household Survey data (Gordon & White, 2014). In addition to being out of date, all of these data sets are seriously compromised by Indigenous reluctance to participate (R. A. Malatest & Associates Ltd., 2004, pp. 9-10; R. A. Malatest & Associates Ltd., 2010, p. 26; Stonecircle, 2011, p. 19). The only claim that can be made in favor of census data is that at least it has "a stable methodology over time [with] similar response patterns" (Gordon & White, 2014).

Province- and institution-specific data sets also tend to be poor quality. There have been consistent calls going back to 1995 for better tracking of Indigenous students (Richardson & Blanchet-Cohen, 2000, p. 14), without significant results. Many institutional attempts to collect this data rely on Indigenous self-identification, which Indigenous students may be reluctant to do (R. A. Malatest & Associates Ltd., 2004, pp. 9-10; R. A. Malatest & Associates Ltd., 2010, p. 51), and institutional data collection methods are site-specific (Stonecircle, 2011, p. 13), which makes aggregating their results and/or generalizing from them challenging. Coordinating data collection methods across Ontario institutions is further complicated by "the historically independent nature of the relationship between [post-secondary] institutions and the provincial government" (p. 15). Indigenous-controlled post-secondary institutions in Ontario similarly "lack formal tracking of service outcomes" (R. A. Malatest & Associates Ltd., 2010, pp. 34-35), and Indigenous student services programs at institutions typically do not have even informal evaluation procedures (R. A. Malatest & Associates Ltd., 2010, p. 74). Claims have been made that Indigenous access programs have more formal evaluation procedures (p. 50), but these procedures can

consist merely of the typical instructor evaluations that students fill out, and that are notoriously unreliable themselves.[1]

These data problems also exist at the elementary and secondary levels of education. School boards, like post-secondary institutions, rely on self-identification and site-specific data collection methods, which makes it very difficult to track students across the transition from secondary to post-secondary education (Stonecircle, 2011, p. 16).

Furthermore, because of the inconsistent data collection methods of school boards and post-secondary institutions, disaggregated samples from one particular school/institution are sometimes "too small to be statistically meaningful" (p. 17).

This data problem is not unique to Canada; both Australia (Bandias et al., 2013, p.8; Oliver et al., 2013, p. 53; R. A. Malatest & Associates Ltd., 2010, p. 35) and the United States (Minthorn & Marsh, 2016, p. 4; Wells, 1997, pp. 1-2) face similar deficits.

Unreliable Qualitative Data

Much of the available qualitative data is anecdotal, and it is typically not gathered in ways that provide reasonably objective assessments of Indigenous post-secondary programs and services. The following quotation from R. A. Malatest & Associates Ltd.'s 2004 report is applicable to many of the qualitative studies in this field:

> Throughout the site visits and interviews, stakeholders frequently noted the limitations of government funding and educational infrastructure, but they rarely singled out existing practices or initiatives as *unsuccessful* attempts to improve Aboriginal participation. While it is possible that all existing practices and initiatives have been successful, the methodological limitations … suggest the need for more comprehensive studies that would include a larger statistical tracking element. (p. 10, original emphasis)

The Ontario Native Education Counselling Association's 2011 report *Aboriginal Student Transitions Project* is a useful example of a qualitative study that has little to offer, since it merely provides a list of focus group opinions without rigorous analysis. Decision-makers must therefore bear in mind the fact that anecdotal stakeholder evidence is weak (Atlantic Evaluation Group, 2010, p. 41; R. A. Malatest & Associates Ltd., 2010, p. 59) and may be biased.

Recommendation 2:

Create a shared, consistent methodology for quantitatively tracking Indigenous student outcomes throughout Ontario institutions, and design high-quality qualitative studies that account for stakeholder bias

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[1] Deer et al. (2015) make the baffling, contrary claim that most of the relevant data is quantitative in nature, and that we consequently need more qualitative studies, not quantitative data-gathering and analysis (p. 9). Their report is based on a very large literature review, however, and it appears that reviewed articles include ones on Indigenous peoples *in general and worldwide*, although a complete bibliography of the reviewed articles does not seem to be available. In any case, the vast majority of sources from Canada, Australia, the United States and New Zealand all agree that there is a serious dearth of quantitative data; these sources' claims are consistent both historically and in very recent publications.

2. Getting Indigenous Students to Post-Secondary: The High School Problem

High school is a significant barrier to Indigenous post-secondary success in most of Canada, and it tends to act as a barrier in two related ways: not enough students are graduating, and not enough students are learning about their strengths and career options. Citing the 2011 National Household Survey, People for Education (2017) states that "24% of Indigenous 20-24 year olds living off-reserve in Ontario did not graduate from secondary school. This is 15 percentage points higher than their non-Indigenous counterparts (9%)" (p. 3). It is worth noting that off-reserve completion numbers tend to be stronger than on-reserve ones (Nguyen, 2010, p. 3).

One prominent study argues that the lack of Indigenous participation in Canadian post-secondary stems largely from poor high school completion numbers:

> Of those Aboriginal students who complete high school and get a graduation certificate, about the *same* proportion go on to complete some form of PSE as do high school graduates of the population in total. In other words, *Aboriginal high school graduates have already achieved parity with respect to completing PSE* … The data appears to show that about the same proportion of Aboriginal high school graduates is going on to graduate in some form of PSE as high school graduates in the total population … In short, if there are to be more Aboriginal PSE graduates, there must be more Aboriginal high school graduates (Mendelson, 2006, p. 30, original emphasis)

Timmons & Stoicheff (2016) also note that high school graduation is a significant problem (p. 2). Bruce & Marlin (2012) concur with Mendelson that Indigenous students who make it to post-secondary seem to graduate at the same rates as non-Indigenous students (p. 2), and Stonecircle (2011) makes a similar claim about Métis students (p. 20). It is worth remembering, however, that these claims are all subject to the very serious data limitations outlined in the previous section.

One longitudinal Australian study of Indigenous youth from 1999 to 2007 found that low literacy and numeracy achievement in this group contributes to low secondary school completion and low university participation; these findings suggest that additional literacy and numeracy interventions need to take place at the high school level, since they "contribute significantly to improving Indigenous outcomes, particularly in increasing Year 12 [high school] completion rates" (Nguyen, 2010, p. 1).

In terms of additional risk factors, a literature review (Atlantic Evaluation Group, 2010), while cautioning that "the literature in this area is limited" (p. 24), identified six additional factors that seem to influence high school graduation rates for Indigenous students in Canada:

1. The number of low-income families living near the student's home: "Statistical modeling revealed that when there were higher proportions of low-income families …, the school completion rates of Aboriginal students diminished" (p. 24)
2. The number of Indigenous students in a class: "The higher the proportion of Aboriginal students in the classroom, the greater the completion rates of Aboriginal students" (p. 24)
3. The number of times Indigenous high school students move during high school: "Results indicated that among 15- to 19-year-olds, frequent moves increased the likelihood of their dropping out … Among 20- to 24-year-olds, those who had moved three or more times in the

previous five years were most likely to not graduate from secondary school, in comparison to non-movers … In BC, a higher proportion of Aboriginal students who completed secondary school had experienced no change of schools during their high school years" (pp. 24-25)

4. The number of children in a family: "Research … indicates that the presence of two or more children in the family has a strong positive effect on graduation rates" (p. 25)
5. The education levels in the community: "Higher education levels in the community had an effect on increasing the graduation rate and on reducing the withdrawal rate" (p. 25)
6. The material needs of the student's family: "The higher rates of high school leavers [withdrawals] may be related to 'pull' factors that cause Aboriginal students to leave school early, rather than 'push' factors related to the school environment … [Aboriginal leavers] may be under more pressure to generate employment income for themselves or their families" (p. 27)

Some of these factors obviously cannot be changed (e.g. socioeconomic status, number of children in a family), but they can be used to help identify Indigenous high school students at a particularly high risk of not completing.

Recommendation 3:

Investigate and validate whether Indigenous direct entrants to post-secondary who have completed high school graduate at similar rates as comparable, non-Indigenous peers

Recommendation 4:

Investigate literacy and numeracy achievement levels for Indigenous high school students, and, if warranted, develop evidence-based interventions to improve these skills at the high school level

Recommendation 5:

Develop evidence-based metrics to identify Indigenous students at an higher risk than their Indigenous peers of high school non-completion, and target this group for evidence-based supports

Who Completes High School?

In Canada, off-reserve Indigenous and Métis students are the most likely to complete high school, while on-reserve and Inuit students are the least likely (p. 3). A 2017 report found that, in Ontario, "eighty-two percent of Indigenous students attend provincially funded schools in Ontario school boards" (People for Education, 2017, p. 2). On reserves, female Indigenous students are more likely to complete high school than their male peers (Richards, 2008, p. 116).

It is worth noting that Mendelson (2006) found that "failure to complete high school explains 87.8 percent of the variation in PSE completion rates among provinces and territories," which is an "extremely strong correlation" (pp. 31-32). In other words, Indigenous post-secondary students who have entered that level of education via alternate routes than simply completing secondary education are at a significantly higher risk of non-completion than their Indigenous peers who also completed high school.

High School Interventions

As R. A. Malatest & Associates Ltd. (2004) state, "Lack of academic preparation is a significant barrier to post-secondary education for many Aboriginal people" (p. 11), and a great deal of the blame resides in high school programs. This consultancy found poor academic preparation in reserve and remote high

schools, a finding corroborated by a contemporary INAC report (p. 12; see also Canada Millennium Scholarship Foundation, 2005, p. 3). A follow-up 2010 report found the same state of affairs (R. A. Malatest & Associates, 2010, p. 40). One issue could be streaming; Australia has identified a persistent tendency for the secondary school system to stream Indigenous students away from higher-level courses and university preparation courses, despite efforts to stop this trend (Oliver et al., 2013, p. 56), and a similar state of affairs obtains in Canadian high schools (Parent, 2017, p.157).

Part of the problem with poor academic preparation and low expectations in high school is that students end up unable to picture themselves in successful careers. As is the case with other Indigenous data sets, "there is little systematic literature on the career aspirations of Aboriginal people" (Bruce & Marlin, 2012, p. 2); however, the studies that do exist tend to find either that Indigenous high school students have completely unrealistic career expectations (Bruce & Marlin, 2012, p. 3), or they have no real expectations at all. For instance, a 2000 study of grades 7-9 Indigenous students at a Canadian tribal school (likely an on-reserve school) found that "only 8 out of 20 students could indicate a career goal. According to the teachers, in a non-Native class probably most students would have something to say" (Richardson & Blanchet-Cohen, 2000, p. 43). Mainstream high schools are not necessarily any better, since they can act as a hostile environment for Indigenous students (Parent, 2017, p. 155).

The existing research therefore strongly recommends interventions at the high school level, or even earlier, a recommendation that encompasses Australia as well as Canada (Atlantic Evaluation Group, 2010, p. 44; AUCC, 2013, p. 7; Oliver et al., 2013, p. 52; Parent, 2017; Stonecircle, 2011, p. 36). Parent (2017) emphasizes the importance of helping high school (and younger) Indigenous students envision their success in a post-secondary environment. Early intervention programs offered by Canadian post-secondary institutions "may include a smorgasbord of required academic courses, an exploration of career possibilities, and First Nations and Indigenous study courses designed to enhance students' cultural knowledge and strengthen their identities" (p. 157). Youth participants in a study of these programs have identified the K-12 system as a problem that limits their abilities to picture themselves as post-secondary successes (p. 163); participating in early intervention programs motivated these participants to keep going in high school, despite negative experiences, because they could see a successful post-secondary future for themselves (p. 161). Parent notes, though, that very little research has been done on what is known as AEUPIs (Aboriginal Early University Promotion Initiatives) (Parent, 2017, p. 155).

However, a reasonably robust, American 21-year longitudinal study of students who completed a similar intervention at Stanford (the Stanford Medical Youth Science Program) found very significant, positive impacts (Winkleby et al., 2009, p. 535). While not targeted at Indigenous youth specifically, the program aims to help minority high school students imagine themselves as successful university students (p. 536). The program consists of the following:

> A 5-week summer residential biomedical program … seeks to enlarge the pool of underrepresented low-income students who succeed in college, the sciences, and eventually in science and health professions … Each year approximately 24 low-income high school students are selected to participate. They live on the Stanford University campus with 10 Stanford undergraduate student staff, most of whom are from underrepresented ethnic minority groups and majoring in the sciences, with plans to become health professionals. (p. 536)

Students participate in experiential learning, hospital internships, and academic enrichment lectures (p. 536); they also receive ongoing support beyond the 5-week residential component in the form of "program activities (e.g. annual alumni reunions), workshops (follow-up standardized test preparation), and college and career guidance … [which] are offered for years after participation" (pp. 537-38). 82% of Indigenous student participants who were subsequently admitted to university completed a 4-year degree (p. 540).

Recommendation 6:

Design early intervention programs for high school students that help them envision themselves as successful post-secondary students, and that provide appropriate career counselling. Track the outcomes of these programs and students, and provide ongoing support for program participants even after the program has finished

Because of the widespread problems at the high school level, multiple studies and reports recommend modified admissions requirements for Indigenous students (R. A. Malatest & Associates Ltd., 2004, pp. 39-41; R. A. Malatest & Associates Ltd., 2010, p. 61; Richardson & Blanchet-Cohen, 2000, p. 17). These modified requirements obviously need to be paired with appropriate supports, such as upgrading opportunities and access programs, in order to give Indigenous students the skills to succeed.

Recommendation 7:

Modify admission requirements to increase Indigenous access to post-secondary, and design evidence-based supports to target the weaknesses that these students may experience in their background knowledge and study skills

3. Getting Indigenous Students Through Post-Secondary: Common Barriers to Retention and Graduation

There is widespread agreement in the literature that the following factors impede Indigenous student success at the post-secondary level, although there is not always agreement on their relative impact:

- Lack of role models
- Geography and language
- Dissonant cultures and discrimination
- Finances
- Childcare
- Family/community responsibilities
- Academic weaknesses
- Personal factors

As a Canadian literature review notes (Atlantic Evaluation Group, 2010), "there may be a layering effect" (p. 36) with these problems, in which "the higher prevalence of various challenges [faced by Indigenous post-secondary students in comparison to their non-Indigenous peers] compound each other's effects" (p. 36).

Lack of Role Models

Indigenous university graduates in Canada have identified lack of role models as a problem (R. A. Malatest & Associates, 2004, p. 12), a concern that is echoed by other research sources (Atlantic Evaluation Group, 2010, p. 39; Canada Millennium Scholarship Foundation, 2005, p. 3; Parent, 2017, p. 164; R. A. Malatest & Associates, 2010, p. 16; Stonecircle, 2011, p. 25). There is the possibility of a feedback loop here: a lack of role models leads to a lack of post-secondary graduates, which then contributes to a lack of role models. In particular, "parental educational attainment is highly correlated with children's success" (Gordon & White, 2014), so creating a new generation of post-secondary success is necessary. One Ontario study found that using recommendations and success stories from Indigenous post-secondary graduates may be helpful in fostering more post-secondary enrollment and graduation (R. A. Malatest & Associates, 2010, p. 62). A 2017 study found that Indigenous students in an access program placed a lot of value on interacting with successful Indigenous post-secondary students and graduates (Parent, 2017, p. 163).

Recommendation 8:

Cultivate Indigenous role models—both current students and post-secondary graduates—and use them to connect with/motivate Indigenous students

Geography and Language

In multiple regions, geography (remote location) and language (first language is neither English nor French) can both pose barriers to Indigenous post-secondary education (Bandias et al., 2013, p. 29; R. A. Malatest & Associates Ltd., 2010, p. 16; Stonecircle, 2011, p. 25). One study of female Indigenous post-secondary students in northern Manitoba found that being able to go to school close to home was very important to this group (Simpkins & Bonnycastle, 2015, pp. 11-16).

Providing more programming in students' first languages is clearly important; distance education and in-community delivery can help to overcome geographical challenges.

Recommendation 9:

Survey the post-secondary institution's catchment area to determine the degree to which geography and language may pose barriers to Indigenous students

Dissonant Cultures and Discrimination

Culture shock, isolation and racism are all serious problems at the post-secondary level. Post-secondary institutions tend to seem "impersonal and hostile" (R. A. Malatest & Associates, 2004, p. 13) to Indigenous students, who often see neither themselves nor their culture's values and pedagogy in the curriculum (Canada Millennium Scholarship Foundation, 2005, p. 3; Richardson & Blanchet-Cohen, 2000, p. 43; R. A. Malatest & Associates, 2004, pp. 13-15; Stonecircle, 2011, p. 25). The study of female Indigenous post-secondary students in Manitoba found that students' abilities to see themselves in the curriculum was very important to them (Simpkins & Bonnycastle, 2015, p. 14). Australian studies have similarly found that Indigenous students can feel alienated from and overwhelmed by the typical post-secondary environment (Oliver et al., 2013, p. 54; p. 60). A further complication in Canada is that, where inclusion initiatives for Indigenous students do exist, Métis students may still feel left out (Stonecircle, 2011, pp. 28-29).

Overt racism is a persistent problem in both Canadian and Australian post-secondary environments (Canada Millennium Scholarship Foundation, 2005, p. 3; Farrington et al., 1999, p. 15; Oliver et al., 2013, p. 54; R. A. Malatest & Associates Ltd., 2010, p. 16; Richardson & Blanchet-Cohen, 2000, p. 43; Stonecircle, 2011, p. 24). In one Ontario study, "one-third of stakeholders expressed concern about negative attitudes (both on and off campus) in relation to the need for Aboriginal-specific resources and services" (R. A. Malatest & Associates Ltd., 2010, p. 37).

As an Australian study notes, there is clearly a need for "a culturally appropriate and culturally safe space on campus[es]" (Bandias et al., 2013, p. 31). A study in Atlantic Canada identified Indigenous student lounges as positive innovations that support retention (Timmons et al., 2009, p. 25). Another way to help Indigenous students feel welcome and to offer them culturally appropriate support is to integrate Elders on campus; this practice is fairly widespread on Canadian university campuses (Timmons & Stoicheff, 2015, p. 3). An interesting further extension of having Elders on campus is to include them in curriculum development and to recognize learning from them with formal academic credits (Richardson & Blanchet-Cohen, 2000, p. 51).

Recommendation 10:

Create safe, dedicated spaces for Indigenous students on campus, and incorporate Elders in both curriculum design and student support

Finances

In Canada and internationally, financial problems are a serious barrier to retaining and graduating Indigenous students at post-secondary institutions (Atlantic Evaluation Group, 2010, pp. 37-38; Bandias et al., 2013, p. 29; Canada Millennium Scholarship Foundation, 2005, p. 3; Farrington et al., 1999, p. 15; R. A. Malatest & Associates Ltd., 2004, p. 14; R. A. Malatest & Associates Ltd., 2010, p. 15; Richardson & Blanchet-Cohen, 2000, p. 43; Shah & Widin, 2010, p. 31; Stonecircle, 2011, pp. 24-28; Timmons et al., 2009, p. 25; Wells, 1997, p. 3). A 2004 study at the First Nations University of Canada found that childcare and affordable housing, both of which are financial issues, are consistent needs for a significant number of students (Prokop & MacDonald, 2004, p. 7). Indigenous students in Australia face similar financial challenges (Oliver et al., 2013, p. 57). Furthermore, Canadian Indigenous students who receive band funding may find that it is delayed, uncertain, and sporadic, which creates further financial hardship for them (R. A. Malatest & Associates Ltd., 2004, pp. 21-22). Additionally, student loans are typically insufficient for the kinds of necessary travel and living expenses that Indigenous students accrue (R. A. Malatest & Associates Ltd., 2004, p. 20)—students with families face significant living expenses, and students who are coming from remote areas face significant relocation costs (p. 14).

Recommendation 11:

Prioritize financial counselling and financial assistance for Indigenous students

Childcare

Childcare is a patently financial issue, but the proportion of Indigenous post-secondary students it affects is high enough to treat it as its own category. It has been consistently reported as a serious barrier to post-secondary enrollment and persistence for Indigenous students, in both Canada and Australia (AUCC, 2013, p. 7; Bandias et al., 2013, p. 29; R. A. Malatest & Associates Ltd., 2010, p. 16; Richardson & Blanchet-Cohen, 2000, p. 43). According to a 2010 study in Ontario, "childcare was

consistently cited as the primary reason why students leave [a post-secondary] program" (R. A. Malates & Associates Ltd., 2010, p. 49).

Recommendation 12:

Prioritize providing and/or finding affordable childcare and affordable family-friendly housing for Indigenous students

Family/Community Responsibilities

Responsibilities to children, to extended family, and to the community often interfere with Indigenous students' persistence in post-secondary (Farrington et al., 1999, pp. 14-15; R. A. Malatest & Associates, 2004, p. 14; R. A. Malatest & Associates Ltd., 2010, p. 16; Stonecircle, 2011, p. 24). These responsibilities can be reported by students as "personal reasons" for dropping out of post-secondary, and one institutional stakeholder in a 2004 study claimed that "more students drop out of the programs for 'personal reasons' than all other reasons combined" (R. A. Malatest & Associates, 2004, p. 16). A similar situation obtains in Australia (Oliver et al., 2013, p. 54), where researchers have found that the simple fact of attending higher education can increase the family/community burdens that Indigenous students carry:

> Some Aboriginal students are the first in their family to attend university and this places huge expectations on them. Sometimes they are expected to immediately become spokespersons for their community or a representative for their family and are called upon to write letters to government agencies and the like. Such tasks require a relatively high level of literacy—resulting in additional stress. (p. 54)

In another Australian study, Indigenous students rated very highly the ability to take time off from their studies for "family/community business" (Bandias et al., 2013, p. 29).

Compounding the problem, if yet another Australian study is at all representative, non-Indigenous faculty may seriously underestimate the effects of family and community on Indigenous students. The least-mentioned enabler of Indigenous students' success, according to nursing faculty interviewees in this particular study, was family and community support, attitudes, understanding, etc. (West et al., 2014, p. 11), despite the research showing the significance of these factors.

On the positive side, family and community support for post-secondary enrollment can have an enormously beneficial effect on Indigenous students; one Australia study found that "a strong theme in the [Indigenous students] participants' comments about the factors that affected their decision to study at University was that of encouragement from family" (Farrington et al., 1999, p. 8)

Recommendation 13:

Educate staff and faculty about this issue and about ways to accommodate it for Indigenous students

Academic Weaknesses

As an earlier section outlines, high schools typically do not prepare Indigenous students well for post-secondary studies. Another reason that Indigenous students may experience academic weaknesses is that they are far more likely than their non-Indigenous peers to be mature (Atlantic Evaluation Group, 2010, p. 26; Canada Millennium Scholarship Foundation, 2005, p. 5; R. A. Malatest & Associates Ltd.,

2004, p. 14; Sacher et al., 2014, p. 21; Stonecircle, 2011, p. 25), which can mean that they never completed high school at all or have not been in school for a significant amount of time (R. A. Malatest & Associates Ltd., 2004, pp. 14-15), or that they have no specific career goal in mind (Richardson & Blanchet-Cohen, 2000, p. 43).[2]

This pattern of academic weaknesses is widespread and exists in multiple geographic areas. For example, Indigenous students in the Cadigal Program at the University of Sydney have typically entered with "substantially lower UAI [Universities Admission Index] scores [than their non-Indigenous peers], less previous educational experience in the basic sciences … [and] less experience with the academic skills required to succeed at tertiary study" (Farrington et al., 1999, p. 4). A more recent study found that the majority of Indigenous university students in Australia "gained admission via special entry arrangements" (Bandias et al., 2013, p. 15), and one source identifies this majority as "80-90%" (Nakata et al., 2017, p. 3). American sources also identify academic underpreparedness as a significant challenge at tribal colleges (DeLong et al., 2016, p. 65). A 2013 paper by the Association of Universities and Colleges Canada (AUCC) claims that Indigenous post-secondary students suffer "problems with literacy … and academic preparation" (p. 6), and an early, successful implementation of an Indigenous-focused access program serving the Squamish Nation in B.C. found that "language usage and reading indexes were the most useful" metrics for determining likely future post-secondary success (Wright, 2018, p. 87).

One reason for academic underpreparedness identified in a longitudinal Australian study of Indigenous university students (Boulton-Lewis et al., 2004) is insufficiently advanced study strategies. These inadequate strategies worked against students' appropriately advanced "conceptions of learning": "It was … not the students' conceptions of learning that constrained their studying … but their ways of going about learning" (p. 106). Students relied on rote memorization well into the later years of their degrees: "All of the students reported the use of the 'over and over' strategy during the first year … almost half of the students reported the use of this strategy even during the third year" (p. 106). Many students, however, succeeded despite this disparity, possibly because they "were frequently oriented towards making sense of the phenomena dealt with in their studies and towards determining the reality of these phenomena … such an orientation is a defining feature of what has been called the *deep approach* to studying" (p. 107). Boulton-Lewis et al. (2004) conclude that the reason Indigenous students were unnecessarily hampered by their study strategies is simply that they entered post-secondary "lack[ing] … prerequisites for university study, such as necessary skills to learn" (p. 107).

A recent Australian study investigated whether post-secondary Indigenous students' implicit beliefs about the nature of intelligence affect their academic performance (Tarbetsky et al, 2016). The study examines incremental beliefs, which are based on the assumption that intelligence is malleable and trainable, and entity beliefs, which "view intelligence and ability as attributes that cannot be changed" (p. 62). Previous research has found that students "who face stereotypes that they are inferior to others because of their ethnicity, gender or other personal characteristics" are more likely to hold ability beliefs (p. 63). The study results found that "Indigenous status predicted lower achievement via less

[2] Interestingly, despite the significance of academic weaknesses, a few studies have found that Indigenous students who drop out are least likely to cite academic problems as a reason, as opposed to personal issues, family problems, finances, etc. (R. A. Malatest & Associates Ltd., 2010, p. 49; Oliver et al., 2013, p. 60).

incremental beliefs, suggesting that they do play a significant role in Indigenous students' achievement" (p. 67); this finding is particularly true for mature Indigenous students (p. 69). The researchers therefore recommend incorporating setting goals and personal best goals in the curriculum for Indigenous students, since this intervention has been successful with other ability-oriented groups (p. 69).

Recommendation 14:

Collect quantitative evidence about incoming Indigenous students' academic strengths, weaknesses, and implicit beliefs about intelligence. Collect evidence about the proportion of incoming Indigenous students who are mature students. Design evidence-based upgrading/access programs and academic support for identified needs, incorporate material on advanced study skills, goal setting and personal best goals, and tailor these supports to specific populations (e.g. Indigenous mature students as opposed to Indigenous direct entrants)

Personal Factors

Lack of self-esteem and of motivation are consistently cited in the literature as barriers to Indigenous post-secondary students' success, along with stress, shame, and other personal characteristics (Canada Millennium Scholarship Foundation, 2005, p. 3; Oliver et al., 2013, pp. 54-59; R. A. Malatest & Associates Ltd., 2004, pp. 16-17; Stonecircle, 2011, p. 24). However, researchers, along with post-secondary faculty and staff, need to watch that they don't blame the individual Indigenous student for larger systemic problems and thereby avoid having to face these problems. There is definitely a tendency for institutions to blame individual student characteristics for failures to progress/graduate (R. A. Malatest & Associates Ltd., 2004, p. 23), and faculty in one study primarily attributed the success/failure of Indigenous students to personal characteristics, beyond all other factors (West et al., 2014, p. 7). Parent (2017) does an excellent job of illustrating why the transition into post-secondary can be rocky for Indigenous students, and why institutions should not be quick to place the blame on individuals' characteristics:

> [Existing studies tend to] focus negatively on the deficits of individual learners as the primary reason for their failure to transition and do not acknowledge the many institutional barriers that create these difficulties … Most institutional definitions of transition are regarded as positive because they are thought to establish continuity and familiarity during the high school to university transition and to build supportive connections between students and educators. Such definitions are problematic because most high schools are unfamiliar environments for Aboriginal youth in that curriculums, pedagogies and institutional designs rarely take their needs … into account … Having to transition from one unfamiliar environment to another often causes negative experiences and responses. If a student fails to "successfully" transition the way a "traditional student" is expected to, they become part of an institution's attrition rate and are labelled as having a deficit such as improper "academic preparation," "personal problems," "time management issues," "poor motivation," or "low achievement." (p. 155)

Certainly, institutions should help Indigenous students overcome personal problems, such as poor time management or low motivation, but they should not focus myopically on *only* these problems.

Recommendation 15:

Take an inventory of support services for Indigenous students at a post-secondary institution, and ensure that supports based on improving individual students' characteristics are properly balanced with supports based on overcoming systemic barriers. Additionally, educate faculty, staff and administrators about the risks of focusing only on individuals' characteristics

4. Access Programs

Access and/or upgrading programs are commonly used to help Indigenous students successfully transition into and remain enrolled in post-secondary studies. Usual components in Ontario programs include "courses in English, mathematics and science; tutoring; academic counselling; training workshops, and; an Aboriginal support network" (R. A. Malatest & Associates Ltd., 2010, p. 40). Many also consist of basic education for adults and upgrading programs (p. 40). Additionally, "the more progressive and better-funded access programs offer additional student supports such as those for housing, childcare and career counselling" (p. 12). In the case of one institution, an Indigenous pre-medical access program seemed to successfully reduce student anxiety in medical school (R. A. Malatest & Associates, 2004, p. 25), and access programs offered through Ontario institutions tend to address the individual's strengths and weaknesses along with providing academic support. A typical example is at Carleton University, where the access program "is designed to help students reassess their goals, to help them learn whether a degree program is right for them" (R. A. Malatest & Associates Ltd., 2010, p. 47).

Another example of a successful access program is the Cadigal Program at the University of Sydney, which has productively incorporated reduced course loads (Farrington et al., 1999, p. 4; R. A. Malatest & Associates Ltd., 2004, p. 26) and extensive academic support in order to "ensure that Indigenous students can achieve the same outcomes as non-Indigenous students" (Farrington et al., 1999, p. 4). Students have reported that the reduced course load was crucial for helping them complete their first year and transition into their second, since they were less overwhelmed and had time to devote to necessary academic support for subjects they were weak in (p. 11). An additional example is Camosun College in B.C., whose "step" access program "is individualized and molded to provide the skills and pre-requisites needed for a specific career choice … [and] allows students to move rapidly at their own pace" (Richardson & Blanchet-Cohen, 2000, p. 42). Historically, the entry step level "is equivalent to grades 8, 9 and 10," and "steps 3 and 4 to grades 9-10-11" (p. 42). 60% of incoming students at the time of the report registered "at the step 1 level" (p. 42).

According to current AUCC information, there are "45 … Aboriginal transition programs at 29 of the 54 AUCC member universities in Canada," with most programs aimed at "two student populations: (a) mature students who have been out of school for a long time and may not have a high school diploma, and (b) recent high school graduates who may not have the academic prerequisites for university entrance" (Parent, 2017, p. 156). It is important, however, to note that "access and other bridging programs face funding challenges across the country, even when they are seen as successful in meeting their mandates" (Atlantic Evaluation Group, 2010, p. 50). Additionally, trying for a more holistic approach in Canadian access programs has been identified as an important goal as far back as the 1996 Royal Commission on Aboriginal People, which characterizes the "arbitrary separation of literacy, adult basic education, and academic upgrading from job training services" as a problem for mature Indigenous students in particular (Richardson & Blanchet-Cohen, 2000, p. 49).

While access programs are common and seemingly productive strategies for including Indigenous students in post-secondary education, it should be remembered that, as with other topics related to Indigenous higher education, there is not much hard data beyond the anecdotal (Atlantic Evaluation Group, 2010, p. 42; Deer et al., 2015, p. 9). In particular, "there is little to no comprehensive literature available that views Aboriginal high school to university transitions from Indigenous theoretical perspectives" (Parent, 2017, p. 154). Furthermore, a 2010 study of Ontario institutions found that "five of the eight PSE institutions [in the study] offering Aboriginal access programs felt that their programs were qualified successes" (R. A. Malatest & Associates Ltd., 2010, p. 48), which indicates that there is room for further improvement (it should also be remembered that stakeholders in the existing qualitative studies of these kinds of programs do not offer wholly negative assessments of any programs/initiatives—see R. A. Malatest & Associates Ltd., 2004, p. 10).

It is important for access programs to set students up for success in their first year of regular studies; one Australian study found that most Indigenous undergraduate student withdrawals happen in their first year (Bandias et al., 2013, p. 26). An older American study had the same findings (Wells, 1997, p. 2).

Recommendation 16:

Advocate for greater funding for access/bridging programs

Recommendation 17:

Establish a systematic methodology for evaluating access programs' outcomes, and track these outcomes so that longitudinal data can be compiled and analyzed

5. In-Community Delivery

The literature strongly advocates for post-secondary delivery within Indigenous communities (R. A. Malatest & Associates Ltd., 2004, pp. 26-28; Richardson & Blanchet-Cohen, 2000, p. 17; Stonecircle, 2011, p. 31). In-community delivery can significantly mitigate "financial risks … culture shock and isolation … family responsibilities and childcare issues …" (R. A. Malatest & Associates Ltd., 2010, p. 66). Additionally, in-community delivery is well-positioned to fulfill the model that a study of female students in northern Manitoba developed: "It is … important that a holistic model be flexible to the location, both geographical and cultural, and to the particular needs of the student population" (Simpkins & Bonnycastle, 2015, p. 16). Early successes in Indigenous education in B.C. are attributed to a meaningful collaboration between the Squamish Nation and Capilano College in delivering Indigenous programming within the community:

> The college accepted principles of self-determination as defined by the Squamish Nation and understood that any successful effort must be community-based and locally controlled … Educational facilities located on reserve land as well as at the college campus served as centers of instruction. Squamish leaders monitored instruction and provided suggestions for improvement as the community became more actively involved in the educational experience of its students. This resulted in a more "user friendly" college, able to foster success among First Nations students. (Wright, 1998, pp. 86-87)

This programming included a strong focus on supporting the transition to post-secondary (p. 87).

One interesting suggestion for in-community delivery from Indigenous students in an Australian study was to create "a designated place in their community to study" (Bandias et al., 2013, p. 32).

Recommendation 18:

Develop in-community program delivery that is responsive to community needs and priorities

6. Appropriate, Visible Indigenous Staffing

As Timmons & Stoicheff (2016) note, "Aboriginal faculty and staff need to be visible and actively involved in the life of the institution" (p. 3). Indigenous faculty and staff "are underrepresented in our [Canadian] post-secondary workforce" (p. 3), a problem that is emphasized as far back as a 2004 report by R. A. Malatest & Associates (p. 15). The Association of Universities and Colleges Canada (AUCC) similarly notes that "research has … pointed to a lack of Aboriginal faculty and staff at universities, as well as resistance to change within institutions themselves" (AUCC, 2013, p. 6). Australia also experiences this problem (Oliver et al., 2013, p. 61). The visibility of Indigenous faculty and staff is crucial because it sends the message that their knowledge is "recogniz[ed] and value[d]" (p. 61) by the institution, which in turn can help with the transition process for Indigenous students to post-secondary education.

Finally, Stonechild (2006) makes the convincing argument that "the extent to which Indigenization of large mainstream universities is possible depends on whether Aboriginal people are granted a significant presence in the institution's governance system" (Chapter 3: Increasing First Nations Participation in Higher Educaiton).

Recommendation 19:

Research best practices for recruiting Indigenous faculty and staff to the institution and to governance positions within it; set measurable recruitment goals and timelines, and work to meet them

7. Wellness

Given the challenges and stresses that Indigenous students face, it is not surprising that studies have identified wellness (physical, psychological and spiritual) as a problem for this group (Auger et al., 2016; Guttmannova et al., 2017; Nelson & Wilson, 2017; Patterson-Silver Wolf et al., 2013; Yi et al., 2015). In order to support Indigenous student wellness, it is first necessary to define the concept in culturally-appropriate terms. A study of the Yup'ik in Alaska emphasizes "that the optimal experience of personhood is inextricably linked with one's place in space, with one's social and natural context, and the sense that walking the path of wellness is a matter of maintaining the proper harmony in relationships" (Wolsko et al., 2006, p. 346). This particular study was inductive in nature and shaped by Indigenous community members: "we have approached the issue by first listening to Yup'ik voices about what it means to be well, and then allowing these voices to guide the research process" (p. 347). Furthermore, the authors note that, while at the time of publication (2006) this area of inquiry did not have enough research, what does exist points towards the importance of culture in promoting wellness and resilience (p. 348).

Multiple studies emphasize the significance of social interconnectedness and strong cultural ties in an Indigenous conception of wellness (Auger et al., 2016; Nelson & Wilson, 2017; Snowshoe et al., 2017;

Viscogliosi et al., 2017; Wolsko et al., 2006; Wood et al., 2018; Yi et al., 2015). Indigenous participants in one Canadian study particularly emphasized the "genuine connections between healers and community members" in traditional healing (Auger et al., 2016, p. 395). Connections to the land and to traditional foods have also been identified by Indigenous research participants as important additional factors in wellness (Schultz et al., 2016; Wolsko et al., 2006, p. 353). Finally, Viscogliosi et al. (2017) note that "the social participation of elders" and "intergenerational dynamics must be considered in a holistic approach to wellness" (p. 2), although researchers and program designers should remember that "elder" does not connote any particular age (p. 2). Similarly, an innovative program in Vancouver that demonstrated positive health and wellness effects consisted of "health circles facilitated by Elder and traditional knowledge keepers," with a focus on "learning about traditional health care" (Auger et al., 2016, p. 397).

Recommendation 20:

Inductively define wellness for the Indigenous students at a post-secondary institution, and take into account concepts of wellness from relevant Indigenous communities. Involve Indigenous voices throughout the process of definition and of designing programming to support that definition

An American study by Wood et al. (2018) investigates Indigenous youth attitudes towards and beliefs about wellness. One participant "emphasized the hopelessness she sees plaguing Native youth today," which she in part attributes to "the circulation of narratives perpetuated by health statistics, which frame Indigenous communities as risky, dangerous, and unhealthy places of poverty, isolation, and addiction" (p. 137). As the researchers note, "many scholars are increasingly criticizing health literature for its simplistic portrait of Indigenous communities" (p. 138), and the research team's previous work has shown "how deficit narratives can fuel trauma" (p. 138). This particular study found that the dominant health narratives do not match youth's experiences of Indigenous reserve communities:

> Youth currently living on reservations identified them as places where they could be themselves, and commonly used descriptors such as, "comfy," "safe," "homelike," and "familiar." Likewise, off-reservation and urban youth overwhelmingly categorized reservations as comfortable spaces where they could relax, have fun with relatives, and let go of their day-to-day stresses. (p. 141)

Youth also emphasized the value of intergenerational relationships (p. 141). Importantly, other research has found "that social support, culture, and belonging are all health-promoting factors that strongly correlate with resilience and good health" (p. 142). Youth were not blind to the problems in these communities (p. 143), but their perspective on the worth of the communities is at odds with the dominant narratives about them.

Recommendation 21:

Do not focus wellness programming simply on deficit narratives

A critical review article by Nelson & Wilson (2017) provides a current overview of the available medical literature relating to Indigenous mental health in Canada. This article provides the following crucial information on research into Indigenous wellness:

- Indigenous peoples the world over "suffer a disproportionate burden of mental and physical illness" (p. 93)

- Most scholars and researchers use exclusively Western concepts of mental health: "Much scholarship indicates that a disregard for Indigenous perspectives persists in contemporary mental health research in Canada" (p. 94)
- Rates of mental illness in Indigenous communities in Canada "vary dramatically from community to community" (p. 94)
    - Compounding this problem is the fact that existing research does not adequately differentiate between various Indigenous communities and regions (p. 98)
    - Too much research is focused on stereotypical problems (substance abuse and suicidality, for example), even though many communities do not suffer higher rates of these problems than the Canadian population generally, and some communities in fact have lower rates than the national average (p. 101). Other kinds of mental illnesses and challenges in Indigenous people have been insufficiently researched (p. 101)
- Mental health support programs need to be culturally-informed and culturally sensitive in both their design and delivery in order to be effective (p. 97)
- Métis are significantly underrepresented in the research, despite "mak[ing] up 32% of the Indigenous population in Canada" (p. 99)
- Urban and off-reserve Indigenous people are also significantly underrepresented in Canadian research, with only 15 percent of the 200+ articles in the review focusing on this group, even though they comprise 56 percent of the Indigenous population in Canada (p. 100)
- Most Canadian research focuses on Ontario and British Columbia (p. 99)
- Intergenerational trauma has been extensively emphasized in the literature (p. 100)

As is the case with lack of data for other sections of this report, Nelson & Wilson (2017) emphasize that a significant problem for providing mental health support programs is "that there is only a small, methodologically weak evidence base for culturally adapted, integrated, or otherwise community-based interventions" (p. 100). The importance of this kind of cultural approach is emphasized again and again in the literature, but research that could inform designing and delivering effective programming is sorely lacking. Similarly, the very concept of culture is "often left undefined even in studies which purport to measure its impact" (p. 101), and "the cultural mechanisms at work that not only contribute to, but *enhance*, FN mental health and resilience are still largely unknown" (Snowshoe et al., 2017, original emphasis), which Yi et al. (2015) also observe: "little is known about … the mechanisms for well-being among this population" (p. 881). Furthermore, Nelson & Wilson caution against constructing a false binary "between Indigenous ways of knowing (and by extension, Indigenous methods of healing) and Western ways of knowing (and by extension, biomedical mental health services)" (p. 100). This false binary can sometimes result in reducing the two approaches to "merely" cultural issues, which ignores the "remarkably diverse perspectives" in these kinds of approaches and in the practitioners and clients who make use of them (p. 100).

Recommendation 22:

Gather quantitative data about mental illness incidence rates among Indigenous students at a particular institution, and tailor wellness initiatives to that data. Do not assume that the data will reflect stereotypical problems, that it will best be addressed by a predominantly Indigenous or Western approach, or that it will be representative of other regions in the country. Track data for Indigenous students with attention to groups that are underrepresented in the literature (e.g. urban youth)

The concept of cultural safety is emphasized in the literature on providing mental health support services to Indigenous clients (Nelson 7 Wilson, 2017, p. 101) and has been identified as the key component of an arts program for urban Indigenous youth that successfully improved their wellbeing (Robbins et al., 2017, p. 166). Nelson & Wilson (2017) point out that who decides what constitutes cultural safety is an issue; it should not be "the providers of … services" but rather the clients themselves (p. 101). Ideally, Indigenous community members should be involved in designing all such programs in the first place, since the existing Canadian literature suggests that "community control of mental health services, from their inception, seems to be the best predictor of their success" (p. 101). Yi et al. (2015) similarly recommend involving urban Indigenous youth in the design of wellness programs aimed at this population (p. 886), and also note the importance of "self-determination and autonomy … [as] keys to the success of health promotion programs" (p. 887); Auger et al., (2016) also note the importance of self-determination for urban Indigenous people generally as "a key determinant of health" (p. 396). Participants in Yi et al.'s (2015) study note that a crucial factor in developing this self-determination and autonomy is "educating urban Aboriginal youths to be resourceful and self-supportive," especially through "providing experiential and practical learning experiences … [that incorporate] real-world situations" (p. 888).

Cultural safety may in part explain the phenomenon noted in an American study by Hodge et al. (2009): that, contrary to the perception that Indigenous people do not have sufficient mental health support services available to them, this group in fact uses mental health services at the same rate as white Americans (p. 211). The real problem is, instead, "the [nature of the] services themselves" (p. 211): "The array of [treatment and support] options presented to Native clients fails to resonate with them because such options tend to fall outside the parameters of Native worldviews" (p. 213). The authors recommend constructing service programs based on a "relationally based perspective … [involving] the interrelated concepts of spirit, body, mind, and context" (p. 213). Spirituality in particular tends to be sidelined in mainstream programs, but not in many Indigenous conceptions of wellness (p. 217).

Interestingly, an Australian study (Toombs & Gorman, 2011) found that Indigenous university students tend to view university as a positive force for dealing with their mental health struggles, since it provides motivation and productive distraction: "participants noted that university gave them something to look forward to and a diversion from the daily struggles of their illness … university for these students meant getting out of the house and busying their minds" (p. 22).

Finally, an American study of Indigenous prevention programs using the Communities That Care model (which measures risk in a community and matches it to proven interventions) (Guttmannova et al., 2017, p. 347) emphasizes the importance of first determining the unique needs of the community in which an intervention will be delivered (p. 347). It is on this initial measuring that any future success lies.

Recommendation 23:

Ensure cultural safety in wellness programming by involving Indigenous stakeholders at every step of the design and delivery process; measure the success and cultural safety of the programming through gathering data from Indigenous students who make use of the services

Successful Wellness Programming Initiatives

The Healthy Native Community Fellowship (HNCF) program began in Alaska in 2003 and expanded in 2007 throughout Indigenous communities generally in the United States (Rae et al., 2016, p. 1). The

program is “an evidence-based mentorship and leadership program, that starts from an Indigenous strengths focused core to enhance skills and community-building capacities of leaders, community teams, and co-mentored teams in order to improve health status” (p. 1). While this program is obviously not offered through postsecondary institutions, its reasonably lengthy history and supporting evidence base make it an attractive model to adapt in a postsecondary context; it has been rigorously analyzed and boasts impressive success rates in terms of its empowerment of its fellows and team members (p. 14). HNCF’s goals include the following:

1. Increasing social participation (also known as social capital or cohesion);
2. Strengthening cultural connectedness and revitalization of cultural identity; and
3. Advocating for health-enhancing policies, practices, and programs that strengthen systems of prevention and care, as well as address the structural social determinants of health. (p. 1)

The program has the following “five core principles”:

1. To build community connectedness and care for each other in strong and healthy relationships,
2. To regenerate and heal the community by cultivating cultural and spiritual resources,
3. To nurture talents and leadership that enhance the quality of community life,
4. To develop effective strategies to tackle problems that threaten the community, and
5. To cultivate and create opportunities to heal negative family and community conditions. (pp. 1-2)

HNCF is a one-year fellowship program that works in the following ways:

> Each year, HNCF brings together 10 to 15 teams of two or three individuals from across Indian country for a co-learning fellowship experience … Fellow teams participate in three weeklong retreats …, with a focus on self- and team-transformations to become effective community change agents, interspersed with learning activities and coaching taking place in the Action Learning Space, the time teams work together in-between retreats. During the year fellows learn to assess community needs using participatory listening methods, learn how to engage community members to develop a community wellness action plan that includes analysis of community health issues, change strategies, action planning and policy development. (p. 7)

The article provides specific examples of curriculum components and learning tools.

Finally, the article offers the following lessons that similar programs should consider:

- Use participatory evaluation as iterative co-learning [involve program participants in evaluating and revising the program for its next offering]
- Be sensitive to the reality of community challenges [positive change may take longer than participants anticipate]
- Importance of an Indigenous cultural-centered and connected model (pp. 20-21)

Recommendation 24

Adapt the proven HNCF model to a post-secondary environment, with the goal of fostering both Indigenous student wellness leaders/wellness champions and Indigenous student team-based programming that supports other students

Two other wellness programming initiatives that are documented in the literature and that were delivered in an educational context (using post-secondary and/or high school participants) empowered students to create videos or photobooks on wellness. Both seemed to be successful in developing the students' own leadership skills and promoting larger community wellness (Genuis et al., 2015; Riecken et al., 2006; Stewart et al., 2008). Success in both cases seems to rest on the fact that students led and shaped the nature of the wellness-related videos/photobooks; as Genuis et al. (2015) note, "Scholars assert that higher levels of participation in decision-making will increase youth self-esteem, empathy and responsibility, as well as improve community participation and the quality of response to the issue at hand" (p. 2). Additionally, Genuis et al. (2015) report that "the deliberate time and space set aside for debriefing sessions was an important feature for fostering partnership with [student] co-researchers and facilitating knowledge co-generation" (p. 6).

Recommendation 25

Empower Indigenous students to create wellness-supporting materials that will be useful to other Indigenous students and to their larger communities

Finally, although designed for any Indigenous adult who needed better heart health and not specifically students, an Australian health promotion program also succeeded due to ensuring that all coordinators and guest speakers were first taught "culturally appropriate communication styles" (Vallesi et al., 2018, p. 6), that all programming was extremely flexible, "not in a strict 'you must attend this six-week course' style" (p. 7), and that intergenerational ties were nurtured (p. 10). This programming also emphasized the importance of including Indigenous communities in design and delivery (p. 11).

Recommendation 26

Brief all involved outsiders (guest speakers, external partners, etc.) on culturally-appropriate methods for delivering wellness programming for Indigenous students

8. Additional Supports and Innovative Practices

Attracting and Retaining Male Indigenous Students

Generally speaking, female Indigenous students in Canada fare better in post-secondary than their male counterparts (Atlantic Evaluation Group, 2010, p. 19; Mendelson, 2006, p. 13; Richardson & Blanchet-Cohen, 2000, p. 16); there is a similar problem in the United States (Stuart, 2012). Stuart (2012) argues that male Indigenous students are particularly at risk because they face "an abundance of hurdles, including lack of money to pay for college, few peer and mentor incentives and important family obligations that don't leave much time for pursuits like college"; these students can also feel lost because their traditional roles "as 'provider, gatekeeper, hunter' [have] gone by the wayside as the world around Native men on the reservation has evolved" (p. 14).

American tribal colleges have addressed the extra challenges faced by male students by developing programming aimed specifically at them: tribal colleges have worked on ""expanding their offerings beyond degree programs as they seek to address the needs of men in tribal college communities to redefine their roles in modern tribal societies"; they also "address community needs … even if [these needs] don't mesh with some national goals of graduating more students from college and having more earn advanced degrees in science, technology, engineering and math" (p. 14).

Little Big Horn College in Michigan has had success in offering "half a dozen short-term … programs aimed at males. The six-week introductory courses give students training in fields that can lead to work quickly—carpentry, welding, electrical work and operating heavy equipment … At the end of their classes, they are ready for apprenticeships" (p. 15). This programming is specifically aimed at males who do not intend to pursue a college program, in the "hopes [that] the short-term exposure to college work will entice those who try it to come back and pursue their associate or bachelor's degree in some area, based on a successful experience with a short course" (p. 15).

Recommendation 27

Design short-term programming that will be both useful and appealing to Indigenous male students; ensure this programming sets them up for success regardless of whether they continue on to further post-secondary studies (i.e. short-term programming should both improve employability and increase the attractiveness of longer post-secondary studies)

Math Upgrading

In response to research showing that "developmental math" courses (essentially pre-college upgrading courses) rarely set students up to succeed in their future studies (Goldstein et al., 2011, p. 26), an American college created a "problem-based collaborative learning intervention in Intermediate Algebra" (p. 26). Importantly, this college has significant Native American student enrollment and tracked this group as part of their pilot study of the new curriculum (pp. 26-27). The researchers were particularly interested in increasing these students' "self-efficacy in learning mathematics" (p. 27), which had previously been identified as a problem. The new curriculum incorporated math software in the classroom that allowed students to "receive individualized instruction … as needed while working at their own pace" (p. 28). Students built up to a capstone problem, which was designed to motivate their learning from the beginning of the course (p. 28) and to foster critical thinking: "the type of [capstone] problems selected required students to discern what information was important and then choose a method to solve the problem, which could vary from student to student" (p. 28). Students also had to learn to write up their work (p. 28).

The students who completed the pilot upgrading course fared better in college-level math than did their peers who completed the non-pilot version (p. 30). Native American students fared particularly well:

> This difference was especially pronounced for Native American students, who earned more than two letter grades higher on average [in college math] if they had taken the pilot section of Intermediate Algebra instead of the original section as a prerequisite to College Algebra the previous semester (GPA of 3.60 vs. 1.33, $t(6) = 3.87$). (p. 30)

The researchers attribute this significant improvement to the pilot course's "individualized learning …, group work, and more integrated content, with a capstone problem and optimally-ordered topics," since these components promote self-efficacy in learning math (p. 33).

Recommendation 28

Investigate methods of increasing students' confidence and self-efficacy in foundational upgrading courses, and investigate methods of tailoring the delivery of these courses to individuals' needs and abilities

Creative Scheduling

An unnamed Indigenous Institute of Higher Learning in Canada has experimented with creating "'adult-friendly'" scheduling (Atlantic Evaluation Group, 2010, p. 43):

> One key informant described the "intensive mode style" of programming that they used. In this style of teaching, classroom time was concentrated between 9 a.m. and 5 p.m. in a one-week block, after which students were expected to remain out of the classroom, completing reading assignments, work placements, and papers over a four- to five-week period. During this out-of-classroom time, students required academic and social support. This instruction style … allows students the opportunity to remain in their home communities while attending PSE. (p. 43)

The source does not explicitly comment on the success of this venture, but it does note that the unique delivery style "allowed the institute to delivery programs across the province as well as internationally" (p. 43), which suggests that there was Indigenous student interest in this model.

Recommendation 29

Investigate creative scheduling arrangements that might better respond to Indigenous students' needs than conventional scheduling

Peer Mentoring

Research has found that "school (i.e. elementary and high school) and community-based mentorship programs are beneficial for Aboriginal youth" (Rawana et al., 2015, p. 4). Among other benefits that may obtain at the post-secondary level, mentoring ("peer-to-peer and intergenerational") helps students preserve their culture and engage with the institution (p. 5). While there is not much research on specifically Indigenous mentoring programs at post-secondary institutions, there is a great deal of research that proves the efficacy of these programs in general at the post-secondary level (p. 5).

Rawana et al. (2015) describe the development and implementation of a peer mentorship program for Indigenous students at an urban Canadian university. The researchers used "a participatory action research framework" for the project, which allows Indigenous students and other stakeholders to participate in shaping and directing the project (p. 6). The final program was therefore the result of significant collaboration. The project's goal was to promote resilience in Indigenous students, which is strongly linked to "social support from friends" for this group (p. 7).

The project's collaborative process created the following goals for the program, "in decreasing order of preference:"

> academic support, social activities with non-Aboriginal students, orientation to the university for students who may be coming from far away, academic and professional workshops, and Aboriginal-focused cultural activities or goals. Suggested important program components were prioritized as individual mentoring, workshops on university procedures that are specific to Aboriginal students, information on non-university resources, tutors for academic support, and an overview of campus resources. (p. 18)

The majority of collaborators stated that the program should be "more than one academic year" (p. 20) and should involve "one-on-one sessions … once a week," with group mentoring "once a month" (p. 20).

Program participants, both mentors and mentees, who were interviewed about their experiences saw positive "emotional and psychological effects" (p. 22). Areas identified for improvement include the following:

> broadening recruitment strategies; having a longer program duration; having more program structure; and offering workshops on health and mental health issues, time and stress management, crisis prevention and intervention, and how to establish boundaries in the mentoring relationship. (p. 23)

Future iterations of this program can address these issues. Participants also ended up valuing the social components of the program even more highly than they had before they went through it; similarly, they ended up ranking "group mentoring over individual mentoring as an important program component after the program ended because the group activities allowed them to socialize and network with more students like themselves" (p. 23). Participants also increased their ranking of tutoring (p. 23).

Peer mentorship programs are more common in Canadian universities than colleges: "Of the 131 English-speaking Canadian colleges, only three (2%) have an Aboriginal peer mentorship program, while 21 of the 73 English-speaking Canadian universities do" (p. 17). As is the case with many of these kinds of initiatives, "most of these programs did not have an evaluation component" (p. 18).

Recommendation 30:

Perform a needs assessment to determine the parameters for a post-secondary institution's development and implementation of a peer mentoring program for Indigenous students; plan robust evaluation of the program and longitudinal data tracking. Employ a participatory action research approach

Individualized, Holistic Support

Nakata et al. (2017) explain an innovative, holistic system of individualized support that has been implemented in Nura Gili at the University of New South Wales in Australia. These academic and personal support services are designed to continue support beyond the entry/transition period (p. 2). Nura Gili's support services emphasize treating each student as an individual, rather than merely as a representative of an aggregated group:

> … Learning support practices have to be developed so that *each* student has the optimal support conditions to stay in study and academically progress towards completion over the course of a degree … We stress that it is extremely important that the focus on the educational meaning of "the gap" between Indigenous and other domestic students is directed towards the student support effort and not directed towards the characterisation or typification of Indigenous students. (p. 4, original emphasis)

Support staff are required to stay up-to-date on a "student's study conditions (finance, accommodation, health and family issues, work, and/or career obligations) … what their study load is, and how they are managing in each subject" (p. 4). Staff use admissions data to gather information, and also contact each new student to ask them "four simple questions related to: how they are travelling …; how they are finding their courses …; how they are settling in to uni …; and is there anything staff could help them with" (p. 5). Staff also administer diagnostics to understand each student's unique academic strengths and weaknesses (p. 6). The ongoing, individualized, personal support at Nura Gili has led to extremely

unusual results: “In the first year this strategy was trialled, attrition among commencing students reduced to zero in this period and in the years since, the numbers have remained extremely low” (p. 5).

Another important aspect of Nura Gili’s program is that there is no assumption that only a particular subset of students (e.g. ones with low admissions averages) are in need of support; instead, staff try to establish “an ethics of care and the normalizing of support assistance” (p. 8).

Recommendation 31:

Implement Nura Gili’s approach to student support, including individualized, detailed data collection and ongoing contact with students, and track the results

9. Additional Issues and Unknowns

Type and Level of Post-Secondary Programming

As a Canadian report notes, “There is very little literature evaluating whether program level and field of study may have an influence on Aboriginal students’ postsecondary completion rates” (Bruce & Marlin, 2012, p. 2). A similar problem obtains in the United States (Stuart, 2012, p. 14).

One other issue for which we do not currently have good data is “the relationship between the high rates of disability in the Aboriginal population and access to [postsecondary]” (Atlantic Evaluation Group, 2010, p. 40).

Recommendation 32:

Track Indigenous student success in particular programs, with the goal of longitudinal analysis and generalizability to other Canadian post-secondary institutions. Similarly, track the outcomes of Indigenous students with disclosed disabilities

10. Best Known Practice: Indigenous Control of Indigenous Higher Education

The entirety of Blair Stonechild’s (2006) highly-regarded Canadian monograph on Indigenous higher education is a forceful and persuasive argument for the superiority of Indigenous-controlled higher education over any other option. Similarly, in the United States, Indigenous post-secondary students fare significantly better at tribal colleges than they do at mainstream institutions (DeLong et al., 2016, p. 68). Additionally, a study of Indigenous education in Atlantic Canada in 1996-2011 found that there is significantly greater Indigenous high school success in Nova Scotia, where there are “self-governing educational authorities of Mi’kmaw communities” that oversee high schools with a completion rate of 88% (Gordon & White, 2014)—and high school in other parts of the country is a significant barrier to post-secondary success.

Tribal colleges in the United States provide one example of what Indigenous-designed and -controlled higher education could look like. These colleges meaningfully integrate Indigenous perspectives and culture into all aspects of the institutions and their programming; the colleges achieve these outcomes by doing the following:

- Working with elders on new initiatives

- Developing new relationships between [Indigenous people] and [non-Indigenous people]
- Expanding strategic partnerships between [Indigenous] and [non-Indigenous] organizations
- Creating curriculum that meets academic standards and includes rich Indigenous content that reflects curricular content and approaches to learning, and student support considered essential to sustaining a successful learning environment for Native American students (DeLong et al., 2016, p. 66)

As DeLong et al. (2016) note, "person-environment congruence is a goal for students at tribal colleges" (p. 66).

Tribal colleges also incorporate Indigenous culture in their architecture and physical environment:

> Regardless of how modest, in the facilities and campus spaces, students see architecture and design that reflects their tribal identity. They see signage written in their Indigenous language alongside the English translation. They may see structures depicting totems, tribal traditional homes, ceremonial replications, on-campus pow-wow grounds, clan representations, and numerous other symbols reminding them of their rich cultural heritage. Upon entering a tribal college building, students will often see posters and paintings that reflect the history of their tribal leadership, chiefs, journeys, and in many cases their own family. In addition, they will see tribal teachings in print with explanations. They can go to the bookstore where, in addition to textbooks and college paraphernalia, there is information about their own tribe. (DeLong et al., 2016, p. 67)

As Stonechild (2006) observes, tribal colleges significantly outperform mainstream institutions: "American Indian students who attend a tribal college before transferring to a four-year institution were four times as likely to complete their degrees as those who entered as first-year students at mainstream universities" (Chapter 6: A New Deal).

The Chiefs of Ontario (2012) argue that Canadian primary and secondary schools also suffer when there is a lack of Indigenous control:

> There are three basic models of First Nation education currently in Canada. There are federal schools operated by Indian Affairs; provincial and territorial public schools; and local schools operated by First Nations, with the latter often being under the administration of a local school board or education authority. None of the current arrangements are satisfactory from a legal, social or cultural perspective as they do not address the fundamental issue of jurisdiction. In other words, there is no protection, recognition or implementation of First Nation authority in education. (p. 2)

As the Chiefs of Ontario (2012) also—with frustration—note, the problem at this point is action, not merely diagnosing issues: "We have had so many reports, studies and research done on the issue of First Nation education, that it has become nearly impossible to write a new report without sounding identical to all those before it" (p. 15). The solutions in the literature are always "the same: First Nation jurisdiction, adequate funding and the inclusion of culture and language" (p. 23).

Recommendation 33:

Strongly advocate for increased Indigenous control of Indigenous education within existing mainstream institutions at all educational levels (primary, secondary and post-secondary); strongly advocate for and support Indigenous higher education institutions that enjoy full Indigenous control

11. Conclusion

Because of the weaknesses in the current knowledge and data, all new programming and supports aimed at Indigenous post-secondary students "should be tied to research and evaluation strategies that incorporate Aboriginal and mainstream definitions of success" (Atlantic Evaluation Group, 2010, p. 51). The field as a whole is sorely in need of data, and promising practices need to be rigorously evaluated so that they can be reliably recommended and adopted in multiple regions and institutions. The Atlantic Evaluation Group's emphasis on both Indigenous and mainstream metrics of evaluation is important to bear in mind; while the evaluation process needs to be robust, it should be tailored to the characteristics of particular groups of Indigenous students and should grow organically out of culturally-appropriate concepts and goals.

12. References

Atlantic Evaluation Group. (2010). A literature review of factors that support successful transitions by Aboriginal people from K-12 to postsecondary education. Retrieved from https://cmec.ca/Publications/Lists/Publications/Attachments/255/transitions-aboriginal-2010.pdf

Auger, M., Howell, T., & Gomes, T. (2016). Moving toward holistic wellness, empowerment and self-determination for Indigenous peoples in Canada: Can traditional Indigenous health care practices increase ownership over health and health care decisions? *Canadian Journal of Public Health, 107*(4-5), 393-398.

AUCC. (2013). Creating opportunities in education for Aboriginal students. Retrieved from https://www.univcan.ca/wp-content/uploads/2015/07/aboriginal-students-report-2013.pdf

Bandias, S., Fuller, D., & Larkin, S. (2013). Vocational education, Indigenous students and the choice of pathways. National Vocational Education and Training Research Program. Retrieved from https://www.ncver.edu.au/publications/publications/all-publications/vocational-education,-indigenous-students-and-the-choice-of-pathways#

Bruce, D., & Marlin, A. (2012). Literature review on factors affecting the transition of Aboriginal youth from school to work. Toronto: Council of Ministers of Education, Canada. Retrieved from https://www.cmec.ca/Publications/Lists/Publications/Attachments/298/Literature-Review-on-Factors_EN.pdf

Boulton-Lewis, G. M., Marton, F., Lewis, D. C., & Wilss, L. A. (2004). A longitudinal study of learning for a group of Indigenous Australian university students: Dissonant conceptions and strategies. *Higher Education, 47*, 91-112.

Canada Millennium Scholarship Foundation. (2005). Changing course: Improving Aboriginal access to post-secondary education in Canada. Retrieved from https://library.carleton.ca/sites/default/files/find/data/surveys/pdf_files/millennium_2005-09_rn-2_en.pdf

Chiefs of Ontario. (2012). Our children, our future, our vision: First Nation jurisdiction over First Nation education in Ontario. Retrieved from http://education.chiefs-of-ontario.org/upload/documents/resources/jurisdiction/ourchildrenourfutureourvision-2012.pdf

Deer, F., De Jaeger, J., & Wilkinson, L. (2015). Canadian post-secondary education and Aboriginal peoples of Canada: Preparation, access, and relevance of post-secondary experiences: Final report. University of Manitoba. Retrieved from http://intranet.umanitoba.ca/academic_support/catl/indigenous/report.html

DeLong, L. M., Monette, G. E., & Ozaki, C. C. (2016). Nurturing student success in tribal colleges. In C. C. Ozaki & R. L. Spaid (Eds.), *Applying college change theories to student affairs practice* (65-74). San Francisco: Jossey-Bass.

Farrington, S., DiGregorio, K. D., & Page, S. (1999). The things that matter: Understanding the factors that affect the participation and retention of Indigenous students in the Cadigal Program at the Faculty of Health Sciences, University of Sydney. Annual Conference of the Australian Association for Research in Education. 1-23.

Genuis, S. K., Willows, N., First Nation, A., & Jardine, C. G. (2015). Partnering with Indigenous student co-researchers: Improving research processes and outcomes. *International Journal of Circumpolar Health, 74*(1), 1-9.

Goldstein, L., et al. (2011). Ideas in practice: Collaborative problem-based learning in Intermediate Algebra. *Journal of Developmental Education, 35*(1), 26-37.

Gordon, C. E., & White, J. P. (2014). Indigenous educational attainment in Canada. *The International Indigenous Policy Journal, 5*(3).

Guttmannova, K., Wheeler, M. J., Hill, K. G., Evans-Campbell, T. A., Hartigan, L., Jones, T. M., Hawkins, J. D., & Catalano, R. F. (2017). *Journal of Community Psychology, 45*(3), 346-362.

Hodge, D. R., Limb, G. E., & Cross, T. L. (2009). Moving from colonization toward balance and harmony: A Native American perspective on wellness. *Social Work, 53*(3), 211-219.

Mendelson, M. (2006). Aboriginal peoples and postsecondary education in Canada. Ottawa: Caledon Institute of Social Policy. Retrieved from https://maytree.com/wp-content/uploads/595ENG-1.pdf

Minthorn, R. S., & Marsh, T. E. J. (2016). Centering Indigenous college student voices and perspectives through photovoice and photo-elicitation. *Contemporary Educational Psychology, 47*, 4-10.

Nakata, M., et al. (2017). Closing gaps in Indigenous undergraduate higher education outcomes: Repositioning the role of student support services to improve retention and completion rates. *The Australian Journal of Indigenous Education*, 1-11.

Nguyen, N. (2010). Briefing paper 22: Early post-school outcomes of Indigenous youth: The role of literacy and numeracy. *Longitudinal Studies of Australian Youth*. Retrieved from https://www.ncver.edu.au/publications/publications/all-publications/early-post-school-outcomes-of-indigenous-youth-the-role-of-literacy-and-numeracy

Oliver, R., et al. (2013). Understanding Australian Aboriginal tertiary student needs. *International Journal of Higher Education, 2*(4), 52-64.

Ontario Native Education Counselling Association. (2011). Aboriginal student transitions project. Retrieved from http://www.oneca.com/Aboriginal%20student%20transitions%20FINAL%20031911.pdf

Nelson, S. E., & Wilson, K. (2017). The mental health of Indigenous peoples in Canada: A critical review of research. *Social Science & Medicine, 176*, 93-112.

Parent, A. (2017). Visioning as an integral element to understanding Indigenous learners' transition to university. *Canadian Journal of Higher Education, 47*(1), 153-170.

Patterson-Silver Wolf, D. A., VanZile-Tamsen, C., Black, J., Billiot, Shanondora M., & Tovar, M. (2013). A comparison of self-reported physical health and health conditions of American Indian/Alaskan Natives to other college students. *Journal of Community Health, 38*, 1090-1097.

People for Education. (2017). Indigenous education. Retrieved from http://peopleforeducation.ca/wp-content/uploads/2017/06/P4E-Indigenous-education-2017.pdf

Prokop, S. T., & MacDonald, L. (2004). First Nations University of Canada: Saskatoon campus: Housing and daycare research project: Final report. Bridges and Foundations Project. Retrieved from http://www.bridgesandfoundations.usask.ca/reports/FNUC_housinganddaycare.pdf

R. A. Malatest & Associates Ltd. (2004). Aboriginal peoples and post-secondary education: What educators have learned. Montreal: Canada Millennium Scholarship Foundation. Retrieved from http://www.turtleisland.org/education/postseced.pdf

R. A. Malatest & Associates Ltd. (2010). Promising practices: Increasing and supporting participation for Aboriginal students in Ontario. Toronto: The Higher Education Quality Council of Ontario. Retrieved from http://www.heqco.ca/SiteCollectionDocuments/Promising%20Practices.pdf

Rae, R., Jones, M., Handal, A. J., Bluehorse-Anderson, M., Frazier, S., Maltrud, Kt., Percy, C., Tso, T., Varela, F., & Wallerstein, N. (2016). Healthy Native Community Fellowship: An Indigenous leadership program to enhance community wellness. *The International Indigenous Policy Journal, 7*(4), 1-32.

Rawana, J. S., Sieukaran, D. D., Nguyen, H.T., & Pitawanakwat, R. (2015). Development and evaluation of a peer mentorship program for Aboriginal university students. *Canadian Journal of Education, 38*(2), 1-34.

Richards, J. Closing the Aboriginal/non-Aboriginal education gaps. Toronto: C.D. Howe Institute. Retrieved from https://www.cdhowe.org/public-policy-research/closing-aboriginalnon-aboriginal-education-gaps

Richardson, C., & Blanchet-Cohen, N. (2000). Adult education and Indigenous peoples in Canada. UNESCO Institute for Education.

Richmond, C. A. M. (2007). Narratives of social support and health in Aboriginal communities. *Canadian Journal of Public Health, 98*(4), 347-351.

Riecken, T., Conibear, F., Michel, C., Lyall, J., Scott, T., Tanaka, M., Stewart, S., Riecken, J., & Strong-Wilson, T. (2006). Resistant through re-presenting culture: Aboriginal student filmmakers and a

participatory action research project on health and wellness. *Canadian Journal of Education, 29*(1), 265-286.

Robbins, J., Linds, W., Ironstand, B., & Goodpipe, E. (2017). Generating and sustaining positive spaces: Reflections on an Indigenous youth urban arts program. *AlterNative, 13*(3), 161-169.

Sacher, M., Sacher, M., & Vaughan, N. (2014). A blended approach to Canadian First Nations education. *International Conference: eLearning*, 21-28.

Schultz, K., Walters, K. L., Beltran, R., Stroud, S., & Johnson-Jennings, M. (2016). "I'm stronger than I thought": Native women reconnecting to body, health, and place. *Health & Place, 40*, 21-28.

Shah, M., & Widin, J. (2010). Indigenous students' voices: Monitoring Indigenous student satisfaction and retention in a large Australian university. *Journal of Institutional Research, 15*(1), 28-41.

Simpkins, M., & Bonnycastle, M. M. (2015). "It's home": Listening to female post-secondary students in northern Manitoba, Canada. Winnipeg: Canadian Centre for Policy Alternatives. Retrieved from https://www.policyalternatives.ca/sites/default/files/uploads/publications/Manitoba%20Office/2015/05/It%27s%20Home%20FINAL.pdf

Snowshoe, A., Crooks, C. V., Tremblay, P. F., & Hinson, R. E. (2017). Cultural connectedness and its relation to mental wellness for First Nations youth. *Journal of Primary Prevention, 38*, 67-86.

Stewart, S., Riecken, T., Scott, T., Tanaka, M., & Riecken, J. (2008). Expanding health literacy: Indigenous youth creating videos. *Journal of Health Psychology, 13*(2), 180-189.

Stonechild, Blair. (2006). *The new buffalo*. Kindle ed. Winnipeg: U of Winnipeg P.

Stonecircle. (2011). Research on effective practices to support Métis learners' achievement and self-identification project. Retrieved from http://www.Métisnation.org/media/222452/mno%20pse%20research%20final%20report%20%20march%2031%202011%20final%20version.pdf

Stuart, R. (2012). College bound: Efforts to recruit American Indian males to college are working. *Issues in Higher Education,* 14-15.

Tarbetsky, A. L., Collie, R. J., & Martin, A. J. (2016). The role of implicit theories of intelligence and ability in predicting achievement for Indigenous (Aboriginal) Australian students. *Contemporary Education Psychology, 47*, 61-71.

Timmons, V., Doyle-Bedwell, P., Lewey, L., Marshall, L., Power, B., Sable, T., & Wien, F. (2009). Retention of Aboriginal students in post-secondary institutions in Atlantic Canada: An analysis of the supports available to Aboriginal students. Retrieved from https://www.atlanticuniversities.ca/sites/default/files/documents/AAUReportsPublications/Retention%20of%20Aboriginal%20Students%20July%202009.pdf

Timmons, V., & Stoicheff, P. (2016). Policy brief: Post-secondary education in Canada: A response to the Truth and Reconciliation Commission of Canada. Retrieved from https://www.schoolofpublicpolicy.sk.ca/documents/research/policy-briefs/PolicyBrief-Post%20Secondary%20Education%20in%20Canada.pdf

Toombs, M., & Gorman, D. (2011). Mental health and Indigenous university students. *Aboriginal & Islander Health Worker Journal, 35*(4), 22-24.

Vallesi, S., Wood, L., Dimer, L., & Zada, M. (2018). "In their own voice"—Incorporating underlying social determinants into Aboriginal health promotion programs. *International Journal of Environmental Research and Public Health, 15*, 1-15.

Viscogliosi, C., Asselin, H., Basile, S., Couturier, Y., Drolet, M-J., Gagnon, D., Torrie, J., & Levasseur, M. (2017). A scoping review protocol on social participation of Indigenous elders, intergenerational solidarity and their influence on individual and community wellness. *BMJ Open, 7*, 1-9.

Wells, R. N., Jr. (1997). The Native American experience in higher education: Turning around the cycle of failure II. Retrieved from https://eric.ed.gov/?id=ED414108

West, R., et al. (2014). Academic staff perceptions of factors underlying program completion by Australian Indigenous nursing students. *The Qualitative Report, 19*, 1-19.

Winkleby, M. A., Ned, J., Ahn, D., Koehler, A., & Kennedy, J.D. (2009). Increasing diversity in science and health professions: A 21-year longitudinal study documenting college and career success. *Journal of Science Education and Technology, 18*, 535-545.

Wolsko, C., Lardon, C., Hopkins, S., & Ruppert, E. (2006). Conceptions of wellness among the Yup'ik of the Yukon-Kuskokwin delta: The vitality of social and natural connection. *Ethnicity and Health, 11*(4), 345-363.

Wood, L., Kamper, D., & Swanson, K. (2018). Spaces of hope? Youth perspectives on heatlh and wellness in Indigenous communities. *Health & Place, 50*, 137-145.

Wright, D. A. (1998). Preparing First Nations students for college: The experience of the Squamish Nation of British Columbia. *Canadian Journal of Native Education, 22*(1), 85-92.

Yi, K. J., Landais, E., Kolahdooz, F., & Sharma, S. (2015). *American Journal of Public Health, 105*(5), 881-890.