

Canadian Post-Secondary Education and Aboriginal Peoples of Canada: Preparation, Access, and Relevance of Post-Secondary Experiences

~ Final Report ~

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A complete copy of this report can be found at:
<http://umanitoba.ca/catl/indigenous/report.html>

This project was funded by the
Social Sciences and Humanities Research Council of Canada (SSHRC)

November 1st, 2015

Key Messages

Learning experiences of Aboriginal students in PSE are influenced by:

Family

- Aboriginal students often have multiple familial responsibilities that can add both challenging and supportive influences to their educational experiences.
- Family influences are one of the main factors in the decision to pursue PSE, an important source of support within PSE, and a motivating factor for persistence and completion of PSE.
- Family connections serve to support Aboriginal students within PSE and these connections should be honoured within PSE environments.

Community

- Preservation of Indigenous identity appears to be the fundamental reason why connection to family and community was important.
- Many who rely on family, extended family, and communities for affirmation of identity can find large post-secondary institutions difficult to navigate.
- Lack of connection may be exacerbated by the climate and culture of post-secondary education institutions that privilege the non-Indigenous, western mores that provide Aboriginal students no sense of belonging, and no sense of cultural inclusion.

Success & Barriers

- A significant amount of the previous research simply compares the outcomes of Aboriginal and non-Aboriginal students. This is a form of benchmarking that unfairly compares the successes and barriers of marginalized groups to the dominant class.
- Lack of role models, funding, language and cultural differences, intergenerational family/social problems, and inadequate preparation are cited as barriers to experience.
- Aboriginal culture and inclusion of family support systems, are demonstrated markers of success, while informal learning, experiential learning experiences, and strong community involvement and attachment can facilitate post-secondary enrollment and completion.

Educational methods best suited to successful PSE experiences for Aboriginal students:

- There is an essential relationship between students' culture and the way in which they acquire knowledge, manage and articulate information, and synthesize ideas.
- PSE environments should be perceived as those where faculty engage their students and the community in a manner that allows them to explore and affirm aspects of their own identity whilst facilitating academic success. Currently this often not the case.
- Aboriginal perspectives should be integrated in a reasonable manner that makes the PSE experience relevant to Aboriginal students and community.

Characteristics of research regarding Aboriginal students in PSE:

- Much existing research fails to incorporate decolonizing methods as central research strategies.
- Very few of the studies bring the qualitative voices of Aboriginal students to answer this question.

Gaps and future research:

- The third research question, how are current models of education informing the post-secondary teaching and learning experiences of First Nations, Métis and Inuit peoples of Canada, remains unanswered as no research engages with this issue.
- Future research, particularly on curriculum and learning experiences must incorporate Indigenous knowledge at its centre.

Executive Summary

Background

Post-secondary institutions across Canada have promoted academic and professional preparation programs to recruit and retain Indigenous peoples, yet the evaluation of many of these initiatives is limited (Kapsalis, 2006). Although there is some awareness of Indigenous peoples' participation in post-secondary education (PSE), the primary focus has been success as measured by completion rates. Examining the outcomes is only part of the process; the unique learning experiences of Indigenous students and the best-suited delivery methods for successful completion of PSE are equally important.

The current lack of appropriate post-secondary education opportunities for many Aboriginal peoples contributes to the deficit of their participation in the current labour market (Kumar, 2009). Culturally relevant and meaningful opportunities in post-secondary education (PSE) could be the catalyst that reverses this employability trend of underrepresentation of Aboriginal peoples in many parts of the labour force (Akweks, Bill, Seppanen, & Smith, 2009). Considering the significant growth of the Aboriginal population in Canada (Battiste, Bell, & Findley, 2002), it is important for post-secondary institutions to consider how their programs contribute to the development of an innovative, sustainable and diverse labour market that is inclusive of Aboriginal peoples.

Approach

The goal of this study was to explore the experiences of Aboriginal students within PSE by summarizing the literature that addresses factors relating to these experiences. To achieve this goal scoping review methodology was used to isolate key themes embedded within the subject area and summarize a large body of literature under a tight timeline. Levac, Colquhoun and O'Brien's (2010) six-stage framework for scoping reviews, provided a rigorous method through which we conducted the review for this project. This preliminary synthesis included 375 articles relating to the social, cultural, familial, educational, and personal factors influencing Canadian Aboriginal peoples' experiences within PSE.

Findings

Learning Experiences of Aboriginal Students in PSE

The type of research regarding Aboriginal PSE experiences tends to be descriptive, focusing largely on identifying the factors that influence the success or those that hinder the progress of Aboriginal students throughout the education system. We believe the popularity of this type of research has to do with several factors. First, it is important in any field of research to lay the groundwork for understanding 'the problem'. Without some knowledge of the types of individuals experiencing difficulties, it would be difficult for us to identify solutions. Secondly, this kind of research is relatively simple. Most of it is based on reviews of existing studies, which themselves are based on large quantitative surveys or administrative databases. Very few of the studies bring the qualitative voices of Aboriginal students to answer this question. Like many student experiences, the experiences of Aboriginal students is multi-faceted and the areas of influence are not mutually exclusive, but are overlapping and intertwined. To make sense of this varied body of literature we have organized our summary according to four predominate areas found to influence Aboriginal students' educational experiences: Family influences, cultural/community influences, factors influencing success and challenges.

Family Factors

Results from this literature review indicate that family influences of Aboriginal students are unique from their non-Aboriginal peers in a couple of important ways. First, As Cheah & Nelson (2004) point out, the developmental period of emerging adulthood is often perceived as being shorter for Aboriginal students. When participants between the ages of 18 and 25 were asked about adulthood, were more likely than their non-Aboriginal counterparts to perceive themselves as already having reached adulthood.

Cheah & Nelson suggest this difference arises as a result of promoting independence and a focus on starting one's own family occurs earlier for Aboriginal students. Paired with the strong sense of familial connection present in Aboriginal culture the promotion of early independence and childrearing has important implications for the ways in which family factors influence PSE experiences for aboriginal students, This leads us to the second difference, the significantly higher proportions of adult and mature learners among Aboriginal students than any other student group in higher education. These students often have multiple familial responsibilities that can add both challenging and supportive influences to their educational experiences (Millennium Research Program, 2005). When asked about how family influences their education many students report family is: one of the main factors in the decision to pursue PSE, an important source of support within PSE, and a motivating factor for persistence and completion of PSE (Cheah & Nelson, 2006; Guillory & Wolverson, 2008; Millennium Research Program, 2005; Rosemary White Shield, 2009; Simpkins & Bonnycastle, 2015).

Community Factors

An important perennial concern is the connection that students have with their respective families and communities. In most cases, preservation of one's indigenous identity appeared to be the fundamental reason why connection to family and community is important. Many Aboriginal students attending post-secondary institutions are required to move from their respective community. As a number of sources reviewed in this project have stated, the departure from communities where such things as cultural mores, language and social nuances may be remarkably different from that of large urban centres (Canadian Millennium Scholarship Foundation, 2005). Many who rely on family, extended family and communities for affirmation of identity can find large post-secondary institutions difficult to navigate (Carr-Stewart, Balzer, & Cottrell, 2013). The effects of such lack of connection may be exacerbated by the climate and culture of post-secondary education institutions that privilege the non-indigenous, western mores that provide Aboriginal students no sense of belonging and no sense of cultural inclusion (Chacaby, Brunette, Mashford-Pringle, Smillie, & Russel, 2008). In some cases, while residential schools, industrial day schools and other forms of primary and secondary education may have ended, the memories live on in Aboriginal peoples and lead to a subsequent reticence regarding educational endeavours. As Little Bear (2000) once intimated, it may be understandable for contemporary indigenous peoples to be reserved about attending any sort of western educational institution in the face of ancestors' histories where family and community connection is intentionally severed for long periods of time.

Success and Challenges

Until the turn of this century, a significant amount of the previous research simply compared the outcomes of Aboriginal and non-Aboriginal students. An example of this kind of research could be gleaned from much of the findings of the most recent Census of Aboriginal Peoples in Canada. In it, researchers reveal that 8% of Aboriginal students have university degrees, compared with 22% of non-Aboriginal Canadians (Statistics Canada 2009). While this kind of comparison is useful in pointing out systemic and institutional level inequalities experienced by Aboriginal students, there is a rather sinister undercurrent embedded within this kind of research. This is a form of benchmarking that unfairly compares the successes and barriers of marginalized groups to the dominant class. Many of these comparisons do not adequately question the nature of how our society is organized to privilege the dominant class and exploiting the marginalized classes. Despite this major difficulty, we are left with reviewing a substantial number of papers that focus on the successes and the barriers that prevent Aboriginal students from completing post-secondary education. According to Higher Education Strategy Associates (2015), programs that are most successful in attracting and maintaining the participation of Indigenous post-secondary students address "the academic, cultural, and spiritual development of students, ... included Aboriginal content in the curriculum and possessed a strong cultural component".

Aboriginal culture and inclusion of family support systems are shown to be markers of success among students. While, informal learning, experiential learning experiences, and strong community involvement and attachment have been found to facilitate post-secondary enrollment and completion among Indigenous students (Statistics Canada, 2006). Conversely, Anonson, Desjarlais, Nixon, Whiteman, & Bird, (2008, p. 275) found that “inadequate educational preparation, language and cultural differences, lack of role models and funding, and intergenerational family and social problems” as the main reasons preventing students from completing programs. Although the existing research is extremely good at identifying the characteristics that determine success and the barriers that prevent Indigenous students from completing post-secondary education, neither the theoretical framework nor the statistical results tell us ‘why’ nor does any of the research provide an Indigenous decolonized way of collecting and interpreting this data.

Delivery and teaching methods that facilitate successful completion of PSE for Aboriginal Students Ancestral cultures and languages may offer some important insight into worldviews and how meaning is acquired (Ryan, 1994), so it may be important to view the potential of post-secondary education for Aboriginal peoples with considerations of relevant cultures and languages. Many of the items reviewed in this knowledge synthesis suggest that there is an essential relationship between students’ culture and the way in which they acquire knowledge, manage and articulate information, and synthesize ideas. An implication of this argument may be the perception that post-secondary institutions, are regarded as oppressive institutions that facilitate social reproduction (Kumar, 2009). Instead they should be perceived as environments where faculty engage their students and the community in a manner that allows them to explore and affirm aspects of their own identity whilst facilitating academic success. Since PSE in Canada operates with curricular imperatives that give privilege to what is regarded by many as essential learning and methods, contemporary scholars posit that Aboriginal perspectives should be integrated in a reasonable manner that makes the PSE experience relevant to Aboriginal students and community (Association of Canadian Community Colleges, 2005). In a process popularly referred to as Indigenizing the academy, many also refer to the integrating of indigenous perspectives as the preferred terminology for this sort of integration because it emphasizes the importance of exploring the histories, experiences, values, and knowledge associated with an aspect of Aboriginal culture and/or language (Fitznor, 2005). In an effort to avoid treating such subject matter in a tokenistic manner – where aspects of Aboriginal culture are explored in a superficial, trivial way that doesn’t explore why such aspects exist and the people they represent – teachers in many jurisdictions are now encouraged to share and explore with their students the respective social contexts associated with a given cultural issue or theme (Riggs, 2005). While we acknowledge the literature in this area is limited it provides insight to ways in which institutes of higher learning have been lacking as well as ways in which they can move forward.

Conclusion and Future Directions

Our third research question, how are current models of education informing the post-secondary teaching and learning experiences of First Nations, Métis and Inuit peoples of Canada, remains unanswered. This is largely due to the focus of much of the current research on descriptive studies that tend to focus on factors that influence the success of Indigenous post-secondary students or its focus on inventories of barriers that prevent them from succeeding in the first place. This single-minded focus on identifying barriers and successes does little to advance our knowledge on how institutions might change to become more Indigenous. Furthermore, the lack of a strong, Indigenous voice in almost all of the publications was disheartening. Future research, particularly on curriculum and learning experiences must incorporate Indigenous knowledge at its centre.

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1. Context: Aboriginal Peoples' preparation, Access and Experiences in PSE

Preparation and access to post-secondary education (PSE) along with relevant experiences within PSE for all students are key ingredients for developing an innovative, sustainable and diverse labour market within Canada. In spite of this, it is important to acknowledge that such preparation, access and experiences have not been a reality for Aboriginal students. Thus, the contributions by Aboriginal peoples to the current labour market have gone largely unrecognized. The relatively low rate of participation by Aboriginal peoples in the Canadian labour market has significantly contributed to the economic marginalization and relatively poor quality of life. Aboriginal peoples represent the fastest growing portion of Canada's population (Statistics Canada, 2009), yet this significant human resource potential has been under recognized by many (RCAP, 1996). Currently, a number of governmental departments as well as PSE institutions have promoted academic and professional preparation programs to recruit and retain Aboriginal peoples, but many of these initiatives are limited in scope and primarily focus on employment paths such as social work and education (Kapsalis, 2006). While Canada's PSE institutions are of reputedly high quality, the availability of relevant post-secondary programming has not necessarily been on offer for many Aboriginal Canadians.

The Aboriginal population is one of the largest underutilized human resources within Canada (Malatest, 2008). The current lack of appropriate post-secondary education opportunities for many Aboriginal peoples contributes to the deficit of their participation in the current labour market (Kumar, 2009). It has been shown that unemployment amongst Aboriginal Canadians is a factor in the economic marginalization and relatively poor quality of life (Bear Spirit Consulting, 2007). Culturally relevant and meaningful opportunities in PSE could be the catalyst that reverses this employability trend of underrepresentation of Aboriginal peoples in many parts of the labour force (Akweks, Bill, Seppanen, & Smith, 2009). Considering the significant growth of the Aboriginal population in Canada (Battiste, Bell, & Findley, 2002), it may be important for post-secondary institutions to consider how their programs contribute to the development of an innovative, sustainable and diverse labour market that is inclusive of Aboriginal peoples.

This project aimed to synthesize the existing literature related to the post-secondary learning experiences of Aboriginal peoples in Canada with a particular focus on the preparation for, and participation in, PSE. Specifically, this scoping review identified themes relating to the historical, social, cultural, familial, and personal factors identified in the literature that influence Canadian Aboriginal peoples' preparation for successful participation in PSE. In a time when Canadian "universities must embrace Indigenous worldviews in order to help repair past harms and to provide a welcoming environment for the growing numbers of Aboriginal youth seeking higher education." (Martin, 2015), the time has come to reflect on what the experiences of Aboriginal students looks like from the voices of Aboriginal students, and how we can improve these experiences moving forward.

2. Implications

The results of this knowledge synthesis project reveal a number of issues that are prevalent for Aboriginal peoples' access to, participation in, and successful completion of post-secondary education. The findings of this project may have implications for the activities of Canadian policy makers, university administrators and researchers with an interest in post-secondary education and Aboriginal peoples. The findings of this synthesis have implications for policy makers at the federal and provincial levels. Specifically, this project will inform activities of policy makers at the federal level who are involved in managing education funding for Aboriginal peoples. Policy makers at the provincial level who approve new programmes and support universities would also be interested. University administrators that are engaged in indigenous achievement issues on their respective institutions will find the implications of this review relevant and helpful. Finally, this synthesis has implications for researchers who are involved in investigating the institutional, societal and cultural dimensions of post-secondary education issues for Aboriginal peoples.

3. Approach and Methods

The goal of this study was to explore the experiences of Aboriginal students within PSE by summarizing the literature that addresses factors relating to these experiences. To achieve this goal scoping review methodology was used to isolate key themes embedded within the subject area and summarize a large body of literature under a tight timeline. Much of the literature relating to Aboriginal education exists in non-traditional scientific (grey) literature sources. A benefit of scoping review methods particularly relevant to this project is the allowance of non-traditional as well as traditional scientific literature within the review (Arksey & O'Malley, 2005; Levac, Colquhoun, O'Brien, & others, 2010). Levac, Colquhoun and O'Brien's (2010) six-stage framework for scoping reviews, provided a rigorous method through which we conducted the review for this project. The use of a scoping review also presented us with a sound method for mapping literature in a short period of time - a mechanism for presenting results in accessible formats for those within, and more importantly, those outside of academia.

3.1 Document Identification, Screening, and Charting

Using the "Best Practices in Increasing Aboriginal Post-Secondary Enrolment Rates" (Council of Ministers of Education, Canada, 2002) literature review as a starting point, the team developed a framework for a searching the relevant scientific databases and analyzing evidence related to our synthesis question. Each document was screened by two independent reviewers with discrepancies resolved by a third reviewer. Our initial review yielded 769 references relevant to our topic, of those 447 articles met the inclusion criteria, and 375 (447 minus the articles unavailable in full text format) have been charted in full text format. A detailed outline of the document screening and charting process is illustrated in Figure, 1, Appendix A. The thematic framework used for charting each document was developed through consultation with our Advisory Committee and allowed us to capture the social, cultural, familial, educational, and personal factors affecting Canadian Aboriginal peoples' successful participation in PSE. The charting process was iterative and evolved through weekly meetings with researchers and multiple consultations with the Advisory Committee. Each theme was discussed in detail at each iteration with changes to definitions documented for transparency. The final iteration of each theme used to address the synthesis questions as well as the technical information outlining the methods used for document identification, screening, and charting can be found in Appendix B.

3.2 Synthesis and Reporting

Charted evidence was summarized and synthesized using two strategies: 1) a basic numerical account of the amount, type, and distribution of the studies included in the review and 2) a mapped synthesis of themes identified in the results. As recommended by Levac, et al. (2010) Narrative analysis was used to extrapolate (chart) information related to each theme from the included documents. Narrative analysis allowed us to use an established and rigorous text-based approach to chart and summarize the included literature within a quick period of time. We employed Popay et al.'s (2006) guide to narrative synthesis during the charting phase to map five main themes that were later used to our preliminary synthesis of the literature. A detailed analysis of each theme will be conducted in the coming months and the results of that analysis will be included in our post-grant dissemination strategy. This method of conducting a broad preliminary synthesis will enhance the generalizability of our current results and allow us to examine the relationships and variability between articles with greater detail at a later date.

4. Results

Post-secondary institutions across Canada have promoted academic and professional preparation programs to recruit and retain Indigenous peoples, yet the evaluation of many of these initiatives is limited (Kapsalis, 2006). Although there is some awareness of Aboriginal peoples' PSE, the primary focus of many reports has been success as measured by completion rates. Examining the outcomes is only part of the process; the unique learning experiences of Indigenous students and the best-suited delivery methods for successful PSE experiences are equally important. The goal of this study was to identify and broadly synthesize the existing peer-reviewed and grey literature pertaining into the PSE learning experiences of Indigenous students across Canada.

4.1 Learning Experiences of Aboriginal Students in PSE

Our first research question asks, what are the learning experiences of Aboriginal students in PSE in Canada? The results of the scoping review revealed that this is the most active area of research. This type of research tends to be descriptive, focusing largely on identifying the factors that influence the success or those that hinder the progress of Aboriginal students throughout the education system. We believe the popularity of this type of research has to do with several factors. First, it is important in any field of research to lay the groundwork for understanding 'the problem'. Without some knowledge of the types of individuals experiencing difficulties, it would be difficult for us to identify solutions. Secondly, this kind of research is relatively simple. Most of it is based on reviews of existing studies, which themselves are based on large quantitative surveys or administrative databases. Very few of the studies bring the qualitative voices of Aboriginal students to answer this question.

Like many student experiences, the experiences of Aboriginal students is multi-faceted and the areas of influence are not mutually exclusive, but are overlapping and intertwined. To make sense of this varied body of literature we have organized our summary according to four predominate areas that have been found to influence Aboriginal students' educational experiences: Family influences, cultural/community influences, factors influencing success and challenges. A numerical count of the number of articles found in relation to each area of influence can be found in Appendix A.

A) Family factors influencing post-secondary experiences of Aboriginal Students

Family, relationships, and connectedness are paramount to Aboriginal culture and as a result, family issues were addressed in the majority of documents included in this review. As outlined in the literature, the definition of family often includes nuclear and extended family members. It is evident from this large body of literature that the concept of "family" includes multi-layered, interconnected, and sometimes conflicting influences on the PSE experiences of Aboriginal students (Bingham, Adolpho, Jackson, & Alexitch, 2014; Cheah & Nelson, 2004; Simpkins & Bonnycastle, 2015).

Results from this literature review indicate that family influences for Aboriginal students are unique from their non-Aboriginal peers in a couple of important ways. First, As Cheah & Nelson (2004) point out, the developmental period of emerging adulthood is often perceived as being shorter for Aboriginal students. When participants between the ages of 18 and 25 were asked about adulthood, were more likely than their non-Aboriginal counterparts to perceive themselves as having reached adulthood. Cheah & Nelson suggest this difference arises as a result of promoting independence and a focus on starting one's own family occurs earlier for Aboriginal students. Paired with the strong sense of familial connection present in Aboriginal culture the promotion of early independence and childrearing has important implications for the ways in which family factors influence PSE experiences for Aboriginal students. This leads us to the second difference, the significantly higher proportions of adult and mature learners among Aboriginal students than any other student group in higher education. These students often have multiple familial responsibilities that can add both challenging and supportive influences to their educational experiences (Millennium Research Program, 2005).

When asked about how family influences their education many students report family is: one of the main factors in the decision to pursue PSE, an important source of support within PSE, and a motivating factor for persistence and completion of PSE (Cheah & Nelson, 2006; Guillory & Wolverson, 2008; Millennium Research Program, 2005; Rosemary White Shield, 2009; Simpkins & Bonnycastle, 2015).

Family issues can be paradoxical for many Aboriginal students, on one hand they provide a significant source of support, but on the other hand they can provide unique challenges for post-secondary experiences. Several studies have identified challenges such as (including but not limited to):

- family histories of drugs and alcohol
- pressure to stay on reserves and close to family members
- residual effects of parents who were subjected to residential schools
- geographic removal from family supports
- community, cultural, and familial isolation
- financial responsibilities for students living away from home and for those who support family members by sending money back home
- difficulty securing appropriate housing for students who have children and partners, and
- difficulty securing appropriate childcare.

Several of these challenges are compounded for single parents who are geographically removed from familial supports and have less time to foster social/emotional relationships with peers. Situations in which older children are subjected to unwelcoming or racist environments have been linked to additional levels of stress for parents who are students (Guillory & Wolverson, 2008; Young, 1999)". Many students report being torn between two, sometimes conflicting worlds: one where family loyalties and responsibilities come first, and one in which they are a student struggling to succeed in a sometimes unwelcoming environment (Bingham et al., 2014; Fitznor, 2005; Guillory & Wolverson, 2008; Millennium Research Program, 2005; Stone Circle, 2011).

Despite these challenges when asked about their academic aspirations Aboriginal students: report similar PSE aspirations as their peers, are optimistic about educational opportunities, and though some are hesitant about post-secondary institutions, they demonstrate an overall positive regard for education (Millennium Research Program, 2005; Simpkins & Bonnycastle, 2015). Female Aboriginal students from a post-secondary institution in Northern Manitoba, reported that they viewed higher education as an empowering way to transmit knowledge to future generations, as well as a way to strike a balance in becoming a successful student and a successful parent/family member (Simpkins & Bonnycastle, 2015). While family influences may pose challenges, these experiences do not outweigh the significant positive influences families provide for Aboriginal student experiences. Family is noted by several authors as the number one factor in students' the decisions to pursue and subsequently persist within post-secondary environments. Rosemary White Shield (2009) encapsulates this influence well by stating

sometimes family loyalty is misunderstood and seen as a "barrier" for Native women to "overcome" in pursuing a higher education goal. Tribal college leaders, however, are looking at this cultural strength of using one's gifts, talents, and strength to contribute to one's family and community as a support in retention efforts, (p. 59).

Clearly family connections serve to support Aboriginal students within PSE and these connections should be honoured within PSE environments. This sentiment was demonstrated by Aboriginal students in an Indigenous teacher training program who indicated that relationships with family and community were paramount to student experiences.

Several participants reported that family members were integral in helping to raise and care for children, provide beneficial home environments, maintain and transmit culture and knowledge, and provide motivation to complete degree programs. Almost all participants said that formal education was positively valued within their families, “even for those who had relatives subjected to residential schools, and despite the feeling that mainstream education has continued to degrade Indigenous ways of being” (Freeman, 2008, p. 132). Overwhelmingly students described their educational experience within the teacher training program as empowering, allowing them to transmit indigenous culture, community, and knowledge both as parents and as teachers (Freeman, 2008).

The importance of strong familial loyalty, connection, and influence beyond instrumental support cannot be clearer than how these influences are discussed in some of the qualitative studies with Aboriginal women to reflecting on family in relation to their PSE experiences. Women in all three studies stressed the importance of family in the emotional, cultural, and academic elements of their experiences (Bingham et al., 2014; McMurchy-Pilkington, 2013; Rosemary White Shield, 2009). Family factors were often noted as sources of resiliency when making difficult academic decisions (Rosemary White Shield, 2009). Furthermore, positive family supports were seen as sources of motivation for students to excel within PSE. Even when the message was not positive, one student reflected that family gave her the strength to succeed,

At first they didn't like it. They thought I should just work and provide for my kids. But after a while they began to realize, 'Maybe she is doing it the right way.' And now they don't say anything to me, not anymore. They don't bother me. They just help me even more now (Bingham et al., 2014, p. 624).

Family factors exert a similar influence on educational experiences internationally. For example, two studies from Australia explored family influences for first-generation Indigenous students compared to later-generation Indigenous students (Cameron & Robinson, 2014). Both first and later generation students reported that family has provided an essential support within educational contexts. Later-generation students reported receiving experiential support and mentorship from family members who had experience in PSE, while first-generation students reported that their family was often the “driving force” for them to attend university. Both groups recounted they received much needed emotional support from family during the duration of their studies. Regardless of the type of support it is clear that family influences and feelings of connectedness within PSE are of utmost importance for positive student experiences. The voices of Maori learners furthered this sentiment by stressing the importance of embedding whanau (family) in higher education both figuratively within the university community and literally by making space for students’ family experiences within the university culture (McMurchy-Pilkington, 2013).

B) Community as a factor influencing post-secondary experiences of Aboriginal Students

In addition to family factors, the literature reviewed in this knowledge synthesis suggests that community factors are also an important concern when exploring the Aboriginal peoples’ post-secondary experiences. Community considerations are defined in this report as the challenges to and opportunities for success in PSE that emerge from Aboriginal social groups whose unifying commonalities are marked by nationality, language group, treaty region, or other indigenous communal themes.

To a notable extent, the literature contained in this synthesis situated community factors within some of Bowman's (2013) considerations for student success. The considerations that organize this portion of the report, adapted from Bowman, are:

- family and community connections
- ancestral language
- ancestral cultures
- balance between two worlds
- overcoming challenges
- life-long learning
- goal setting;
- learning styles;
- civic-engagement
- self-sufficiency, and
- proficiency with technology.

In adapting Bowman's framework, an important issue arises with regard to repeated references to location vis-à-vis access. Hanson (2001) explored the issue of location in a way that merits consideration here: For economically challenged Aboriginal peoples, particularly parents, traveling a long distance in order to attend post-secondary education classes at established institutions such as universities and vocational colleges can be problematic.

Hanson (2001) asserted that post-secondary learning "involves development in personal, interpersonal, and community processes," (p. 47). This sentiment is echoed by Nowlen (1980) who recognized four interpersonal settings in which post-secondary education can take place: 1) the individual setting, 2) the temporary setting, 3) the organizational setting, and 4) the community setting. Essential to Nowlen's conception of the community setting were mandates related to dealing with specific problems that are prevalent in specific communities:

The educational program focuses on problems and assembles participants who relate to two or more organizations or segments of a neighbourhood or community. One of the program purposes, usually designated as most important, is community development...program ideas tend to evolve from major problems and opportunities related to community functioning. Some ideas arise from events themselves: a court desegregation decision, a sharp rise in unemployment, and the like. Other ideas are selectively chosen as "issues" because a programming agency chooses to treat them as such – for example, infant mortality and morbidity in the ghetto or the impact on private charities of closing federal tax loopholes (pp. 16 – 17).

Within the theme of community, an important perennial concern is the connection that students have with their respective families and communities. In most cases, the family and community connections emerge from the concern for maintaining and affirming aspects of indigenous identities that are manifest in students' respective communities. Otherwise stated, preservation of one's indigenous identity appeared to be the fundamental reason why connection to family and community was important.

As mentioned earlier, many Aboriginal students attending post-secondary institutions are required to move from their respective communities. As a number of the sources reviewed in this project have stated, the departure from communities where things such as cultural mores, language, and social nuances may be remarkably different from that of large urban centres (Canadian Millennium Scholarship Foundation, 2005). Many who rely on family, extended family, and communities for affirmation of identity can find large post-secondary institutions difficult to navigate (Carr-Stewart, Balzer, & Cottrell, 2013).

The effects of such lack of connection may be exacerbated by the climate and culture of post-secondary education institutions that privilege the non-indigenous, western mores that provide Aboriginal students no sense of belonging, and no sense of cultural inclusion (Chacaby, Brunette, Mashford-Pringle, Smillie, & Russel, 2008).

This historical dimension that feeds the perceptions Aboriginal peoples hold of Canadian PSE institutions as an environment in which it is difficult to relate to the communal and kinship connections of an Aboriginal student's home community are easily overlooked. In other words, in some instances the PSE perceptions held by contemporary Aboriginal peoples are one of the consequences of generations of negative experiences with schools that marginalized and subjugated ancestors and fellow community members (Hudson & Hanrahan, n.d.). Residential schools, industrial day schools and other forms of primary and secondary education may have ended, but the memories live on for some Aboriginal peoples leading to a subsequent reticence regarding educational endeavours. As Little Bear (2000) once intimated, it may be understandable for contemporary Indigenous peoples to be reluctant about attending any sort of western educational institution in the face of ancestors' histories where family and community connection is intentionally severed for long periods of time.

C) Factors influencing success and challenges in post-secondary education among Aboriginal students

Until the turn of this century, a significant amount of the previous research simply compared the outcomes of Aboriginal and non-Aboriginal students. An example of this kind of research could be gleaned from much of the findings of the most recent Census of Aboriginal Peoples in Canada. In it, researchers reveal that 8% of Aboriginal students have university degrees, compared with 22% of non-Aboriginal Canadians (Statistics Canada 2009). While this kind of comparison is useful in pointing out systemic and institutional level inequalities experienced by Aboriginal students, there is a rather sinister undercurrent embedded within this kind of research. This is a form of benchmarking that unfairly compares the successes and barriers of marginalized groups to the dominant class. Many of these comparisons do not adequately question the nature of how our society is organized to privilege the dominant class and exploiting the marginalized classes. As Peter Li (2002) asks, why are the successes of the dominant class the yardstick from which we must compare ourselves? Shouldn't it be reasonable for Aboriginal students to strive to surpass those from the dominant classes or is reaching mediocrity enough to define success? This comparative enterprise seems very inappropriate, especially at a time when academics and the like are supposed to respect the voices of the marginalized to continue to compare ourselves to the colonizers. We see this as a glaring omission in much of the current research which we discuss in the conclusion of this report.

Despite this major difficulty, we are left with reviewing a substantial number of papers that focus on the successes and the barriers that prevent Aboriginal students from completing post-secondary education amounting to over 500 individual papers, reports, books and chapters. We begin with the evidence describing the successes of Aboriginal students. According to Higher Education Strategy Associates (2015, np), programs that are most successful in attracting and maintaining the participation of Indigenous post-secondary students address "the academic, cultural, and spiritual development of students, ... included Aboriginal content in the curriculum and possessed a strong cultural component".

In a study of retention among Aboriginal nursing students at the University of Saskatchewan, Anonson, Desjarlais, Nixon, Whiteman, & Bird, (2008, p. 275) found that "inadequate educational preparation, language and cultural differences, lack of role models and funding, and intergenerational family and social problems" as the main reasons preventing students from completing their program. They also identified language as the most significant barrier since nursing is taught in English but many of the Aboriginal students speak Cree, Dene, Saulteaux, Dakota, Assiniboine, or Michif as first languages.

Few Colleges of Nursing offer adequate language training to assist these students and to encourage language maintenance, an especially important factor for those nurses who might return to their communities to continue their professional work. Aboriginal culture and inclusion of family support systems are also shown to be markers of success among students.

Recruitment and retention are two other areas that are only recently gaining attention in this field. Restoule and his colleagues (2013) suggest that posters of successful local Aboriginal students could help secondary students imagine themselves attending university and this method has been used in Ontario with some success. They also suggest that Grade 9 is the 'formative' year of education for Aboriginal students and universities must reach out to that group at that time so that they take the courses that make them eligible for post-secondary schooling in the future. Alternatively, informal learning, experiential learning experiences, and strong community involvement and attachment have been found to facilitate post-secondary enrollment and completion among Indigenous students (Statistics Canada, 2006).

Although the existing research, like the projects cited above, is extremely good at identifying the characteristics that determine success and the barriers that prevent Indigenous students from completing post-secondary education, neither the theoretical framework nor the statistical results tell us 'why' nor does any of the research provide an Indigenous decolonized way of collecting and interpreting this data. Of the 375 articles charted for this study, only 64 did not discuss barriers. Upon reflection, we don't find this particularly surprising given the overwhelming focus on challenges to entering post-secondary education which seems to be the focus of much of the research in this area.

There are some good international papers that identify the barriers to post-secondary participation among Aboriginal students that can inform our practices in Canada. A recent project by the US Department of Education (2015) identifies the characteristics of students who are likely to struggle and prematurely leave post-secondary education. These 'vulnerability' characteristics include delayed entry into post-secondary education, obtaining a GED diploma instead of completing highschool, presence of dependent children, currently employed and part-time enrolment in school. Students who have more than one of these characteristics are least likely to complete post-secondary education. As mentioned earlier the presence of children is a significant barrier to academic success. According to Bonnycastle & Prentice, (2011), 11% of non-Aboriginal students are parenting children, and among Aboriginal students, that number is 33%. They suggest that affordable, quality, and culturally appropriate daycares become essential services for universities that are serious about providing quality education to Aboriginal students.

Finally, geography also plays a role in the success of Aboriginal students in post-secondary education. Findings by David & Marlin (2013) confirm anecdotal observations that rural, northern and reserve dwellers are less likely to attend post-secondary schools and are more likely to experience difficulty locating steady employment as adults. Special efforts are needed to encourage and support this group once they arrive on post-secondary institutional campuses.

4.2 Delivery and teaching methods that facilitate successful completion of PSE for Aboriginal Students

Our second research question asks what are the delivery and teaching methods that facilitate successful completion of PSE for Aboriginal students? While the answer to this question is difficult to parse apart from discussions on family, community, successes, and challenges for Aboriginal students within PSE there are a few predominate recommendations that can be drawn from the literature we reviewed.

First, the theme of ancestral cultures and language cannot be completely separated from the previous themes of family and community connections, successes or challenges. One of the unifying commonalities are the ways in which Indigenous identity may be characterized by these themes. The theme of ancestral cultures and languages may offer some important insight into worldviews and how meaning is acquired (Ryan, 1994), so it is important to view the potential of PSE experiences for Aboriginal peoples with considerations of relevant cultures and languages.

Some post-secondary institutions in Canada have been working toward establishing appropriate, ethno-culturally and linguistically relevant education that operates using the model of mainstream PSE delivery (Every & Young, 2002). For many responsible for the development and delivery of such programmes, the notion of what constitutes appropriateness and ethno-cultural relevance is usually governed by an understanding of the unique manifestations of indigenous knowledge, heritage, consciousness and tradition that may be associated with a particular region (Barnes, 2011). Important to these unique manifestations can be how they are reflected in their respective languages. Culture, in the context of this discussion referring to the totality of a peoples' beliefs, worldviews and traditions, is said to have an essential relationship with its respective ancestral language and is thus relevant to the worldviews of the students (Kirkness & Barnhardt, 1991). Because many Aboriginal cultures reflect an experience where a) individual, family and communal identity are informed by language and culture, and b) spirituality and relationships at least existed in the context of those identities, it is reasonable to expect that many PSE experiences reflect a peoples' relationship with a their respective cultures and languages (Collins, 2013).

Many of the items reviewed in this knowledge synthesis suggest that there is an essential relationship between students' culture and the way in which they acquire knowledge, manage and articulate information, and synthesize ideas. An implication of this argument may be the perception that post-secondary institutions, are regarded as oppressive institutions that facilitate social reproduction (Kumar, 2009). Instead they should be perceived as environments where faculty engage their students and the community in a manner that allows them to explore and affirm aspects of their own identity whilst facilitating academic success. Since PSE in Canada operates with curricular imperatives that give privilege to what is regarded by many as essential learning and methods, contemporary scholars posit that Aboriginal perspectives should be integrated in a reasonable manner that makes the PSE experience relevant to Aboriginal students and community (Association of Canadian Community Colleges, 2005). The type of integration called for by many may be regarded as the use of supplementary resources, curricular material, or knowledge to amend or augment an existing programme of study, which allows faculty to enrich areas of study with relevant, localized content (Curtis et al., 2012). In a process popularly referred to as Indigenizing the academy, many also refer to the integrating of indigenous perspectives as the preferred terminology for this sort of integration because it emphasizes the importance of exploring the histories, experiences, values, and knowledge associated with an aspect of Aboriginal culture and/or language (Fitznor, 2005). In an effort to avoid treating such subject matter in a tokenistic manner – where aspects of Aboriginal culture are explored in a superficial, trivial way that doesn't explore why such aspects exist and the people they represent – teachers in many jurisdictions are now encouraged to share and explore with their students the respective social contexts associated with a given cultural issue or theme (Riggs, 2005). The exploration of Aboriginal perspectives in PSE provides a more complete picture of their culture and the peoples and histories that they represent.

The recognition of Aboriginal perspectives as a bona fide aspect of public education can be regarded as a reasonable progression from the socio-political events of the last four decades (Schissel & Wotherspoon, 2003); the Royal Commission on Aboriginal Peoples of the mid 1990s is a cogent example of how government has recognized that Aboriginal peoples, their experiences, and their cultures should inform social change (White, Maxim, & Spence, 2004).

Some provincial jurisdictions have developed resources to assist in the integration of Aboriginal perspectives into mainstream curricula (White, Spence, & Maxim, 2006). Although Aboriginal education may be frequently perceived as a prospective or constituent part of the post-colonial, anti-racist, and decolonization discourses of educational foundations programmes (Huffman, 2008), the importance of programming and teaching issues for Aboriginal students is becoming more prevalent (Redwing Saunders & Hill, 2007). The focus on programming and learning may be regarded as a response to a concern for the lack of authentic Aboriginal programming in Canadian post-secondary institutions. While we acknowledge the literature in this area is limited it provides insight to ways in which institutes of higher learning have been lacking as well as ways in which they can move forward.

5. Future Research and Next Steps

Evidently, our third research question, how are current models of education informing the post-secondary teaching and learning experiences of First Nations, Métis and Inuit peoples of Canada, remains unanswered. This is largely due to the focus of much of the current research on descriptive studies that tend to focus on factors that influence the success of Indigenous post-secondary students or its focus on inventories of barriers that prevent them from succeeding in the first place. We view Indigenous achievement as more than just compilations of statistical measures of academic performance and time to completion. This single-minded focus on identifying barriers and successes does little to advance our knowledge on how institutions might change to become more Indigenous. Furthermore, the lack of a strong, Indigenous voice in almost all of the publications was disheartening. Future research, particularly on curriculum and learning experiences must incorporate Indigenous knowledge at its centre.

The failure of much existing research to incorporate decolonizing methods as central research strategies is also noteworthy. Although there are a number of key texts (see Adams, 2014; Smith, 2012) that explicitly call for the demarginalization of Indigenous voices in research, very few of the studies took a recognizable and decolonized approach to the topic. As Chilisa & Ntseane (2010) remind us, decolonizing “approaches can enable the construction of context-specific knowledge” that characterizes all of the Canadian post-secondary education system today. We found it odd that very few of the articles questioned the western hegemony of curriculum, pedagogy or the way our institutions are organized. Andreotti, Stein, Ahenakew, & Hunt, (2015) and her colleagues use cartographic methods to deconstruct and critique the current organization of education from an Indigenous perspective and conclude that this task is difficult because the language and grammar we use to learn and organize ourselves is inherently anti-democratic and marginalizing to Indigenous persons.

6. Knowledge Mobilization & Implementation

The knowledge mobilization plan for this project was driven by four overarching questions:

1. What are the outputs of the synthesis?
2. Who are the potential knowledge users of the synthesis outputs both within and outside of academia?
3. What are the most effective ways to make contact and interact with these knowledge users?
4. How do we facilitate uptake and usability of the synthesis outputs for the knowledge users we have identified?

This project utilized integrated, end-of-grant, and post-grant knowledge mobilization strategies. The strategies outlined in this plan were developed using an interactive process between researchers and an Advisory Committee comprised of representatives from various groups of knowledge users. Consultations took place between the two groups throughout various stages of the synthesis project and are expected to continue in the months to come.

6.1 Integrated Knowledge Mobilization

To achieve an integrated knowledge mobilization approach, an Advisory Committee, comprised of representatives from several groups of knowledge users, was established to participate in the interpretation and dissemination of the synthesis results. The Advisory Committee served to:

- represent groups of knowledge users
- validate the framework applied during the synthesis portion of the review
- assist in the development of the knowledge mobilization plan
- facilitate uptake of the synthesis findings by a broader group of knowledge users.

The Advisory Committee was comprised of 14 individuals including: former deans, University librarians, directors of teaching and learning centres, post-secondary educators from various institutions within urban, rural, and remote Manitoba, Aboriginal undergraduate and graduate students, and the knowledge synthesis project team.

Three Advisory Committee meetings were held between during the duration of this project:

1. at the start of the review to provide feedback on the search approach and results (May),
2. at the mid-point to review and interpret initial results, provide input on the synthesis framework, and assist in the development of the knowledge mobilization plan (August), and
3. review the synthesis findings and develop a dissemination plan to distribute the findings to the broader group of knowledge users.

Several informal consultations between members of the project team and Advisory Committee members in addition to the three formal meetings.

6.2 End-of-Grant Knowledge Mobilization

The end-of-grant knowledge mobilization activities were developed to transmit the findings of the synthesis to various groups of knowledge users. This process is intended to ensure that the outcomes of this knowledge synthesis are made available to those who need it and that it is packaged in a manner that is acceptable and relevant those users. This stage of knowledge mobilization will include working with the Advisory Committee to package the synthesis findings in the most suitable way for practical and sustained application. The following end-of-grant knowledge mobilization activities are currently in progress:

1. Conduct a meeting with the Advisory Committee (November) in order to:
 - a) provide short presentations by the applicant team to the Advisory Committee regarding the project findings;
 - b) reach consensus on key outcomes arising from the synthesis for dissemination strategies suitable for non-academic audiences.
2. Produce a 'lay language' summary report of key findings and future directions (via the consensus process described above) for distribution to non-academic audiences.
3. Present the synthesis findings (presentation accepted) at the Hawaii International Conference on Education, January 2016.

6.3 Post-Grant Knowledge Mobilization

Post-grant knowledge mobilization activities were developed to facilitate ongoing uptake and dissemination of the synthesis results for sustained impact.

1. Two, post grant Advisory Committee meetings
 - a) at completion of the review to assist in packaging the findings for publication in a form that is relevant, practical and easily interpreted by the broader group of knowledge users (January);
 - b) develop a working group with the goal of fostering ongoing institutional, community, and non-profit partnerships to address areas for future research and collaboration.
2. Create two web-based resources based on the evidence categories used during the data abstraction and charting process for academic and non-academic audiences:
 - a) an interactive evidence map; a visual conceptualization of the project themes with academic and lay-summaries embedded to aid in decision making/planning for educational programs;
 - b) a tabulated database of studies corresponding to each theme.
3. Distribute materials for students and instructors through various means facilitated by the Associate Dean Undergraduate Students of faculties at corresponding PSEs.
4. Distribute appropriate materials in the form of a toolkit for K-12 teachers and guidance counsellors who prepare students for PSE.
5. Distribute appropriate materials to adult education centres and PSE preparatory programs.
6. Provide links to curriculum materials through various faculty websites for educational developers, instructors, and University administrators.
7. Conduct workshops for educational developers sponsored by various teaching and learning centres.
8. Present the synthesis findings at the Canadian Society for Studies in Education meeting held at the Congress of Social Sciences and Humanities.
9. Produce a manuscript for submission to an open access, peer reviewed journal, as well as a traditional peer reviewed journal.
10. Present the synthesis findings via a roundtable panel discussion at the Society for Teaching and Learning in Higher Education Conference.

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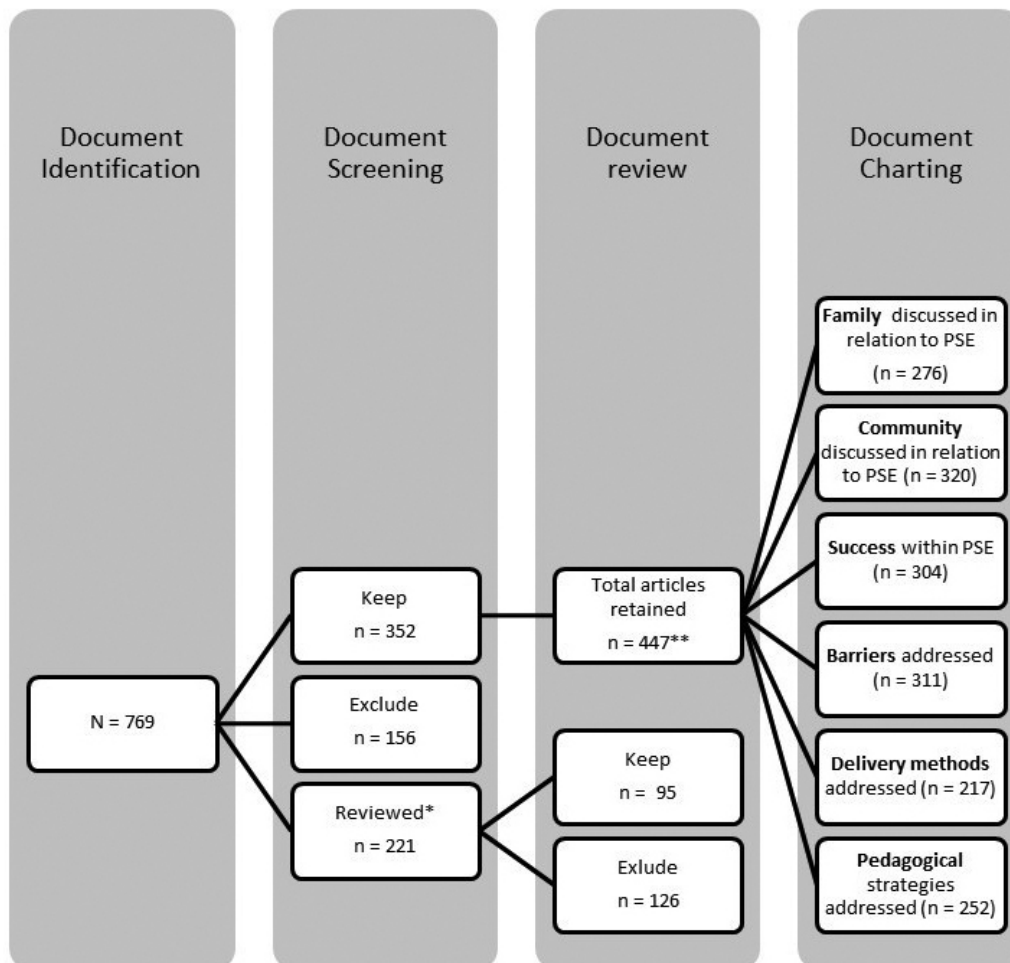
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Appendix A

Figure 1: Document Retention and Charting Flow-Chart



* Reviewed documents include discrepancies found between reviewers and those tagged as 2 = review.

** The full text version of 69 citations retrieved during the initial scope could not be located.

Appendix B

Methods: Technical Information

Document Identification

Operationalization of each synthesis question in consultation with resulted in a detailed list of search terms which were then applied to various sources of literature. Several databases were used to search for relevant information including PSYCHInfo, ERIC, EBSCO Host, SAGE, iportal, Google Scholar, Google, various university and government websites, Truth and Reconciliation literature, as well as a search of several non-electronic libraries. The grey literature search will focussed on government reports, educational guidelines, reports compiled by post-secondary institutions and Aboriginal organizations. The initial scope yielded N = 769 documents.

Document Screening

Two reviewers will independently reviewed all abstracts/executive summaries according to 4 inclusion/exclusion criteria (Table 1). A hierarchical inclusion method was used for articles that were noted as “keep” (Table 2). Documents tagged “review” and discrepancies between reviewers were resolved during a full text review conducted by a third reviewer. All keep and review documents were stored in Zotero for charting/data abstraction.

Table 1: Inclusion/exclusion criteria for document screening.

Screening Criteria	Yes	No
Is article focused on indigenous students? [IND]	1	0
Is the document focused on post-secondary education? [PSE]	1	0
Is education the main focus of the document? [EDU]	1	0
Is the document written or translated into English? [ENG]	1	0

Table 2. Keep, eliminate, review decision matrix.

Criteria	Code	Action
PSE = 1 & IND = 1 + EDU = 1 & ENG = 1	1	Keep - Locate full text document; file and flag the citation as keep.
PSE = 1 & IND = 1 + EDU = 1 or ENG = 1	2	Maybe – Locate full text document; file and flag the citation for full text review.
PSE = 1 & IND = 1 + EDU = 0 & ENG = 0	2	Maybe – Locate full text document; file and flag the citation for full text review.
PSE = 0 &/or IND = 0	0	Exclude – Does not meet criteria; do not locate file.

Note. Reliability analysis ($\kappa = .93$, $p < .005$ or greater for all screened articles) indicated a high level of agreement between reviewers.

Document Charting

During the charting process a copy of each document was individually reviewed and charted for themes by two reviewers using an abstraction form. A reliability sample of $n = 60$ articles were charted by two independent reviewers. High interrater reliability between coders for each of the 5 identified themes ($\kappa = .94$, $p < .005$ or greater for all themes) allowed for independent charting of each article with adjudication by a third researcher. Each article was charted for the presence of each theme: family factors, community factors, successes within PSE, barriers within PSE, educational delivery methods, and pedagogical strategies. Themes were intentionally broad to capture the wide variety of experiences that may occur within each area. Many of the documents charted contained multiple themes. A detailed analysis of the literature within each theme will be conducted in a future study.