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Editorial

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She:kon Skanen:ko'wa!

In the time that the Canadian Association for Studies in Indigenous Education (CASIE) has been in existence, there has been a palpable growth in the area indigenous education as a field of study and practice. In that time, scholars as well as field professionals have contributed to this growth that has concentrated attention upon the curricular, foundational, and pedagogical dimensions of the field. Many initiatives in indigenous education have been facilitated through the hard work of Indigenous and non-Indigenous students, scholars, and field professionals working in schools and post-secondary institutions. With these developments come the necessities for spaces in which scholarship in the field may be shared and celebrated. It is in respect for this emergent necessity that CASIE values the collaboration we've enjoyed with *in education*.

The importance of the collaboration between CASIE and *in education* is evidenced by the strong selection of articles that comprise this special issue on indigenous education. With inclusion of perspectives from Indigenous and non-Indigenous scholars from numerous regions of Canada and abroad, this special issue explores such concerns as environmental and cultural sustainability, language preservation, science and mathematics programming as well as topics in preservice and in-service teacher development. There is at least one common, perhaps unifying, theme reflected in the vast number of topics reflected in this special issue: that of the importance of research and scholarships that are relevant to the Indigenous experience in Canada and abroad. A growing number of faculties and colleges of education have developed initiatives and programming in their teacher development programs that are responsive to the growing importance of indigenous education. This appears to be responsive to the demand for culturally relevant pedagogical training that facilitates the development of aptitudes and skills necessary for the delivery of indigenous education. Many faculties and schools have established initial teacher education programmes as well as individual course offerings that have supported this demand. Primary and secondary school districts and community institutions have begun to articulate a need for undergraduate teacher education and in-service teacher development that provide knowledge and programming direction for such areas as treaty education, explorations of the residential school experience, and Indigenous student success. It has become clear that the importance of the integration of Indigenous perspectives in primary, secondary, and post-secondary education programming has informed school district programming, ministerial requirements for new graduates and curricular development, and priorities for universities. As the Canadian Indigenous experience becomes more of a concern for primary, secondary, and post-secondary education, the potential impact on children and youth is clear—facilitating the development of a citizenry that takes ownership of our shared history and works together for a better future.

It is a pleasure to offer these introductory comments to this special edition of *in education* on indigenous education. In partnership with the Canadian Association for Studies in Indigenous Education, the academic work reflected in these articles is presented with the intention of informing the advancement and improvement of education for Indigenous and non-Indigenous peoples in Canada. *Nia:wen Ko'wa*

Culturally Relevant Physical Education: Educative Conversations with Mi'kmaw Elders and Community Leaders

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Abstract

This paper presents results from a recently completed inquiry that investigated culturally relevant physical education for Aboriginal students. Employing a decolonizing research methodology (storywork), we engaged seven Mi'kmaw Elders and three Mi'kmaw community physical activity/education leaders in conversations about culturally relevant physical education. Attending to Halas, McCrae, and Carpenter's (2012) framework for culturally relevant physical education, we share our findings related to Mi'kmaw students and school communities. The results ought to be of notable interest to those who share an interest in culturally relevant pedagogy, physical education, and/or Aboriginal education.

Keywords: culturally relevant; physical education; Aboriginal education

Culturally Relevant Physical Education: Educative Conversations with Mi'kmaw Elders and Community Leaders

Canadian scholars have recently suggested there is an absence of understanding, or action, related to culturally relevant pedagogy in physical education, particularly with respect to Aboriginal[1] students (e.g., Halas, McRae, & Carpenter, 2012; Kalyn, 2014; Melnychuk, Robinson, Lu, Chorney, & Randall, 2011; Robinson, Lunney Borden, & Robinson, 2013). Globally, and particularly within the United States, culturally relevant physical education efforts have focused principally upon groups other than Indigenous students. For example, much of the recent research and literature in the United States has focused upon African-American, Hispanic, and/or 'urban' students (e.g., see Columna, Foley, & Lytle, 2010; Culp, 2010; Flory & McCaughtry, 2011). Conversely, outside of North America, a small group of New Zealand (Aotearoa) researchers (Hokowhitu, 2008; Legge, 2011; Salter, 2000, 2003) are recognized for their important work related to culturally relevant physical education for Mäori students. Within Canada, such work has been limited, shaped largely by a very small number of pedagogues (e.g., Casey & Kentel, 2014; Halas, 2011; Kalyn, 2006). It is within this context that we came to recognize the importance of our research project, "Culturally Relevant Physical Education: Educative Conversations with Mi'kmaw Elders and Community Leaders."

The justification for our research is twofold. First, we believe there exists a need to ensure high quality First Nations education and, more specifically, physical education—grounded in First Nations culture, history, and language (Anderson, Horton, & Orwick, 2004; Kitchen, Cherubini, Trudeau, & Hodson, 2009; Truth and Reconciliation Commission, 2012). Secondly, though we are familiar with the limited literature related to culturally relevant physical education for Aboriginal students, we believe research interest and efforts related to culturally relevant physical education should be more specifically directed toward understanding and honouring the uniqueness and particular of needs of physical education students from each of the many Aboriginal groups within Canada (Smith, 1999). This research focused on the need to more specifically understand culturally relevant physical education *for Mi'kmaw* students. In this effort, we completed a year-long study in which we invited Mi'kmaw Elders and community physical activity or education leaders to share in educative conversations, giving them voice so that they, and we, could begin to articulate what Mi'kmaw-relevant physical education might look like or be.

What is Culturally Relevant Physical Education?

Pedagogues have adopted a number of terms and meanings to describe what we herein label as culturally relevant. For example, somewhat synonymous terms fashioned and/or employed by others include "culturally appropriate" (Yazzie-Mintz, 2007), "culturally congruent" (Berger & Epp, 2006), and "culturally responsive" (Castagno & Brayboy, 2008). By adopting "culturally relevant," we mean to signify and identify our adherence to Ladson-Billings's (1994, 1995) original conception of the idea, particularly her caution that creating culturally relevant pedagogy requires much more than simply inserting culture into curriculum (which is an altogether too common "solution"). Rather, and like her, we believe that creating cultural relevance requires educators to purposefully "utilize students' culture as a vehicle for learning" (Ladson-Billings, 1995, p. 161). Integrating students' background knowledge and prior (and current) home and community experiences into curriculum and teaching is an essential exercise for those aiming to achieve culturally relevant teaching (Ladson-Billings, 1994). This requires that teachers hold

high expectations for their students, that they assist their students in developing cultural competence, and that they guide their students to develop a critical cultural consciousness (Ladson-Billings, 1994). Culturally relevant physical education attends to all of these requirements and tenets—albeit within the unique physical education context.

Canadian Culturally Relevant Physical Education Scholarship

Casey and Kentel (2014) explain that culturally relevant physical education "not only recognizes the diverse cultural identities of students, [but also] it aims to affirm them through comprehensive curricular development and responsive pedagogical practices that reach beyond the context of the school" (p. 125). They also recognize that attending to culturally relevant physical education will necessarily require a disruption of the current hegemony of whiteness within the discipline. However, despite the best efforts of critical pedagogues to do just that, teachers' lack of expertise and confidence to speak about issues related to race and racialized identities (Douglas & Halas, 2013; Hylton, 2015) often has the unfortunate effect of normalizing the "experiences, histories, and worldviews" (Casey & Kentel, 2014, p. 125) of the White racialized majority.

In many Indigenous cultures, the Medicine Wheel contains all of the traditional teachings and can, therefore, be used as a guide in any journey, including the educational process. While there is some variation in its teachings and representations, the underlying web of meaning to the Medicine Wheels remains the same: the importance of appreciating and respecting the ongoing interconnectedness and interrelatedness of all things (Bell, 2014). Recognizing that Indigenous peoples have had a model for healthy living for generations before contemporary (and Western) physical education existed, Kalyn (2006, 2014) has worked with Indigenous teachers, cultural guides, Elders, and administrators to articulate culturally relevant guidelines and practices that honour the Medicine Wheel and the teachings of the Sacred Tree (Bopp, Bopp, Brown, & Lane, 1985). Clearly, Kalyn's model purposefully draws upon the Medicine Wheel, in structure and in purpose. While some of Kalyn's multi-layered components are intuitive and observably appropriate (e.g., the alignment of a wellness framework's spiritual dimension with the Medicine Wheel's East/Spiritual), others are less intuitive though still beneficial (e.g., the alignment of dance with the Medicine Wheel's West/Physical and gymnastics with the Medicine Wheel's South/Emotional).

Halas (2011), whose work has focused almost exclusively upon Aboriginal education within a Manitoba First Nations, Métis, and Inuit (FNMI) context, has defined culturally relevant physical education as "providing programs that are rich in meaningful and relevant activities that affirm the cultural identities of students" (p. 23). Moreover, she and others (Halas, 2011; Halas et al., 2012) provide a framework for engaging students in culturally meaningful ways. This framework, a four-sectioned circle also somewhat resembling the Medicine Wheel, suggests the following are required if students are to experience cultural relevance within physical education: a teacher who is an ally, a shared understanding of students' day-to-day cultural landscapes, a supportive learning climate, and a meaningful and relevant curriculum (Halas et al., 2012). This wheel-as-model approach suggests an interconnected and relational model—and, as previously, is certainly consistent with others who advocate for such a wholistic approach (e.g., see Battiste, 1998).

Researching Within Mi'kma'ki

The Mi'kmaw people are Aboriginal First Nations people who are located within present-day Nova Scotia, northern New Brunswick, Prince Edward Island, the Gaspé Penisula in Eastern Quebec, and parts of Newfoundland and Maine. Throughout Mi'kma'ki territory, there are over 20,000 Mi'kmaw people who reside in more than 35 different communities (Aboriginal Affairs and Northern Development Canada, 2013). Much like other Aboriginal First Nations across Canada, the Mi'kmaw have deep attachments to the land and their language and culture connect them to it. However, Mi'kmaw people also have been challenged to preserve their language and culture as a result of colonial policies such as centralization (Paul, 2006) and residential schools (Benjamin, 2014; TRC, 2012). [2] Despite the detrimental effects of these policies on Mi'kmaw communities, Mi'kmaw people have persevered and a cultural resurgence has occurred. Through the work of the chiefs and organizations as Mi'kmaw Kina'matnewey (MK), the current socio-political landscape has been able to support the revitalization of Mi'kmaw culture and language (Orr & Cameron, 2004).

With Indigenous physical education scholarship in Canada being largely limited to the work conducted by a handful of scholars (i.e., Halas, Kalyn, and other collaborators), there exists a paucity of scholarship related to physical education and Aboriginal students east of the prairies. While to many this observation in and of itself would not give reason enough to pursue scholarship related to physical education and Aboriginal students east of the prairies, it does reinforce our belief that research interest and efforts related to culturally relevant physical education should be more specifically directed toward understanding and honouring the uniqueness and the particular needs of other Canadian Aboriginal peoples (Smith, 1999). It also suggests to us that more scholars ought to be taking up this line of inquiry; the relative lack of scholarship in the (geographic and content) area is both significant and troubling. As such, we recognized the need to do similar research within Mi'kma'ki so that we might come to understand culturally relevant physical education for Mi'kmaw students.

Though the broad aim of this research focused upon culturally relevant physical education pedagogy for Aboriginal students, the primary research questions guiding this study were:

- What is culturally relevant physical education pedagogy for Mi'kmaw children and youth? (What should—and what should not—be taught within physical education so as to respect Mi'kmaw ways of knowing? How should—and how should not—physical education be taught so as to respect Mi'kmaw ways of knowing?)
- In what ways might Halas et al.'s (2012) four criteria for cultural relevance (teacher as an ally, understanding of students' day-to-day cultural landscapes, supportive learning climate, meaningful and relevant curriculum) be best realized for Mi'kmaw students and school communities?

Our efforts to answer these questions relied upon a decolonizing methodology (storywork), conversations with Elders and community leaders, and an analysis process that necessarily privileged the knowledge and wisdom of participants.

Research Methodology: Storywork

Indigenous research methodologies, specifically decolonizing perspectives, challenge the status quo and provide those who have been oppressed with necessary tools to combat the oppressor and oppressive structures, including, for example, Eurocentric research approaches. Eurocentric research approaches have perpetuated oppression on Aboriginal peoples but decolonizing perspectives specifically aim to address, resist, and rectify that oppression (Beeman-Cadwallader, Quigley, & Yazzie-Mintz, 2012). Smith (1999) offers, "It is about centring our [Indigenous] concerns and worldviews and then coming to know and understand theory and research from our own perspectives and for our own purposes" (p. 39). Swadener and Mutua (2008 assert that, "decolonization is about the process in both research and performance of valuing, reclaiming, and foregrounding Indigenous voices and epistemologies" (p. 31).

Researchers who employ Indigenous research methodologies are more effectively positioned to counter the metanarrative and to redefine research and researchers. They have activist agendas and work towards social justice and emancipatory goals (Denzin & Lincoln, 2008). Furthermore, Kovach (2009) contends, "As long as decolonization is a purpose of Indigenous research, critical theory will be an allied Western conceptual tool for creating change" (p. 48). With these beliefs and perspectives, we adopted storywork as a decolonizing methodology.

Embracing a criticalist perspective, we attended to Archibald's (2009) Indigenous storywork—which is both a narrative and critical research approach. This approach was chosen because we presupposed that we, through the knowledge and wisdom of Mi'kmaw Elders and community leaders, could gain an improved initial understanding about culturally relevant physical education. Moreover, it was our sincere goal that this research would: (a) give voice to the participating Elders and community physical activity/education leaders in an effort to, together, begin to articulate what Mi'kmaw-relevant physical education might look like or be, and (b) support the efforts of community Elders and leaders to bring about change for their own communities.

Research Methods: Conversations

Data were collected over a one-year period through the use of one-on-one conversations. As Euro-Canadian scholars, we entered into our conversations acknowledging and respecting Indigenous ways of knowing and doing (Kitchen, Cherubini, Trudeau, & Hodson, 2009). Conversations (particularly as an alternative to interviews) privilege Aboriginal approaches to research—something we, as well as others (Chilisa, 2012; Lavallee, 2009), believe is especially necessary when employing Indigenous methodologies. The use of minimally structured open-ended conversations allowed participants to discuss themes related to physical education, cultural relevance, and Mi'kmaw ways of knowing as they naturally unfolded (Kvale, 1996). All conversations (save one) were audio-recorded and transcribed verbatim (one participant requested that the conversation not be recorded). Conversations ranged from 67 minutes to 112 minutes.

Participants

Seven Elders (from four Mi'kma'ki regions) and three community physical activity/education leaders (from three Mi'kma'ki regions) participated in this research. Eight

participants were male while two were female. Moreover, a pilot process with two Elders and two community physical activity/education leaders preceded these research conversations; data from these pilot conversations are not included within this paper. In order to protect the anonymity of the participants, schools, and communities, pseudonyms have been used throughout the remainder of this article.

Research Ethics and Mi'kma'ki

In addition to first receiving research ethics approval from one university's Research Ethics Board, addition ethical approval was granted by Mi'kmaw Ethics Watch. It is worth noting that the Mi'kmaw Ethics Watch committee is appointed by the Sante' Mawio'mi (Grand Council); this committee ensures the right of ownership of research conducted with Mi'kmaw people rests with various Mi'kmaw communities.

Positionality. Positionality "refers to the place that a person occupies within a set of social relationships" (Leistyna, Woodrum, & Sherblom, 1996, p. 340). Locating ourselves—that is, identifying and contemplating our social locations—enables us to understand and disclose our positionality. Such a process is rightfully important to our readers, allies, and critics. Appropriately, then, we offer some insight into our positionality as researchers. We identify as Euro-Canadian scholars. We also share a history of teaching experiences within different Canadian Aboriginal communities. Moreover, since moving to the academe, we have developed working and research relationships and partnerships with a number of Mi'kmaw people and communities associated with MK. We believe these relationships and partnerships allowed us to develop the requisite "trust, rapport, and authentic communication patterns" (Chilisa, 2012, p. 34) necessary to engage in research with participants.

Data Analysis

Agreeing that the researcher and participants are co-learners (Wilson, 2008), and as suggested by Chilisa (2012) and Wilson (2008), data were analyzed in collaboration with the participants. That is, following each one-on-one conversation, we (as the researchers) transcribed the audio-recorded conversations as we also began to identify major themes. Follow-up correspondence with participants invited them to co-construct meaning of the text (Richardson, 1994) by reviewing the transcribed conversations. This process was meant to allow the participants to confirm or provide suggestions on how to amend our articulation of their words and stories (Brown & Strega, 2005). Following the completion of conversations, we considered the larger ideas and the themes presented by all of the participants—particularly as they "fit" into Halas et al.'s (2012) four categories of cultural relevance (see Figure 1 below). These four areas are: (a) teacher as an ally, (b) understanding students' day-to-day cultural landscapes, (c) supportive learning climate, and (d) meaningful and relevant curriculum (Halas et al., 2012). The teacher as ally uses of her/his own privilege to help students overcome their oppression and works in support of the students. The teacher who demonstrates understanding students' day-to-day cultural landscapes ensures that she/he is knowledgeable about the students' socio-historical context and purposefully works to build relationships with them. By providing students the opportunity to contribute to each other's learning, the teacher demonstrates a supportive learning climate. The teacher's use of meaningful and relevant curriculum demonstrates her/his commitment to use culturally meaningful activities that affirm students' cultural identities.

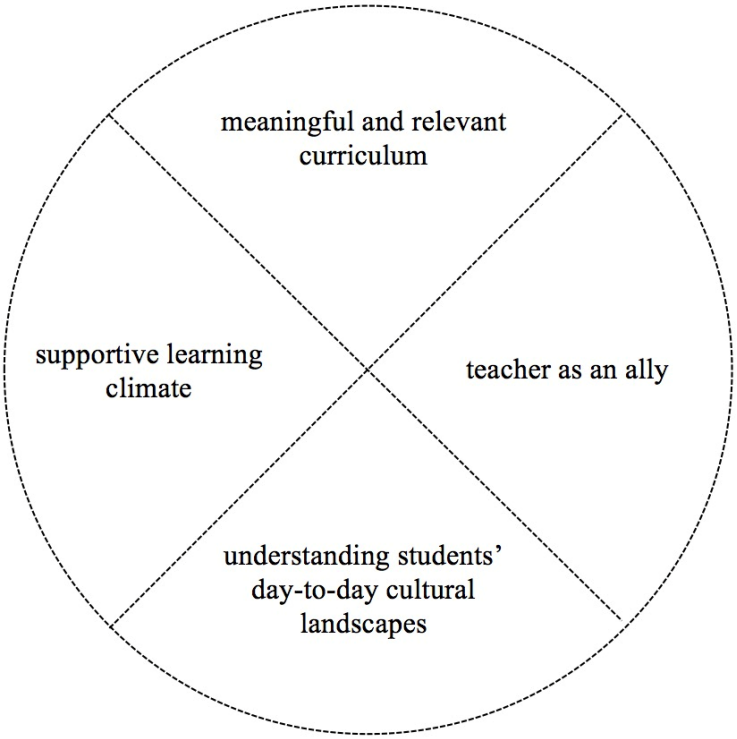

Figure 1. Culturally responsive physical education (Halas et al., 2012).

By carefully and repeatedly reading, discussing, and juxtaposing the transcribed data, research notes, and feedback from the participants, we identified key ideas derived from our conversations.

The Findings

Conversations with Elders and community leaders revealed considerable information related to possibilities for (more) culturally relevant physical education for Mi'kmaw students and school communities. As noted, we focused our analysis on the participants' conversations (and stories and responses) as they related to Halas et al.'s (2012) framework for engaging students in culturally meaningful ways.

Teacher as an Ally

Participants cautioned about the difficult and fine line between being an ally and also trying to be a friend to students. For example, one participant offered:

> Be an ally but when you are teaching, you can't be a best friend to the kids all of the time because a lot of them are going to be disruptive…and you got to deal with them. So, you can't be everybody's best friend all of the time—I find anyway. I mean, I worked in the school 12 years as a guidance counsellor and I was supposed to be everybody's best friend all of the time, but I wasn't. What's important is that you draw a line and they can come up to the line but they can't cross it. You got to have a line with the kids and they understand line but if you don't have a line and you try to be everybody's ally and best friend, they will walk all over you. They'll take full advantage of you trying to be their best friend.

The observation that teachers ought to avoid trying to be friends with their students is not a unique one. Indeed, a similar note of caution is routinely shared with our institutions' neophyte teacher candidates in an effort to reinforce their duty of care responsibilities. Still, it was interesting to us that participants felt it important to provide a similar caution when asked about the importance of physical education teachers also being allies. Clearly, these participants recognized the difficult-to-define notion of being an ally. As described by Champagne (2006), serving as an ally to Aboriginal youth "involves having consciousness of patterns of oppression and intervening to minimize the hurt that gets inflicted or re-enacted up Aboriginal people" (p. 18). Another participant offered the following:

> If you notice if the kid is off, it might be just the fact that they didn't have breakfast, you know. Just ask. Ask the people from the community that are on staff. Anyone, not just teachers. Just ask them privately, "Is there anything going on with that kid and his family?" "Oh, yeah, yeah. His parents broke up last week." Wouldn't know that as a teacher and he's acting out. Just be understanding but you don't need to be like that with everybody because not everybody is going through the same thing. That's what I used to say when I worked at Ravenwood to teachers: "Just be understanding. Just ask me if one of the kids are acting up and I will tell you what is going on with them or what might be going on with them."

Similarly, another shared:

> The understanding, if they are having problems with their parents, their girlfriend, [their] boyfriend, their uncle is dying of cancer or something. Like that is going on in the family, it's the understanding.

These findings—pointing to the fundamental importance of physical education teachers having and demonstrating an understanding of students' social circumstances and needs—have been affirmed in the literature (Champaign, 2006; Halas, 2011). Additionally, others suggested that being an ally required teachers to make an extra effort to learn about their students' cultural knowledge and cultural connections. One participant shared:

> First of all, have a knowledge base of what they are supposed to be doing. Have the resources available so they can provide the best supporting learning climate. Have the integrity to work towards that. Have a vision of some sort so that they can provide. Have a historical knowledge of the people you are going to be teaching. Have a knowledge of the community that you are going to be instructing in. Have a good working relationship with the rest of the staff or the rest of the people that are in the same business as you.

Given this response, we see teachers as allies to Mi'kmaw students endeavouring to demonstrate cultural competence—an understanding of their students' cultural knowledge and cultural connections. This could be achieved by tapping into the wealth of community information harboured by teaching assistants, administrative assistants, and kitchen staff. By gaining valuable community information from community members within schools, participants suggested teachers might be enabled to be more understanding of their students.

Additionally, teacher candidates coming into practice would benefit from university offerings that explore Aboriginal culture and history as it relates to teaching. Despite the TRC's

(2012) call for federal, provincial, and territorial governments to provide education to public servants on Aboriginal history and intercultural competency, most teacher candidates do not take a single university course related to Aboriginal history (and fewer take a course related to Mi'kmaw history); further action is certainly needed if this is to occur.

Finally, participants were asked to share stories about the types of things that were important for teachers-as-allies to know when working with students in their communities. This is a commonly held viewpoint related to the notion of interconnectedness or relationality. One participant shared a story of the interconnected relationship that existed between teacher, student, and Elder and the need for allies to be understanding:

> We had a girl in class; it was Friday afternoon; nice girl, she was, she was a bit cross with her teacher and the teacher came to see me and said and after the fact, she was pretty mean in class, "Anything going on with her?" "Not that I know of, nothing going wrong with the family." Anyway, long story short, Monday morning, she went to the hospital Friday night and had a baby. Not me, not any of her friends, not her parents, not her sisters, not one person knew that she was pregnant. So she was probably in labour Friday afternoon. But the good thing is the teacher was understanding because I had in-serviced the teachers about if a Mi'kmaw kid gets cross in class and they normally don't, there is something going on.

We were further reminded of the need for and importance of seeking out guidance from Indigenous voices to better understand teacher roles in intercultural learning communities. We were drawn back to the words shared by Halas (2011) about her own experiences with Aboriginal communities:

> In striving to understand what I have been taught and have learned in my many personal and professional encounters with young people from diverse Aboriginal cultural backgrounds, I continually look for guidance from Indigenous voices. In doing so, I have worked hard to loosen the constraints of my own White, Eurocentric pattern of seeing and being in the world. (p. 3)

It is vital for teachers to make meaningful connections with community members throughout the school and school community. Moreover, creating these meaningful connections needs to be cultivated with care and respect. We all need to see our physical education settings as an intercultural space shared between Aboriginal students and Euro-Canadian teachers—those privileged with the opportunity to be invited to live and work alongside Mi'kmaw communities.

Understanding Students' Day-to-day Cultural Landscapes

Participants shared examples of how important it is for physical education teachers to engage with their students outside of the classroom—something that clearly requires them to be present within the community outside of regular school hours. For example, one participant shared:

> Spend some time in the community. At least go visit the kid's home, see what his home life is like. If that kid is coming in every day and he is all screwed up in the head well go see what is wrong with him. Maybe it is not a very happy home life. Rather than just show up at quarter to nine every morning, they are gone by four

> o'clock and they did not spend any time outside that school and they don't know nothing about that community, they know nothing about the community, nothing about the peers, nothing about that kid except what they see in the classroom and that does not give a very clear picture.

While teachers within virtually all public school contexts can expect meetings with parents to occur at the school site, participants suggested that teachers may need to travel to parents'/guardians' homes in Mi'kmaw communities. This was a common suggestion by participants. In explaining this preferable practice, one participant also offered insight into parents who do not come to the school yet still care for their children:

> I would say that, take the time to really devote and sometimes if the parents are not too willing to come to teachers' nights, I would think after school drop by the parents' home and see them. They do care but a lot of parents are not really educated or outgoing people, but they do care about their child and if you care about the child as you say you do by going in to be a professional teacher, then you would be in the same boat as the parent who wants the best for their child so it should not be something that is out of your way to go in and find out how you can best teach and the parent can perhaps help.

Teachers also need to have a colour-conscious perspective—one that recognizes the extent to which colour and race continues to influence the life chances of citizens (Wilkins, 1996). Such a point was made by many participants, particularly when contrasts were being made between the "White way" and the "Mi'kmaw way." As many Elders and leaders suggested, understanding how to best work with Mi'kmaw students requires teachers to understand that they are not the same as White kids. For example, one participant shared:

> I think that if the teachers spend time with the kids out of the classroom, they would know they're different, that they are not like the White kids outside and they have to be given a different kind of—Cherise said not that long ago she was not really proud and honoured as a Native person when she went to the White school. It is only after she was knowledgeable about her own background, about our history and language that she became more proud. The teachers should have recognized the shortcoming a long time ago and advocated something. You want your students to succeed. That is your ultimate goal: you want your students to succeed.

The findings highlight the importance of understanding and affirming Mi'kmaw cultural identity and tradition with the aim of helping all students succeed. These findings are in line with assertions made by Halas et al. (2012) who stated that:

> To enhance learning outcomes related to physical and health education, PE teachers need to create climates where Aboriginal youth feel welcome, where teachers and classmates affirm their cultural identities, and where teachers provide proactive assistance to individual students who may be struggling. (p. 6)

Others offered stories of promise, sharing that some physical education teachers had been making very real attempts at cultural immersion. For example, one participant shared:

> One of the things we can see as more physical education teachers attending sweat lodge ceremonies, attending powwows and seeing the dance because they are culturally immersing themselves so they are able to utilize our own practices and take them and put them into a classroom. Even if they are teaching, non-Natives, bring that in. The non-Natives are not so stereotypical when they see us practicing our own practices. It helps with that colonialism or centralization that we talked about earlier that creates the fear in the white system.

These findings also align with the work conducted by Champagne (2006), who noted that "physical education teachers are strategically placed to help Aboriginal students nurture healthy relationships among themselves, their families, and communities" (p. 18). Though we appreciated the observations that physical education teachers need to include culturally relevant movement experiences (e.g., sweats, powwows, traditional dances), we were also honoured that participants, such as this one, suggested that all students, regardless of racialized identities, be invited to participate in these same culturally relevant movement experiences.

Supportive Learning Climate

Conversations about supportive learning environments primarily focused upon belonging— making students feel safe and feeling cared about—core tenets of Mazlow's (1968) well-established and widely familiar hierarchy of needs. Indeed, many participants shared examples about White teachers who were unable to connect with their Mi'kmaw students because they were unsuccessful in first attending to the need to make their students feel safe and cared about. For example, one participant explained:

> Because I will have that group of kids in Welp'tek where they are safe, they feel safe in the community and then I will go watch them practice in Bellesville and have a non-Native coach and I am, like, "Oh, he is not hearing you; he is over there banging his head off the wall; he is not connecting." I am thinking, and the coach asked me once, "What will I do? Why doesn't little Johnny listen to me?" "Because you did not pay attention to him: you did not once ask him his name, you did not once ask him what he thinks, you did not connect with him, or look at him. He tuned out way before practice started. You don't care about him." You don't have to make a huge effort every single time but if you do it once in a while then they know that you are actually trying.

Others, elaborating upon what can be gained when teachers engage themselves within Mi'kmaw communities, suggested that students who felt their teachers cared about them would try harder to excel:

> I think kids would take a huge leap forward with their teachers if the teacher just took an hour to go visit the powwow or drive through the reserve or go to a function or just get to know the community. It is a community within a community and if you get to know that community that kid happens to see that teacher. Basically, if the kid knows that you care then he is going to give you more.

Another similarly shared:

> Like, I can run really fast, but I don't know if you want to help me be the best runner or you just want me to run. If you generally convince the child that I really want you to be the fastest runner because I think we can make something out of it, then that kid will give you 110% but what I am trying to say, if you are just trying to make him run just to run, he is probably only going to give you 50-60% because he does not want to tire out. If he thinks that you really care, he will give you 100% all the time.

Others shared poignant stories of past teachers who made such efforts to make their students feel cared about. For example, one participant suggested:

> The teachers become involved and show an interest in what interests the kids; they are not distancing themselves. We had a teacher there, she had to be the—we talk about her often even now because she is retired now. She used to get the kids to write a journal. "Write what you did last weekend, tell me what you did" and she would read them and write a little story right behind it and go, "It was so nice to hear how much fun you had with your grandmother, grandfather, and your mother." We went to a powwow and enjoyed ourself. "I am going to go to a powwow sometime too." Things like that and it was—my kids just loved her. They wanted to go to school just to be in her classes; we are going to have Ms. Linda today. Ms. Linda is really nice.

Gregory and Chapman (2013) suggest that the emotional environment influences and interacts with students' experience with instruction and learning. The findings presented support this notion highlighting the importance and need to ensure we are providing a learning environment that goes beyond the duty of care. Rather, a learning environment must be derived out of a moral obligation to ensure safe, caring, and empathetic spaces for Mi'kmaw students to learn and grow.

Meaningful and Relevant Curriculum

As was expected (and we certainly welcomed these sorts of suggestions), most participants saw and shared obvious examples where curricular content could very easily be made more culturally relevant. For example, one participant suggested:

> Yeah, I think that if it is more culturally relevant that you be able to get more out of a child. You don't necessarily have to make everything but sometimes if they are going to play dodge ball for the sake of getting kids active, why don't we practice dance or jump or a culturally relevant game?

Another participant—who was also aware of distinctly Mi'kmaw activities—also suggested that hockey, a more traditional game, ought to be taught as a Mi'kmaw activity:

> Me, personally, I like hockey because when schools do floor hockey, they don't realize that hockey actually comes from Mi'kmaq around here. If you really research it, it was first played in a variation of a game using a piece of wood and a ball that was made out of wood. It evolved and the first hockey stick was called Mi'kmaw hockey stick and the birth place of hockey happened either in Windsor

> or Ontario but a little bit of research behind that and that is why hockey is so huge among First Nations kids because some are taught we kind of invented a type of hockey that is to this.

Another participant, also recognizing hockey's Mi'kmaw heritage, added an explanation of a Mi'kmaw variation of cricket:

> With the advent of summer games I would think that you would try to get things that are culturally relevant to go along with the ball. They moved into basketball and volleyball and stuff like that but running would be culturally acceptable as well as things that some people are really good at such as dancing to go along with, maybe even floor hockey. That is something that is culturally relevant too because I know our people always played hockey and there was a game we used to play on the street before cars became a problem and it was called cricket. We never played it the British way; we took an old sponge ball and put up a couple rocks and rolled the ball down the road that kept us going all Jesus day!

Other participants also recognized other culturally relevant curriculum, sharing some of the most exciting local initiatives related to physical activity. For example, consider this participant's words:

> Another thing in the schools that is starting to scratch the surface for the schools, we started, another one of the things that we started, the education director from here… they're field trips for the kids and basically what they do is they incorporate physical activity, culture, and Elders teaching on the trip plus healthy eating so basically what they did, they got an Elder that knew about traditional medicines, that are in the forest so they drove over to Epsmusi Mountain and then the kids had to hike up the mountain along with the Elder for about a mile and then until they found some traditional herbal medicines right in the forest. The Elder taught them about that and the importance and significance then their lunch was a healthy lunch it was like sandwiches and stuff so that's one aspect where physical activity was incorporated with the culture and the connectedness.

Others lamented the loss of other clearly culturally tied physical activities. For example, one shared:

> It is unfortunate canoes and all that disappeared because we did not need to travel anymore; we were all put in a community. "Don't leave, you probably don't need a canoe." Just for them to know that you don't even have to say we are going to do this Mi'kmaw game, but if we do canoeing, I think they will appreciate it a little bit more. Although it is sort of lost in the last couple of generations but it played a huge part on who you are as a nation because that was the main mode of transportation other than walking.

Similarly, others suggested physical activities related to day-to-day life of generations of Mi'kmaw people:

> Alright, ha, that is the fastest potato pickers or blueberry pickers. Ash pounding. People used to pound ash to make baskets and stuff. Jesus, that is hard work. Bang on that Jesus ash all day! They used to make you go get ash and make you

> pound it. It just freezes. Anyway that and, Christ, even basket making, maybe you should try that whole concept: going into the woods to get the ash, identifying it and splitting it, and pounding it and making the basket itself. Finishing it. That should be an event in itself.

It has never been lost on us that many of these activities require someone with cultural competence—and very often an Elder would be most able to ensure activities were appropriately and authentically taken up. Supporting this notion was one participant:

> Cody, he is a resource person at the school for our culture so he does things with them like showing them how to spear eels, how to do canoes, kayaks, he will camp outside with them in the fall. You got to make your place where you are going to stay warm because you will be there overnight; they are not allowed to take tents so he has to teach them to make a fire. You need your rocks and boughs and make yourself as comfortable as possible. You need an Elder to tell you this. We had sessions on how to make a needle spear. Nobody knew how so we had to get a guy from Melgignat who does it, Cody, he was down and showed this is how you make a needle spear, this is what you look for. That is the kind of things we try to deliver to the kids. The more we deliver, the more complete Mi'kmaq they turn out to be.

While many of the participants' recollections of past physical education activities were positive, we also, unexpectedly, found that our conversations necessarily had some Elders reflecting upon their residential school experiences. Without arriving with any questions meant to elicit conversations about their experiences as residential school survivors, participants nonetheless turned to those experiences when trying to capture what (physical) education was like for Mi'kmaw students in the past. For example, consider this Elder's comments:

> I would say there are different reasons why we participated. Like, in [residential] school there was a core group, about 12 of us, that played softball every day. Every day we played softball. That was the reason we got good at it. There was a group from Millsport and a couple from Bezanson and a couple from Prince Edward Island. It was our way of getting out of the school and getting away from the nuns and priests who would constantly would beat on you or berate you. We used that as therapy. We went to play ball instead where nobody else would bother us and we did that when it was raining or cold and as a result we grew up to be pretty, have decent athletes…. It was therapy for us. We survived it and maybe we can thank them for doing that; we can thank us we did not think about it, we just did it and now over the years I have thought about it and realized it and gee wiz somebody gave us a gift to play ball and saved us a lot of beatings and a lot of misery in that school. Anyway I did not mean to get off on sports.

Forsyth (2012) has documented similar stories of survivors of the residential school experience. These unplanned residential school conversations reminded us that we must be especially sensitive when engaging with Elders about conversations related to education or schooling. Indeed, we felt some shame about our role in eliciting some of these memories when asking about Mi'kmaw conceptions of physical education in the past.

Making Sense of Multiple Conversations

This inquiry has not been an easy exercise. For example, and while we already knew it to be true, after engaging in conversations and considering participants' responses, we were very quickly reminded that Halas et al.'s (2012) four criteria for engaging students in culturally meaningful ways are certainly not entirely discrete. Wilson (2008) and Lavallee (2009) lay challenge to the Western research tradition of breaking data down into smaller parts in order to gain an understanding of the whole. However, our categorization of the data using the four criteria has served to help us better understand and explain the multilayered responsibilities of physical education teachers. We recognize that these are not distinct categories and they, in many ways, are overlapping and interrelated concepts. For example, having a teacher as an ally can help create a supportive learning climate. Similarly, only by attending to students' day-to-day cultural landscapes can planned and/or taught curriculum be meaningful and relevant. Given these overlapping and interacting concepts, coding responses into these categories is not a straightforward task. Still, we would like to believe we have captured some Mi'kmaw Elders' and leaders' perspectives related to these four categories.

These four categories also serve as a framework for engaging students in culturally meaningful ways. We recommend that physical education teachers actively employ these acts of relationality in their spaces of learning. Our study's findings both rely upon and support Halas et al.'s (2012) model. A physical education teacher as ally needs to exhibit caring (but with clear boundaries). Demonstrating cultural competence requires physical education teachers to use knowledge about the local culture to make purposeful connections with the students and the community. Physical education teachers need to use curriculum to connect traditional cultural activities with contemporary practices. Finally, physical education teachers must be mindful to engage with their students, their families, and communities in ways that celebrate their cultural identities and their community-based knowledge.

Also, though we aimed to focus on culturally relevant *physical education*, we note that most conversations and quotations are related more generally to *education*. That is, in our research, only one of Halas et al.'s (2012) four criteria had a clear and continued focus upon physical education (meaningful and relevant curriculum). Although physical education—as it relates to the other three criteria—was addressed by some participants, we acknowledge that it was not a common central focus. What we can take from this is that we have engaged with these Mi'kmaw Elders and leaders to learn about culturally relevant education—with a focus upon culturally relevant physical education as it relates to meaningful and relevant curriculum.

Future Directions

We believe we are doing important work—that we are on the "right track." One Elder, when explaining what needs to be done to ensure physical education teachers are able to more adequately provide culturally relevant physical education for their students, suggested continued inquiries, like ours, are needed more than anything else. We were certainly appreciative to encounter this sort of unsolicited approval of our work. This Elder shared:

> I think there should be more people doing just what you are doing right now, trying to get information; then you have to have someone who helps you put it all together. Hopefully from that you will get a better idea of what the Native community wants or needs. You can only get that through the participation of the

> entire nation. It can't just be [one person from one community] doing that. It has to be [many people] from here and here doing this so there is consensus; you probably have concepts you would agree on. Maybe you would not agree on the exact procedure but you agree with the concepts so you develop from that concept and bring in these white people and teach them this is the way we want it done. I think that would work.

To this suggestion we have been especially responsive. That is, we are now moving forward with a follow-up research project that will build upon this one. Responding to this observation, our current research employs Sharing Circles (rather than conversation) with Mi'kmaw Elders and students. Inviting students to these Sharing Circles was also decided upon after listening to Elders who shared:

> If you don't have meaningful and relevant curriculum as defined by a group of Native educators *and students* you are just going to be guessing. You have to have these people that are in the know how, that are in the system right now.

Agreeing with these participants that this needs to be a group task that includes Elders and students, where consensus—rather than multiple individual perspectives—is sought, our follow-up research is likely to achieve more meaningful results. With this model, groups of Elders and students will come together to learn together—or as Lunney-Borden (2010) has observed, *mawikinutimatimk*.

Moreover, our ongoing research also has two other notable changes from our initial conversation sessions. First, instead of using pseudonyms throughout, we will be sharing participants' names and communities (unless they indicate they wish to remain anonymous). We believe that for far too long Aboriginal voices have been silenced in research (results). To us, their voices are paramount. It is our hope that by connecting their names to their comments and stories, they will retain and hold onto their own power. These are their ideas, not ours. And we want them to be recognized for them. Second, we are more closely focusing our follow-up research on physical education. To do this, we are focusing our Sharing Circle discussions around four areas of culturally relevant physical education. (Western physical education designs have three broad areas: physical/psychomotor, cognitive, and affective.) This research will be focusing upon Spiritual (East), Emotional (South), Physical (West), and Mental (North). It is our goal to work with Elders and students to better articulate what outcomes we might aim for in these four areas and then to decide, together, what might then be done, and how, in physical education to achieve them.

We know that our initial research has allowed us to recognize the necessity of this work but it has also let us know that it is unfinished. We believe we are now better positioned to do more meaningful follow-up research. In addition to this, we also recognize that we are on a research journey. And unlike most of the other educational research we do—which can sometimes be started and finished within a few months—this is more likely a life-course inquiry. Given our relationships we have forged with our Indigenous partners in beginning this research, we are hopeful that we can build on these partnerships and create additional opportunities for future collaborations.

References

Aboriginal Affairs and Northern Development Canada. (2013). *Indian register population affiliated with First Nations by gender and residency 2012.* Retrieved from http://www.aadnc-aandc.gc.ca/DAM/DAM-INTER-HQ-AI/STAGING/texte-text/rip2012_1374066492835_eng.pdf

Anderson, D., Horton, L., & Orwick, S. (2004). First Nations teacher education: Issues for First Nations communities. In Chiefs of Ontario (Eds.), *The new agenda: A manifesto for First Nations education in Ontario.* Toronto, ON: Chiefs of Ontario.

Archibald, J. (2009). Creating an Indigenous intellectual movement in Canadian universities: The stories of five First Nations female academics. In G. Valaskakis, M. Stout, & E. Guimond (Eds.), *Restoring the balance: First Nations women, community, and culture* (pp. 99-123). Winnipeg, MB: University of Manitoba Press.

Battiste, M. (1998). Enabling the autumn seed: Toward a decolonized approach to Aboriginal knowledge, language, and education. *Canadian Journal of Native Education, 22*(1), 16-27.

Beeman-Cadwallader, N., Quigley, C., & Yazzie-Mintz, T. (2012). Enacting decolonized methodologies: The doing of research in educational communities. *Qualitative Inquiry, 18*(1), 3-15.

Benjamin, C. (2014). *Indian school road: Legacies of the Shubenacadie Residential School*. Halifax, NS: Nimbus.

Bell, N. (2014). Teaching by the medicine wheel: An Anishinaabe framework for Indigenous education. *Education Canada, 54*(3). Retrieved from http://www.cea-ace.ca/education-canada/article/teaching-medicine-wheel

Berger, P., & Epp, J. R. (2006). Practices against culture that "work" in Nunavut schools: Problematizing two common practices. *McGill Journal of Education, 41*(1), 9 - 27.

Bopp, J., Bopp, M., Brown, L., & Lane, P., Jr. (1985). *The sacred tree* (2nd ed.). Lethbridge, AB: Four Worlds International Institute for Human and Community Development.

Brown, L., & Strega, S. (Eds.). (2005). *Research as resistance: Critical, indigenous and anti-oppressive approaches*. Toronto, ON: Canadian Scholars' Press.

Casey, C., & Kentel, J. A. (2014). Diversities in physical education. In D. B. Robinson & L. Randall (Eds.), *Teaching physical education today: Canadian perspectives* (pp. 123 - 136). Toronto, ON: Thompson Educational.

Castagno, A. E., & Brayboy, B. M. J. (2008). Culturally responsive schooling for Indigenous youth: A review of literature. *Review of Educational Research, 78*(4), 941 - 993.

Champagne, L. D. (2006). *Physical education teachers as allies to Aboriginal students: Dimensions of social consciousness*. (Master's thesis). Retrieved from http://mspace.lib.umanitoba.ca/handle/1993/7970

Chilisa, B. (2012). *Indigenous research methodologies*. Thousand Oaks, CA: Sage.

Columna, L., Foley, J. T., & Lytle, R. K. (2010). Physical education teachers' and teacher candidates' attitudes toward cultural pluralism. *Journal of Teaching in Physical Education, 29*(3), 295 - 311.

Culp, B. (2010). Are your S's in effect? Ensuring culturally responsive physical education environments. *Strategies: A Journal for Physical and Sport Educators, 24*(2), 10 - 14.

Denzin, N., & Lincoln, Y. (2008). Locating the field: Performing theories of decolonizing inquiry. In N. Denzin, Y. Lincoln, & L. T. Smith (Eds.), *Handbook of critical and Indigenous methodologie*s (pp. 21 - 29). Thousand Oaks, CA: Sage.

Douglas, D., & Halas, J. (2013). The wages of whiteness: Confronting the nature of the ivory tower racism and the implications for physical education. *Sport, Education and Society, 18*(4), 433 - 474.

Flory, S. B., & McCaughtry, N. (2011). Culturally relevant physical education in urban schools: Reflecting cultural knowledge. *Research Quarterly for Exercise and Sport, 82*(1), 49 - 60.

Forsyth, J. (2012). Bodies and meanings: Sports and games at Canadian residential schools. In J. Forsyth & A. Giles (Eds.), *Red and white: Aboriginal peoples and sport in Canada* (pp. 182 - 205). Vancouver, BC: UBC Press.

Gregory, G. H., & Chapman, C. M. (2013). *Differentiated instructional strategies: One size doesn't fit all.* Thousand Oaks, CA: Corwin.

Halas, J. M. (2011). Aboriginal youth and their experiences in physical education: "This is what you've taught me." *PHEnex Journal, 3*(2), 1 - 22.

Halas, J., McRae, H., & Carpenter, A. (2012). The quality and cultural relevance of physical education for Aboriginal youth: Challenges and opportunities. In J. Forsyth & A. Giles (Eds.), *Red and white: Aboriginal peoples and sport in Canada* (pp. 182 - 205). Vancouver, BC: UBC Press.

Hokowhitu, B. (2008). Understanding the Mäori and Pacific body: Towards a critical physical education pedagogy. *New Zealand Physical Educator, 41*(3), 81 - 91.

Hylton, K. (2015).'Race' talk! Tensions and contradictions in sport and PE. *Physical Education and Sport Pedagogy, 20*(5), 503 - 516.

Kalyn, B. (2006). *A healthy journey: Indigenous teachings that direct culturally responsive curricula in physical education*. (Unpublished doctoral dissertation) University of Alberta, Edmonton, AB.

Kalyn, B. (2014). Indigenous knowledge and physical education. In D. B. Robinson & L. Randall (Eds.), *Teaching physical education today: Canadian perspectives* (pp. 153 - 176). Toronto, ON: Thompson Educational.

Kitchen, J., Cherubini, L., Trudeau, L., & Hodson, J. (2009). Aboriginal education as cultural brokerage: New Aboriginal teachers reflect on language and culture in the classroom. *McGill Journal of Education, 44*(3), 355 - 375.

Kovach, M. (2009). *Indigenous methodologies: Characteristics, conversations, and contexts*. Toronto, ON: University of Toronto Press.

Kvale, S. (1996). *Interviews: An introduction to qualitative research interviewing*. Thousand Oaks, CA: Sage.

Ladson-Billings, G. (1994). *The dreamkeepers*. San Francisco, CA: Jossey-Bass.

Ladson-Billings, G. (1995). But that's just good teaching! The case for culturally relevant pedagogy. *Theory into Practice, 34*(3), 159 - 165.

Lavallee, L. (2009). Practical application of an Indigenous research framework and two qualitative Indigenous research methods: Sharing circles and Anishnaabe symbol-based reflection. *International Journal of Qualitative Methods, 8*(1), 21 - 40.

Legge, M. (2011). Te ao kori as expressive movement in Aotearoa New Zealand physical education teacher education (PETE): A narrative account. *Asia-Pacific Journal of Health, Sport and Physical Education, 2*(3/4), 81 - 95.

Leistyna, P., Woodrum, A., & Sherblom, S. A. (Eds.). (1996). *Breaking free: The transformative power of critical pedagogy*. Cambridge, MA: Harvard Educational Review Reprint Series.

Lunney-Borden, L. (2010). *Transforming mathematics education for Mi'kmaw students through mawikinutimatimk* (Unpublished doctoral dissertation). University of New Brunswick, Fredericton, New Brunswick, Canada.

Mazlow, A. H. (1968). *Toward a psychology of being*. New York, NY: Van Nostrand.

Melnychuk, N., Robinson, D. B., Lu, C., Chorney. D., & Randall, L. (2011). Physical education teacher education (PETE) in Canada. *Canadian Journal of Education, 34*(2), 148 - 168.

Orr, J., & Cameron, C. (2004). "We are Mi'kmaw Kina'matnewey": An assessment of the impact of the Mi'kmaw Kina'matnewey Self Government Agreement on the Improvement of Education for Participating Mi'kmaw Communities. Antigonish, NS: St. Francis Xavier University.

Paul, D. N. (2006). *First Nations history: We were not the savages.* Halifax, NS: Fernwood

Richardson, L. (1994). Writing: A method of inquiry. In N. Denzin & Y. Lincoln (Eds.), *The sage handbook of qualitative research* (pp. 516 - 529). Thousand Oaks, CA: Sage.

Robinson, D. B., Lunney Borden, L., & Robinson, I. (2013). Charting a course for culturally responsive physical education. *Alberta Journal of Educational Research, 58*(4), 526 - 546.

Salter, G. (2000). Culturally responsive pedagogy and the renaissance of a Maori dimension in physical education: Te reo kori as cultural taonga. *Journal of Physical Education New Zealand, 33*(2), 42 - 63.

Salter, G. (2003). Mäori culture and tradition in the mainstream: Teaching Te Reo Kori in sport education. *Journal of Physical Education New Zealand, 36*(1), 27 - 42.

Smith, L. T. (1999). *Decolonizing methodologies: Research and Indigenous peoples*. New York, NY: Zed Books.

Swadener, B., & Mutua, K. (2008). Decolonizing performances: Deconstruction the global post-colonial. In N. Denzin, Y. Lincoln, & L. T. Smith (Eds.), *Handbook of critical and Indigenous methodologies* (pp. 31 - 43). Thousand Oaks, CA: Sage.

Truth and Reconciliation Commission of Canada (TRC). (2012). *Truth and reconciliation commission of Canada: Calls to action.* Retrieved from http://www.trc.ca/websites/trcinstitution/File/2015/Findings/Calls_to_Action_English2.pdf

Wilkins, D. B. (1996). Introduction: The context of race. In K. A. Appiah, & A. Gutma (Eds.), *Color conscious: The political morality of race* (pp. 3 - 29). Princeton, NJ: Princeton University Press.

Wilson, S. (2008). *Research is ceremony: Indigenous research methods*. Halifax, NS: Fernwood.

Yazzie-Mintz, T. (2007). From a deep place inside: Culturally appropriate curriculum as the embodiment of Navajo-ness in class pedagogy. *Journal of American Indian Education, 46*(3), 72 - 93.

Endnotes

[1] We use the term "Aboriginal" to refer to Canada's First Nations, Métis, and Inuit (FNMI) peoples as well as the United States' Native American/American Indian, Alaska Native, Native Hawaiian, and Pacific Islander peoples. We use the term "Indigenous" to refer to first peoples throughout the world—including Canada's and the United States' Aboriginal peoples.

[2] We suggest those interested in understanding the Mi'kmaw residential school experience ought to look to Benjamin's (2014) *Indian School Road: Legacies of the Shubenacadie Residential School*.

The Community Strength Model: A Proposal to Invest in Existing Aboriginal Intellectual Capital

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Abstract

Indigenous communities have strengths and wisdom beyond Westernized culture's recognition and understanding. However, there continues to be significant difference in literacy and life skills between Indigenous and non-Indigenous adults. In this article, I reflect on a project that investigated how technology could best support adult literacy learners in an Australian Indigenous community. The project provided insights into how local people perceive the concept of literacy and the significant role it plays in critical thinking and quality decision making. The aim of my research was to create a set of principles to support adult literacy learners, which could be interpreted and applied on a global level. From this project, a new theoretical framework—the Community Strength Model—emerged. The cyclical model serves as a tool to assist researchers with conceptualizing the collective process of learning within an Indigenous culture, where being true to Indigenous knowledge and Indigenous ways of learning is imperative to successful outcomes. It also provides a structure to facilitate respectful research, which can be adapted for Indigenous communities globally.

Keywords: Indigenous culture; theory; synchronous technology; literacy; Indigenous ways of knowing

The Community Strength Model: A Proposal to Invest in Existing Aboriginal Intellectual Capital

The Community Strength Model discussed in this paper evolved from my previous research (Eady, 2015) with the Point Pearce Indigenous community in South Australia. The research aimed to connect and complement longstanding sociological and cultural theories of learning with a relatively new model of e-learning that is influenced by Indigenous culture. That research refined 11 design-based principles to guide respectful implementation of technologically based learning into Australian Indigenous communities. The principles remain timely as Australia rolls out a National Broadband Network, which will bring high-speed internet into many Indigenous communities for the first time.

Funding and Support

The South Australian Department of Further Education, Employment, Science and Technology's Digital Bridge Unit donated funds and support to the Point Pearce research project. The manager of the Digital Bridge Unit, a unit which promotes digital literacy, approached Indigenous communities to explain the project and gauge interest while the project was achieving University of Wollongong ethics approval.

Community Selection Process

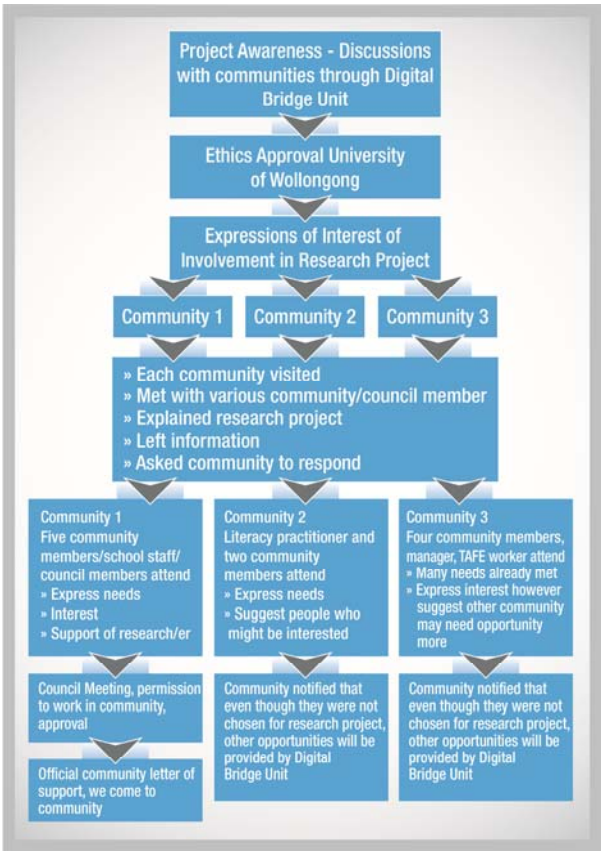

Figure 1. Community Sampling Strategy.

Figure 1 shows the strategy used to select Point Pearce. Three communities expressed interest in participating. I visited each of them and discussed their needs, the depth of the research and the community commitment that participation would require. One community wanted to improve Indigenous people's prospects of achieving employment at the local mine; however, interest seemed to be driven by a literacy practitioner who was not local. Another interested community was already committed to a range of training programs and international school trips, which caused concern about any additional time commitments. The community manager said the community was already doing well and the research might benefit another community more. Because of that suggestion, the communities' specific interests, and verbal support for the research, I chose to work with the third community that had expressed interest: Point Pearce. Point Pearce is located 280 kilometres north-west of Adelaide. It is home to the Narungga people. The community, of about 100 members, remains strong and committed to their land and language. Five community members including school staff and the council manager expressed support for the research.

Design-Based Research Approach

The Point Pearce qualitative study used a design-based research approach (van den Akker, Gravemeijer, McKenney, & Nieveen, 2006) to guide the investigation of synchronous technologies and how they could be used to build literacy in Indigenous communities. Design-based research offered the advantage of integrating practice and theory, while valuing interactive relationships between the researcher, the literature, literacy practitioners and community members. The approach also enabled data that was collected through interviews and focus groups to carry the authentic voice of Indigenous community members who contributed to research questions and draft guiding principles. The design-based research (Reeves, 2006) was undertaken in four phases, illustrated below.

Research Approach Phases

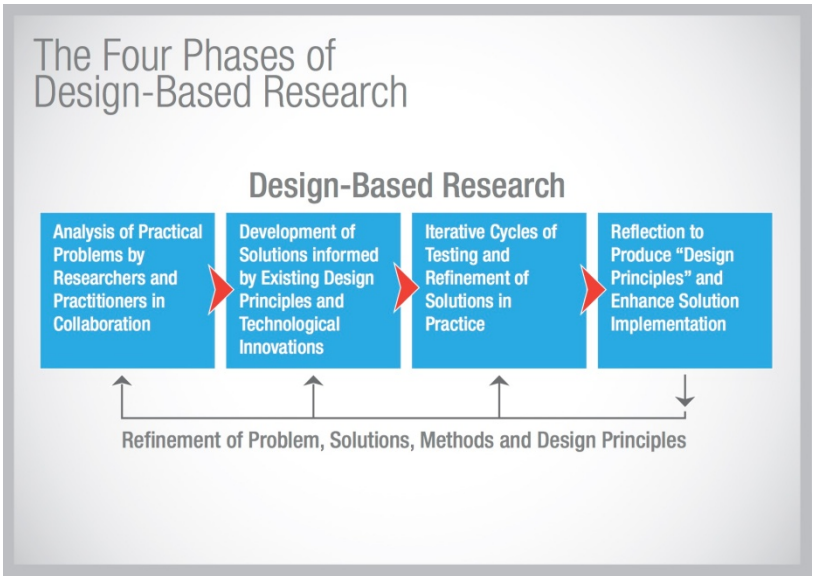

*Figure 2***.** Design-based research approach phases (Reeves, 2006).

Phase 1: Analysis of practical problems by researchers and practitioners in collaboration. A literature review identified practical problems associated with synchronous

technologies and literacy skill acquisition. These were analysed in collaboration with 11 practitioners who had worked with Indigenous communities, community members and/or with Indigenous literacy issues, in either a face-to-face or computer-based capacity. During this phase it became apparent that despite the value of information and communication technologies, a framework to guide the use of synchronous technologies for adult literacy learning in Indigenous communities did not exist.

Phase 2: Development of solutions informed by existing design principles and technological innovations. A collaborative community engagement project with the Point Pearce community was created, based on draft guiding principles drawn from the literature, and consultation with literacy practitioners and the community.

Phase 3: Iterative cycles of testing and refinement of solutions in practice. Point Pearce study participants took part in synchronous platform training sessions to prepare for the presentation of their work in the online environment. Three iterations of the presentation took place. Focus group members had the opportunity to discuss their thoughts and make changes to improve the next iteration of the project. In this way, Indigenous ways of knowing were consistently incorporated and the draft guiding principles were refined. This work can be viewed in its entirety (Eady, 2010), or in papers published from the work (Eady, 2015; Eady, Herrington, & Jones, 2010).

Phase 4: Reflection to produce "design principles" and enhance solution implementation. During this phase, 11 design-based principles emerged to guide future research in the areas of online learning and Indigenous adult literacy learners (Eady, 2015). This phase also revealed the Community Strength Model.

The Community Strength Model

The Community Strength Model has four components that can be specific to Indigenous communities. The Community Strength Model can be extrapolated and applied in various contexts, or used as an independent model. It is cyclical, as these components are unlikely to be fixed, and will need to be regularly reviewed and updated.

Components

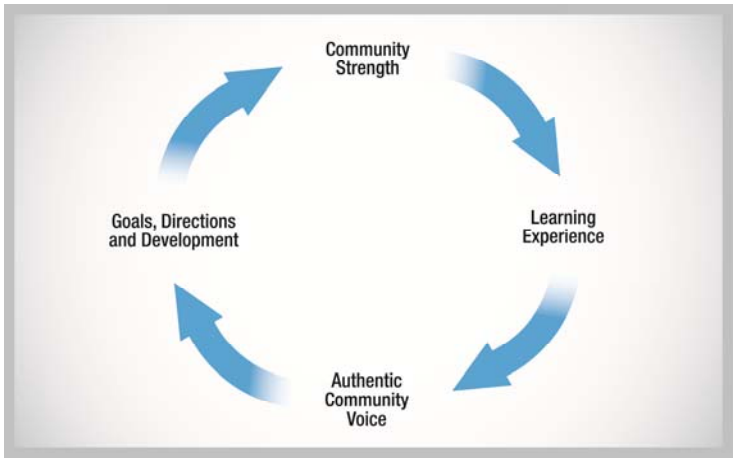

Figure 3: Components of Community Strength Model.

Community strength. Strengths will be present in every Indigenous community. In the Narungga context, during the time of this study the community was preparing to celebrate its 140th anniversary and this was recognized as a community strength. A large celebration was being planned and the community was bursting with pride and buzzing with excitement. Another strength was the way community members came together and worked for a common cause: the community's struggles in relation to their education system.

Shared learning experiences. The second component of the Community Strength Model is an environment for shared learning experiences to take place. At Point Pearce, when community members were given an opportunity to share their concerns in a non-threatening environment, they decided to incorporate into the project the traditional language, Indigenous knowledge, and the Elders' wisdom. Shared learning experiences were meaningful tasks that were relevant to the cause and were supported by skillful teachers, administrators and mentors. The tasks resulted in further sharing of experiences, harnessing the value of oral tradition, which is common to Indigenous people throughout the world.

While Western education techniques focus on developing the mind, Indigenous societies have long valued the development of survival skills, such as observation and memory, to ensure continuation of culture, language, and citizenship (Des Jarlais, 2008). Friesen and Lyons Friesen (2002) describe the use of legends by Indigenous groups in Canada as "the intricately-devised [*sic*] deliberate process of verbally handing down stories, beliefs, and customs from one generation to the next" (p. 64). Hughes and More (1997), the Australian National Training Authority (2002), and Dyson (2002) include the following learning strategies and preferences for Indigenous adult learners:

- learning through doing, rather than observing;
- learning from real-life experiences;
- a focus on skill acquisition for specific tasks;
- careful observation before practising new skills;
- trial and feedback approaches;
- the interest of the group taking precedence over the individual;
- a holistic approach of comprehending the entire concept before putting it into practice;
- strong representation of visual-spatial skills;
- deployment of imagery;
- contextual learning as opposed to abstract concepts;
- unprompted learning;
- an aspect of personal, face-to-face instruction; and,
- an emphasis on people and relationships.

Despite these commonalities, advocates of Indigenous learning caution against a one-size-fits-all approach. Instead, a more personalized approach is recommended, specifically designed to assess the learning style of each adult learner and prevent stereotyping (Australian Flexible Learning Framework, 2003; Eagles, Woodward, & Pope, 2005; Hughes & More, 1997). The same authors suggest that learning for Indigenous adults is best achieved through trial and error in real-life circumstances. In Yolngu society in Western Australia, for example, Indigenous knowledge is traditionally taught by Elders through imitation and observation, which is congruent with the societal value of maintaining traditional customs (Dasen, 2008; Verran & Christie, 2007).

Authentic community voice. Group members who had experienced the most Western education reflected on another data category, which the researcher termed authentic voice. Authentic community voice includes intergenerational sharing and passing down of culture and wisdom, as well as strong communication skills in traditional languages, people's first language, and English. The five components contribute to authentic community voice follow.

Community concerns. When a safe environment enabled people to express themselves naturally and to be respected for what they had shared, this authentic community voice fostered confidence to raise concerns about community well-being in the Point Pearce focus group. Community focus group (CFG) members raised concern in general conversation, but also in relation to photographs they were sorting into categories for their e-learning project. Some of these discussions included concerns about employment issues, lack of literacy skills, and worry for the future of the children in the community. One saw literacy as a way of making people safer to express their concerns:

> I used to think [literacy] was all about reading and writing. But I don't know as I've gotten older I think it's more important that we teach to be able to challenge and question and understand what's being said to them and having the confidence to be able to do that. So literacy is having the ability to do public speaking, having the ability to be confident in challenging someone else. Or know that it's okay to clarify any questions you know for your own understanding. So that's what I think literacy is. (Ally, CFG, October 13, 2010)

Power of position. Some Point Pearce participants were concerned with the lack of power of position that they had in the greater Westernized world. The members felt that they were getting further behind the way of the wider society especially in the area of computers and related technologies. The power of literacy and learning were seen as tools that would strengthen the voice of the community and that could be used to help the community to be confident and be heard as an important entity who had rights and needs as a viable Australian community. The issue of the unknown future of the local school brought forth the need to express these concerns and be heard in an equal and respectful way.

The group discussed how literacy can empower a person, and a community, to rise above an oppressed state and speak up for their rights. One participant explained:

> Literacy to me means power because it's a power of language that will get you wherever you want to go, so that's what literacy means to me, it's a power base and if you don't have it you've sunk, you know, and I've actually seen people without literacy go into to Centrelink and fill in a form and they can't do it, they can't even write their own name. So it's a shame job, it's a shame thing, they feel very embarrassed and they're told quite categorically that, you know, you're an idiot because you can't write and you can't read and you can't, you know, compute. So it's a deep shame that people feel because they do not have the literacy and so literacy in my book is a power base. Aboriginal people come from another language base, and we have to learn the literacy and the language of a dominant group because we want to work in a world that's not of our own making and to do that you have to have the literacy in the dominant group but I like to believe that it can be. (Ally, CFG, October 13, 2010)

Strength of Elders. The voice of Indigenous Elders is a particularly awe-inspiring gift. In the Point Pearce research project, three Elders participated in the collaborative community engagement project and contributed to the creation of the online synchronous presentation. These Elders provided facts about the project, stories that enhanced the journey and provided first-hand recollections of the early years of education in the community. Many of the focus group members heard stories and learned things that they had never been told before as a result of their participation in the collaborative community engagement project.

Traditional language. Another important aspect of authentic community voice was the use, preservation, and in some cases the revitalisation of traditional language. It was very important to the Point Pearce community that portions of their presentation were done in their traditional language. Audio files of the local children singing songs in their traditional language were also added to the presentation. In some cases, an interpreter may be required for a greater understanding of the content and expression of what is being discussed. One participant explained:

> Literacy like to us is, is being literate in your own language. Because I think if you're literate in your own language and you have a good understanding about the culture and the way [our] people do things, then I think you're confident to be able to tackle anything. (Eden, CFG, October 13, 2010)

Battiste (2008) defines Indigenous knowledge as a multifaceted system of knowing which encompasses "the complex set of languages, teachings, and technologies developed and sustained by Indigenous civilizations" (p. 87). Within Indigenous communities there are often rules governing the passing of knowledge, specifically in relation to spoken and unspoken knowledge (Brady, 1997). Within the protocols of knowledge transfer is the importance of preserving the uniqueness of local knowledge, which will aid the preservation and social order of the culture and community (Brady, 1997; Des Jarlais, 2008; Kinuthia, 2007; Kinuthia & Nkonge, 2005).

Indigenous ways of knowing. Warner (2006), using the term "Native ways of knowing," describes Indigenous knowledge as "acquired and represented through the context of place, revolving around the needs of a community and the best efforts to actualize a holistic understanding of the community's environment" (p. 150). Expanding from the individual notion of Western thought and intellect, Indigenous knowledge challenges the individual to view relationships in the context of the community, natural environment and a global perspective (Cajete, 2000). Regarded as much more than an instrument implemented to fulfill one's innate sense of curiosity, Indigenous knowledge bears a specific and significant role in Indigenous communities. Brady (1997) writes, "The desire to 'know' is not sufficient reason in Aboriginal societies for receiving knowledge" (p. 418).

Point Pearce participants believed that literacy and education needed to incorporate a strong Indigenous component, with one stating that education needs to be "immersed in culture." The participant suggested literacy helps people position themselves to be heard, while also giving them a strong sense of who they are and their identity as an Indigenous person:

> You know, like, I've always grown up with this belief that, you know, the Government make decisions, they make laws and it's all about keeping people in their places. And, you know, I did say that education empowers Aboriginal people

> to then stand up…because we do need those freedom fighters to stand up and say, "Hey we won't be putting up with this anymore." And, you know, this is what needs to happen and, and you know and, I guess ninety-nine point nine percent of the time, um, it's only a very few that stand up. …those people that do stand up and be counted are the ones that make a difference. And if an Aboriginal is strong in their identity they know where they come from…they know where they belong, they know who they are, then everything just falls into place. And, you know, it doesn't matter what sort of background…how dysfunctional families are, um,…or how supportive families are, if they know who they are then they can achieve anything. And that's why it's really important that through education we teach about the culture and we teach about the language and we strengthen that and then we teach them the curriculum. And it does go hand in hand. Like I said the only way out of poverty and the only way to make changes is if we have that strong foundation of education [literacy] and culture. (Eden, CFG, October 13, 2010)

Goals, Directions, and Development. The final element of the cyclical Community Strength Model focuses on creating manageable, community-wide, relevant goals and directions that lead to further community development. Community strength can grow from learning experiences based on authentic voice and strong community attributes. This improves confidence, which can lead to the community's directions and development being further identified and articulated. The Point Pearce community's goal was to tell a wider audience about the importance of the local community school and its role in preserving culture and language.

Point Pearce residents had a deep concern for their children and the future generations of the community. The group hoped to see the school re-open for older children as well and identified this as a direction they would like to pursue. These goals and directions led to larger community development directives which required community strength, which comes from an authentic voice, which fosters learning experiences to move further forward with goals, direction and development. The circle continues as the community strengthens.

The Community Strength Model Relative to a Broader Theoretical Framework

Multiple Cultural Model

The Community Strength Model is presented next as an extension of the Multiple Cultural Model (Henderson, 1996).

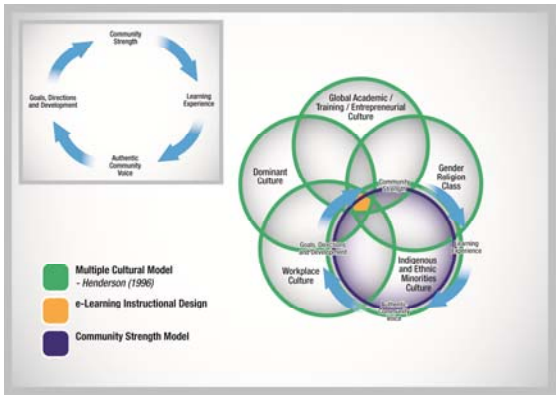

Figure 4: The Community Strength Model relative to the Multiple Cultural Model.

Henderson's (1996) Multiple Cultural Model of e-Learning design for Indigenous communities features five interlocking circles that represent the detailed cultural considerations that are relevant to Indigenous communities. The Multiple Cultural Model provides a framework for designing an effective e-learning environment, which promotes equality for learners from minority groups. Henderson (1996) presented this model in the context of a tertiary education program that was delivered to Indigenous communities.

The Point Pearce study, however, applied Henderson's (1996) concepts to an adult literacy-learning environment within an Indigenous community. The components of Henderson's five circles were altered to reflect the specific context of the Narungga people and the model was used to facilitate collaboration and interconnectedness between the Narungga community's five subcultures. These five subcultures, which are shared with other Indigenous communities on local, national, or global levels, have been identified in other research (Eady & Woodcock, 2010; El Sayed, Soar, & Wang, 2011; Henderson, 1996). They are as follows:

- dominant culture,
- workplace culture,
- global academic training and entrepreneurial culture,
- gender, religion and class, and
- ethnic minority and Indigenous culture.

As seen in Figure 4, Henderson's (1996, 2007) circles interlock to form an apex, which represents the most desirable scenario for e-learning to take place in an Indigenous community setting. The dominant culture in Henderson's research was Westernized society, which influences the outcomes of e-learning and Indigenous communities' involvement with e-learning experiences. Henderson (2007) expresses concern that e-learning applications and resources do not include relief from "the rich get richer and the poor get poorer" cultural paradigm of Westernized society, and that issues such as power, control and disadvantage are not readily addressed in the context of e-learning.

Situated Learning Theory

The next layer of the theoretical framework is Lave and Wenger's (1991) Situated Learning Theory, as illustrated below.

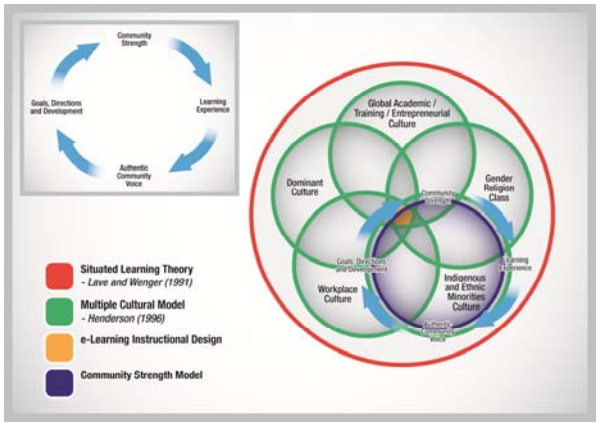

Figure 5: The Community Strength Model relative to the Multiple Cultural Model and Situated Learning Theory.

This theory suggests that social interaction and collaboration result in common learning groups called "communities of practice" (Lave & Wenger, 1991). The theory also suggests that effective learning takes place within authentic contexts. Lave and Wenger's (1991) interpretation of Vygotsky's (1978) sociocultural theory suggests the context in which knowledge is obtained and applied in daily situations governs the cognitive retention of the information being taught (Bell, Maeng, & Binns, 2013; Chin & Williams, 2006; Stein, 1998). This presents learning as a sociocultural phenomenon, in which the learner acquires knowledge through actively participating in specifically influenced contexts, rather than being an action of the learner obtaining information from an academic body (Bell et al., 2013; Stein, 1998).

At each turn of the research the Point Pearce community focus group provided meaningful input to the process of learning new computer and literacy skills. When it was decided that the topic choice, direction, and creation of the presentation would be managed by the focus group, and the result would be something that the group created together, one group member said:

> That would be good because it's always been like that in the past, that we've always had to rely on these – no offence – but white fellas to come in and show us how to do them and then they're still doing things for us, instead of us learning how to do it and then do it on our own. And I think that's the skills we need to build on. (Julie, CFG, November 5, 2010).

Lave and Wenger (2003) have also developed a model of situated learning that is based on a process of engagement in a community of practice, where learners commune through mutual participation in activities related to their learning. Building relationships over time, participants in communities of practice continue to develop meaningful relationships and resources that contribute to both the group and the individual's knowledge base (Bell et al., 2013; Lave & Wenger, 1991; Stein, 1998). Data presented in this research lend further support to Lave and Wenger's perspectives within Indigenous contexts.

Research participants from the Point Pearce community came together as a community of practice around a common goal. They became passionate about the case that they were supporting and presenting. Throughout the project, focus group members were learning things about their culture and community from each other. In this way, the collection of learning and (re)membering, as discussed by Haig-Brown (2005), enabled everyone in the community, young and old, to come together to share their stories and their personal journeys. They pieced together the "fragments" (Haig-Brown, 2005, p. 90) of history and created a fuller, more meaningful story for everyone involved.

Focus-group members learned and retained this new information, which enabled them to convey it more meaningfully. They decided to create a presentation about the past and present value of education to the Narungga people of Point Pearce. Much like the students in the group described by Haig-Brown (2005), these community focus group members were "all people with a commitment to learning more, using the knowledge, and passing it on to others who have less experience with it than they do" (p. 96). The personal connection to the content and the desire to share their stories fostered a fruitful and vibrant community of practice and brought meaning and relevance to the literacy skills that were achieved as a result. These skills included practical applications such as sorting, categorizing, discussing, scanning, cropping, sequencing, creating scripts, public speaking, and facilitating an online classroom. Other literacy and life skills were

also nurtured and valued, including commitment, dedication, patience, sharing, discussing, listening, interpersonal relations, teamwork, and taking pride.

In keeping with situated learning theory, this research demonstrated the value of a community of practice and learners having common interest in an Indigenous context. Lave and Wenger (2003) suggest that a community of practice's context, beliefs, and values encourage and enable the acquisition of new skills; hence this theory being represented as the second circle in the theoretical framework underpinning this research.

Sociocultural Theory

The final layer in the theoretical framework is another equally important theory—the Sociocultural Theory (Vygotsky, 1978), which is illustrated below as the largest circle and overarching theme of the research.

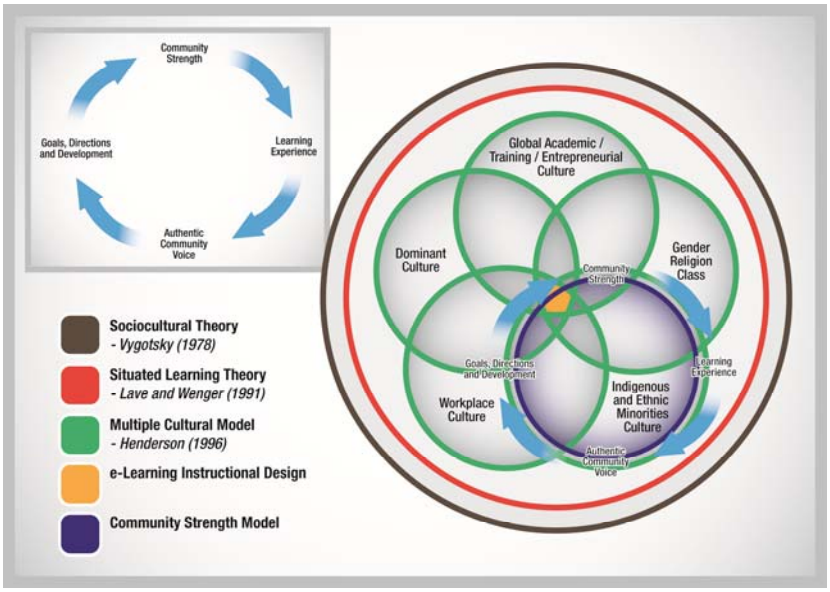

Figure 6: The Community Strength Model relative to the Multiple Cultural Model, Situated Learning Theory and Sociocultural Theory.

The premise of Sociocultural Theory is that quality social interactions can develop higher-order functions when they take place in cultural contexts (John-Steiner & Mahn, 1996; Meskill, 2013; Scherba de Valenzuela, 2002; van der Veer & Valsiner, 1991). Based on this philosophy, adults will learn more effectively when they socialize with other learners in a positive environment and instruction is deemed more effective when it is connected to cultural learning that is relevant to the learner (Meskill, 2013; Scherba de Valenzuela, 2002). This would suggest that learners function best in social settings, working together with others, collaborating and communicating in collective ways.

The study with the Point Pearce community demonstrated the importance of Indigenous adults being comfortable in their community environment. Focus-group members grew up knowing one another and had been through life's challenges and successes together. They shared an understanding of where the Narungga people originated and their history, the realities of today's community, and the hopes for the future. There was potential for Narungga culture to be

negatively impacted should the community lose its school, and this was of grave concern to the community and its members.

The community had a sense of ownership over the research project and a commitment to work together to complete it. The council was preparing to celebrate the community's 140th anniversary. The focus group discussed creating a presentation to celebrate the anniversary, which placed an emphasis on the school, how it came to be and how it had changed over the years. One focus group member reminded the rest of the group:

> Can I just say too that with the issues that we're facing around the school at the moment, about kids and their attendance and the possibility that the school might close…we don't have that many kids, that if something's done around the school that we can then also online present to the Education Department about the importance of the school, that might help with keeping the school here. (Kammie, CFG, November 5, 2010)

> We were just talking about it the other day and something that is really important to our community is this school. There are not many kids that go here and it is always being said that they [the school board] might close it down. We thought maybe we could do a presentation for the school board or something and we could learn some skills on the computer to do that. (Julie, CFG, November 5, 2010)

With this understanding, the focus group members' voluntary participation and commitment of time could be positioned in a broader socio-cultural context.

Vygotsky's (1978) theory suggests that guided social interactions serve a cognitive function that occurs in the zone of proximal development: the difference between what a learner can do independently and what can be accomplished cognitively with guided support from more knowledgeable others (Karlström & Lundin, 2013; van der Veer & Valsiner, 1991). This scaffolding was evident throughout the research, during training in how to use the synchronous platform, and as people undertook isolated tasks such as scanning, creating a presentation, and editing audio files. Throughout the study, the researcher observed the process of moving the learner from assisted performance to greater self-assisted and self-regulatory competence (Henderson & Putt, 1999; Karlström & Lundin, 2013; van der Veer & Valsiner, 1991). A more knowledgeable peer assisted the less knowledgeable learners, so they were then able to help others. The project showed how effective learning was achieved when Indigenous learners felt comfortable in their learning environment and when new tasks were relevant and culturally appropriate. This further supports Vygotsky's (1978) socio-cultural theory's significance in adult literacy learning settings in Indigenous communities.

Relationship to Community-Based Participatory Research

The Community Strength Model has many similarities to the recently emerging community-based participatory research method, as both focus on developing and implementing bi-culturally inclusive research practices (Broad, Boyer, & Chataway, 2006; Broad & Reyes, 2008; Sadler et al., 2012). Each model prioritizes the importance of using decolonization practices that respect all involved parties and utilize the strengths of the Indigenous community (Broad & Reyes, 2008; Simmonds & Christopher, 2013). In this way, both the Community Strength Model and the community-based participatory research method seek to give a voice to the marginalized

and place the Indigenous participants at the centre of the research (Broad & Reyes, 2008; Simmonds & Christopher, 2013).

Simmonds and Christopher (2013) recognize that community-based participatory research is "less a method than an orientation to research" (p. 2186). Within this paradigm, researchers serve the community by creating knowledge that is relevant to it (Broad et al., 2006; Simmonds & Christopher, 2013). This requires ongoing and open communication between the researchers and the community, allowing the community members to shape and design the research and allowing the researchers to hear about the needs of the community and the issues that require attention (Sadler et al., 2012). Each of these elements of the community-based participatory research method is also found in the Community Strength Model, where a cyclical process provides the structure for facilitating respectful research within Indigenous communities. The Community Strength Model suggests that not just research, but all learning experiences can be built on desires and strengths within a community and that these strengths then shape the future direction of learning and growth for communities.

Conclusion

The concept of a Community Strength Model emerged from this research. The model may present itself in a variety of different ways in different communities. However, in the context of the Narungga people of Point Pearce, it enhanced understanding of the value of harnessing Indigenous cultural logic in online learning and teaching environments. The Community Strength Model is built on the premise of Henderson's Multiple Cultural Model (Henderson, 2007), which incorporates ethnic minority and Indigenous culture as a cultural logic to be taken into consideration in the development of e-learning activities in Indigenous communities. The model also assumes that members of Westernized cultural logic understand how to view Indigenous cultural logic in the context of e-learning environments. In a closer examination of Henderson's Indigenous subcultures in relation to this research, the process of this project helped to clarify the meaning of Indigenous cultural approaches to learning and successful bi-culturally inclusive practices.

Many Indigenous communities have embraced and utilized synchronous technologies for literacy enhancement, the sharing of knowledge and cultural traditions, and the acquisition of vocational skills. However, this is not always a simple undertaking, as there are factors to consider when attempting to balance different knowledge systems, both Westernized education and Indigenous ways of knowing.

Although the literature indicates that synchronous learning technologies have the ability to contribute significantly to Indigenous communities, there also lingers within the communities, the reminder of the turbulent history of formal education, which inflicted, on a global level, "damaging practices of indoctrination, assimilation and colonization" (White-Kaulaity, 2007, p. 561). Systems of formal education and attempts at assimilation to Western values have historically denied Indigenous people access to ways of learning that reflect their unique ways of living, traditions, and knowledge (Battiste, 2008; Des Jarlais, 2008; Friesen & Lyons Friesen, 2002; United Nations Educational Scientific and Cultural Organization, 2006). In its attempts to assimilate Indigenous people to European culture and social systems, the European model of education resulted in "great linguistic losses worldwide" (Battiste, 2008, p. 86).

Synchronous learning technologies proposed by non-Indigenous sources are often viewed suspiciously by local leadership. Often equated to dominant educational practices associated with past colonisation/assimilation systems, these scholastic measures are likely viewed as potential threats of a mass invasion of mainstream education practices and materials contrary to local values, traditions, and customs (Facey, 2001; Hodson, 2004; Hunt, 2001). Similarly, current models of distance education being implemented for Indigenous learners are largely representative of the technology, heritage, and scholastic traditions of the developed Western nations, and lack culturally appropriate learning components that have been proven a factor to the success of adult learning (Australian Institute for Social Research, 2006; Ramanujam, 2002; Sawyer, 2004; Young, Robertson, Sawyer, & Guenther, 2005).

To address this challenge, Ramanujam (2002) cautions against blindly copying Western models of distance education and instead recreating Indigenous models, which, "will have greater relevance and strength than the copied or adopted models" (p. 37). Such models will likely gain the acceptance of the introduction of blending Western technology and Indigenous learning styles since prototypes with curriculum and learning objectives based on Western perspectives are often rejected in Indigenous communities (Taylor, 1997).

The Community Strength Model and design-based principles played a significant role in addressing these complex factors, paving the way for the Point Pearce community's multiple successes. The Point Pearce project resulted in the Narungga community focus group members gaining the skills to use the synchronous platform, not only as participants but also as facilitators and teachers.

As researcher, I first gained permission and built relationships with community members, who in turn welcomed the project to take place. After building acquaintances over time, I invited community members to attend a focus group discussion. During this discussion, in a safe, known environment for the group, the community members were able to express their concerns and identify needs in the community. These needs and concerns were strengthened by the need for power of position within the greater community, by Elders' wisdom, by traditional language, and by Indigenous knowledge, all of which led to a desire to learn meaningful and relevant literacy and computer skills. Considerate scaffolding from me, as researcher, was essential to support the motivation and the agency of the community members in their journey of learning the new skills.

With the acquired skills the community members were able to share their story with others and take pride in their accomplishments. This environment fostered further discussions about other ways that they could share strengths and concerns for their community. These learning experiences fostered further discussions about continued directions of the local school and developments that could be supported using the synchronous platform. The learning experiences that took place during this research were successful, in part, due to the relevant content for the learners, combined with the strengths and the components of those strengths in the Indigenous community.

Experience working with the Point Pearce community supports the value in paying close attention to the Community Strengths Model when collaborating with Indigenous communities in the implementation of new technologies. The model's inherent respect for the cultural needs and traditions of Indigenous community members reflects that every Indigenous person has a

voice and every Indigenous community has strengths and wisdom beyond Westernized culture's recognition and understanding.

It is time for Eurocentric educational approaches to take a backseat to Indigenous knowledge and ways of knowing and let the culture, language, and wisdom of these amazingly talented, big-hearted, kind, and welcoming people lead the ways in which they wish to approach learning. A top-down approach often results in limited success. Strength lies in diversity and differences; policy makers and curriculum developers at every level must learn to use their power to embrace these strengths in order to make the difference that is needed for Indigenous learners and communities everywhere.[1]

References

Absolon, K., & Willett, C. (2005). Putting ourselves forward: Location in Aboriginal research. In L. Brown & S. Strega (Eds.), *Research as resistance: Critical, indigenous, and anti-oppressive approaches* (pp. 97-126).Toronto, ON: Canadian Scholars' Press/Women's Press.

Australian Flexible Learning Framework. (2003). Cross-cultural issues in content development and teaching online. *Quick guides series-Australian Flexible Learning Framework, 9,* 2004.

Australian Institute for Social Research. (2006). *The digital divide: Barriers to e-learning - Final report*. Retrieved from http://www.ala.asn.au/

Australian National Training Authority. (2002*). Adapting online resources for Indigenous learners.* http://toolboxes.flexiblelearning.net.au/documents/docs/indighortreport.doc

Baskin, C. (2005). Storytelling circles: Reflection of aboriginal protocols in research. *Canadian Social Work Review, 22*(2), 171-187.

Battiste, M. (2008). The struggle and renaissance of indigenous knowledge in Eurocentric education.In M. Villegas, S. Neugebauer, & K. Venegas. (Eds.), *Indigenous knowledge and education: Sites of struggle, strength, and survivance.* (pp. 85 - 91). Cambridge, MA: Harvard Educational Review.

Bell, R. L., Maeng, J. L., & Binns, I. C. (2013). Learning in context: Technology integration in a teacher preparation program informed by situated learning theory. *Journal of Research in Science Teaching, 50*(3), 348-379.

Brady, W. (1997). Indigenous Australian education and globalisation. *International Review of Education, 43*, 5-6.

Broad, G., Boyer, S., & Chataway, C. (2006). We are still the Aniishnaabe Nation: Embracing culture and identity in Batchewana First Nation. *Canadian Journal of Communication, 31*(1), 35-58.

Broad, G., & Reyes, J. A. (2008). Speaking for ourselves: A Colombia—Canada research collaboration. *Action Research, 6*(2), 129-147. doi:10.1177/1476750307087049

Cajete, G. (2000). Indigenous knowledge: The Pueblo metaphor of indigenous education. In M. Battiste (Ed.), *Reclaiming Indigenous voice and vision*. Vancouver,BC: UBC Press.

Chin, S., & Williams, B. (2006). A theoretical framework for effective course design. *MERLOT Journal of Online Learning and Teaching, 2*(1), 12-21. Retrieved from http://jolt.merlot.org/

Dasen, P. R. (2008). Informal education and learning processes. In P.R. Dasen & A. Akkari (Eds.), *Educational theories and practices from the majority world* (pp. 25-48). New Delhi, IN: Sage.

Des Jarlais, C W. (2008). *Western structures meet Native structures: The interfaces of educational cultures*. Charlotte, NC: Information Age.

Dyson, L. (2002). *Design for a culturally affirming Indigenous computer literacy course*. Paper presented at the 19th Annual Conference of the Australasian Society for Computers in Learning in Tertiary Education (ASCILITE), Auckland, NZ.

Eady, M. (2010). *Creating optimal literacy learning environments using synchronous technologies to support Aboriginal adult learners effectively: A Narungga perspective.* (Doctoral dissertation, University of Wollongong).

Eady, M. (2015). Eleven design-based principles to facilitate the adoption of internet technologies in Indigenous communities. *International Journal of Social Media and Interactive Learning Environments, 3*(4), 267.

Eady, M., Herrington, A., & Jones, C. (2010). Literacy practitioners' perspectives on adult learning needs and technology approaches in Indigenous communities. *Australian Journal of Adult Learning, 50*(2), 260-286.

Eady, M., & Woodcock, S. (2010). Understanding the need: Using collaboratively created draft guiding principles to direct online synchronous learning in Indigenous communities. *International Journal for Educational Integrity, 6*(2), 24-40.

Eagles, D., Woodward, P., & Pope, M. (2005). *Indigenous learners in the digital age: Recognising skills and knowledge*. Paper presented at the Australian Vocational Education and Training Research Association, Brisbane, AU. Retrieve from https://avetra.org.au/documents/PA045Eagles.pdf

El Sayed, F., Soar, J., & Wang, Z. (2011). *Development of a culturally appropriate interactive multimedia self-paced educational health program for Aboriginal health workers*. Paper presented at the Enhancing Healthcare Education, Research and Practice Symposium, Hong Kong.

Facey, E. (2001). First Nations education by internet: The path forward, or back? *Journal of Distance Education, 16*(1). Retrieved from http://cade.athabascau.ca/

Friesen, J., & Lyons Friesen, V. (2002). *Aboriginal education in Canada: A plea for integration*. Calgary, AB: Detselig.

Haig-Brown, C. (2005). Toward a pedagogy of the land: The indigenous knowledge instructor program. In L. Pease-Alvarez & S. R. Schecter (Eds.), *Learning, teaching, and community: Contributions of situated and participatory approaches to educational innovation*. Hillsdale, NJ: Lawrence Erlbaum.

Henderson, L. (1996). Instructional design of interactive multimedia: A cultural critique. *ETR&D, 44*(4), 85-104.

Henderson, L. (2007). Theorizing a multiple cultures instructional design model for e-learning and e-teaching. In A. Edmundson (Ed.), *Globalized e-learning cultural challenges* (pp. 130-153). Hershey, PA: Information Science.

Henderson, L., & Putt, I. (1999). Theorizing audio conferencing: An eclectic paradigm. *Canadian Journal of Educational Communication, 27*(1), 21-37.

Hodson, J. (2004). Aboriginal learning and healing in a virtual world. *Canadian Journal of Native Education, 28*(1/2), 111-122.

Hughes, P., & More, A. (1997). *Aboriginal s ways of learning and learning styles*. Paper presented at the Annual Conference for the Australian Association for Research in Education, Brisbane, AU.

Hunt, P. (2001). True stories: Telecentres in Latin America and the Caribbean. *The Electronic Journal on Information Systems in Developing Countries, 4*(5), 1-17. Retrieved from http://www.ejisdc.org/ojs2/index.php/ejisdc/article/view/25/25 /

John-Steiner, V., & Mahn, H. (1996). Sociocultural approaches to learning and development: A Vygotskian framework. *Education Psychologist, 31*(3/4), 191-206.

Karlström, P., & Lundin, E. (2013). CALL in the zone of proximal development: Novelty effects and teacher guidance. *Computer Assisted Language Learning: An International Journal, 26*(5), 412-429.

Kinuthia, W. (2007). Instructional design and technology implications for Indigenous knowledge: Africa's introspective. In L. E. Dyson, M. Hendriks, & S. Grant (Eds.), *Information technology and Indigenous people* (pp. 105-116). Hershey, PA: Information Science.

Kinuthia, W., & Nkonge, B. (2005). *Perspectives on culture and e-learning convergence*. In G. Richards (Ed.), *Proceedings of E-Learn: World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education 2005* (pp. 2613-2618). Chesapeake, VA: AACE.

Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Melbourne, AU: Cambridge University Press.

Lave, J., & Wenger, E. (2003). Legitimate peripheral participation in communities of practice. In R. Harrison & F. Reeve (Eds.), *Supporting lifelong learning: Perspectives on learning* (pp. 111-126). London, UK: Taylor & Francis.

Meskill, C. (Ed.), (2013). *Online teaching and learning: Sociocultural perspectives.* Advances in digital language learning and teaching. New York, NY: Bloomsbury.

Ramanujam, P. (2002). *Distance open learning—Challenges to developing countries*. Delhi, IN: Shipra.

Reeves, T. C. (2006). Design research from a technology perspective. In J. Akker, K. Gravemeijer, S. McKenny, & N. Nieveen (Eds.), *Educational design research* (pp. 52-66). London, UK: Routledge.

Sadler, L. S., Larson, J., Bouregy, S., LaPaglia, D., Bridger, L., McCaslin, C., & Rockwell, S. (2012). Community-university partnerships in community- based research. *Progress in Community Health Partnerships, 6*(4), 463-469. doi:10.1353/cpr.2012.0053

Sawyer, G. (2004). Closing the digital divide: Increasing education and training opportunities for Indigenous students in remote areas. In *New practices in flexible learning. Australian*

flexible learning framework. Brisbane, AU:ANTA. Retrieve from http://www.voced.edu.au/content/ngv%3A36187

Scherba de Valenzuela, J. (2002). Sociocultural theory. Retrieved from https://www.unm.edu/~devalenz/handouts/sociocult.html

Simonds, V. W., & Christopher, S. (2013). Adapting Western research methods to indigenous ways of knowing. *American Journal of Public Health, 103*(12), 2185-2192.

Stein, D. (1998). Situated learning in adult education. *ERIC Digest, 195,* 1-7. Retrieved from http://files.eric.ed.gov/fulltext/ED418250.pdf

Taylor, A. (1997). Literacy and the new workplace: The fit between employment-oriented literacy and Aboriginal language-use. *British Journal of Sociology of Education, 18*(1), 63-80.

United Nations Educational Scientific and Cultural Organization. (2006). *Education for all. Literacy for life*. EFA global monitoring report. Retrieved from http://www.uis.unesco.org/Library/Documents/gmr06-en.pdf

van den Akker, J., Gravemeijer, K., McKenney, S., & Nieveen, N. (Eds.). (2006). *Educational design research*. Oxon, UK: Routledge.

van der Veer, R., & Valsiner, J. (1991). *Understanding Vygotsky*. Oxford, UK: Blackwell.

Verran, H., & Christie, M. (2007). Using/designing digital technologies of representation in Aboriginal Australian knowledge practices. *Human Technology, 3*(2), 214-227.

Vygotsky, L. S. (1978). *Mind in society*: *The development of higher psychological processes*. Cambridge, MA: Harvard University Press.

Warner, S. (2006). Native ways of knowing: Let me count the ways. *Canadian Journal of Native Education, 29*(2), 149-164.

White-Kaulaity, M. (2007). Reflections on Native American reading: A seed, a tool and a weapon. *Journal of Adolescent and Adult Literacy, 50*(7), 560-569.

Young, M., Robertson, P., Sawyer, G., & Guenther, J. (2005). *Desert disconnections: E-learning and remote Indigenous peoples*. Retrieved from https://www.researchgate.net/

Endnote

[1]**Social Location of Author:** It is important for researchers to identify themselves within the context of their projects, especially in research conducted alongside Indigenous partners (Absolon & Willett, 2005; Baskin, 2005). I have always had a great respect for, and kinship with, Indigenous people and their culture. My career as an educator has taken me to the far north of Canada where I taught primary school and lived for more than a decade. My passion and desire to work with Indigenous people and to help others see the strengths in their communities comes from experiencing the social norms and expectations of these communities first hand. My work has also included a collaborative initiative called Good Learning Anywhere, a project using synchronous technologies to help Indigenous adults in Ontario Canada reach their literacy goals. This project went on to become a province-wide initiative and has won many awards including the Council of the Federation Literacy Award in 2007.

In 2008, I was offered an international scholarship from the University of Wollongong, Australia to commence a PhD, which looked at implementing a similar program for Indigenous learners in Australia. This time, however, it was important that I did not decide for others what they needed to learn. Instead, my focus was building on existing strengths and extending learning opportunities from them. I worked with Aunty Barbara Nicholson; an Indigenous representative on the university ethics committee and respected community Elder, to ensure that the study followed ethical guidelines for Indigenous peoples.

I take great care in all areas of ethical research. My work always leads me to learn side-by-side *with* Indigenous people and not do research *on* Indigenous people. Such was Indigenous people's active participation in one of my projects that all participants wanted to be identified and share ownership. At the end of the project, we held a special graduation ceremony for everyone who participated. The Elder who took part in the project, Aunty Alice Rigney, read and approved of each page of the work and was also invited to be the guest speaker at the graduation ceremony. She said,

> There are many ways of learning and this process is another futuristic method of getting people to gain knowledge. It seems that we go from what was in the past to what is possible in the future. However, we must retain those valued cultural aspects of our lives which strengthen us like our family, culture, language and identity. Like everything, when we unite, there are those things that are outstanding and those that we need to build on because sometimes we come at the subject from different eyes and that's okay too because overall we want to make educational outcomes the best that we can make it for the most disadvantaged people on the planet in all countries everywhere. Those who have been dispossessed, deprived, disempowered but have survived. We have to make it right and sometimes using modern technology of the future is another method of this empowerment. This project helped us to see this and go in that direction" (Eady, 2010, p. viii).

Late 2015, it was confirmed that my great grandmother was a member of the Mi'kmaq Nation of Atlantic Canada. I have been, and will always be, an ally for Indigenous people, and an advocate for Indigenous rights and treating Indigenous people with respect. I believe it is my responsibility, as an academic, and a person, to uphold and demonstrate these values.

Digital Technology Innovations in Education in Remote First Nations

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Authors' Note

We acknowledge and thank the Nishnawbe Aski, who are living in the remote KO First Nations, for supporting us in our work. Brian also acknowledges the traditional, unceded lands and people of the Maliseet Nation where he lives and attends the University of New Brunswick. Thank you to all of the participants and 253 community questionnaire respondents who gave their time, ideas, and efforts to help move this research forward. Thanks to the people who gave us constructive comments that strengthened an earlier version of this chapter, in particular Dr. Susan O'Donnell, who is lead researcher of the First Nations Innovation research initiative. The research was conducted as part of the Brian's thesis program in Critical Studies at the Faculty of Education, University of New Brunswick and as part of the First Nations Innovation (FNI) research project (http://fni.firstnation.ca). Project partners include Keewaytinook Okimakanak, the First Nations Education Council, Atlantic Canada's First Nations Help Desk, and the University of New Brunswick. We thank everyone from KO First Nations, KO, KORI, the community researchers and other members of the FNI research team who contributed their ideas to this study and worked to make it happen. The FNI research has been funded since 2006 by the Social Sciences and Humanities Research Council of Canada (SSHRC) with in-kind contributions from the project partners. Brian's research is also supported by SSHRC.

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Abstract

Using a critical settler colonialism lens, we explore how digital technologies are being used for new education opportunities and First Nation control of these processes in remote First Nations. Decolonization is about traditional lands and creating the conditions necessary so Indigenous people can live sustainably in their territories (Simpson, 2014; Tuck & Yang, 2012). Remote First Nations across Canada face considerable challenges related to accessing quality adult education programs in their communities. Our study, conducted in partnership with the Keewaytinook Okimakanak Research Institute, explores how community members living in remote First Nations in Northwestern Ontario are using digital technologies for informal and formal learning experiences. We conducted an online survey in early 2014, including open-ended questions to ensure the community members' voices were heard. The critical analysis relates the findings to the ongoing project of decolonization, and in particular, how new educational opportunities supported by digital technology enable community members to remain in their communities if they choose to, close to their traditional lands.

Keywords: Critical studies; education; settler colonialism; decolonization; information and communication technologies; remote First Nations

Digital Technology Innovations in Education in Remote First Nations

> We need someone to teach the youth and kids about how to survive in the bush, about hunting, trapping, the old way of life, and how to get medicine from the land, what kind of plants to use, so many plants are out there. Our legends and stories from the past are getting lost, we need to teach our future kids about our traditions and culture and mostly our language.
>
> –Keewaytinook Okimakanak (KO) community member, online survey, 2014

Students in many remote First Nations in Northwestern Ontario and other regions across Canada now have a choice for their education: to remain in their community with their family, close to their traditional lands and teachings, or to travel to a far-away urban environment to access an education. The choice is made possible with digital technologies that support new formal and informal educational opportunities in remote First Nations. The use of digital technologies in these special geographic environments is changing how people create and share their experiences and teachings with others (McMullen & Rorhbach, 2003; Molyneaux et al., 2014; Simon, Burton, Lockhart, & O'Donnell, 2014). This study explores how digital technology is supporting the decolonization of education in remote First Nations in Northwestern Ontario.

To balance the changes introduced by these technologies with the status quo in the First Nations, their leadership and educators are cautiously developing local networks and introducing these technologies in their communities. The protection and maintenance of their local languages is critical in their decolonization struggle (Battiste, 2013 Simpson, 2014). The types of employment and the social changes introduced with digital technologies require long-term planning and a strong connection to traditional values. This long-term vision ensures the online content being used for educational purposes is appropriate and effective in sustaining local cultures and teachings.

For the past 20 years, First Nation leaders and educators across the North have directed the development of their locally owned and operated broadband networks, equipment, and the associated education applications in their communities. With these developments, people living in remote First Nations are innovating and creating choices in the delivery of new training programs and services. With digital tools and networks, remote First Nations are supporting a variety of training programs addressing some of the needs of the communities (Walmark, 2010). Parents and children are now able to remain in their communities to complete their education in familiar and safe spaces. Professional development and new learning opportunities along with other adult training programs are now being delivered online. Some of these programs are being planned and delivered by community members in their own language to upgrade local skills and provide cost-efficient alternatives to expensive travel. Programs supported by digital technologies provide community members with the opportunity to network with their peers in neighbouring communities. First Nation community members are active users of social media and many other online tools for informal learning opportunities (Molyneaux et al., 2014; Potter, 2010; Simon et al., 2014).

Our article presents the results of an online survey of residents of five remote First Nations in Northwestern Ontario conducted in early 2014 in collaboration with the communities and their tribal council, Keewaytinook Okimakanak (KO). The study explores two questions from a critical perspective: How are the people living in five remote KO First Nations using

digital technologies for learning new skills? And, what have been their experiences with these opportunities, and what are their perspectives on digital technology in the community.

We designed the survey using participatory action research (PAR) methodologies to ensure ownership of the survey and its data by KO and the communities (Beaton & Carpenter, 2015; Beaton, Perley, George & O'Donnell, in press). The PAR strategies used encourage the respondents to share their thoughts and experiences, and support the respondents, ensuring the process is done in a safe and engaging way (Wilson, 2008). When provided with the opportunity to share their recommendations and concerns, many respondents provided thoughtful comments about educational opportunities and the use of digital technology in their communities. The comments throughout this article are selected to present resident's perspectives on their use of these technologies.

Digital Technology and Decolonization in First Nations

> [We need] more land-based activities for the younger generations to learn how to survive out on the land where our ancestors taught us how to survive.
>
> –KO community member, online survey, 2014

The design and analysis of the study was informed by Tuck and Yang's (2012) article, "Decolonization is not a metaphor." Working from a "desire-based" approach to research (Tuck, 2009), the study provides another perspective on digital development opportunities in remote First Nations across Canada. Tuck and Yang's article is central to the current study: Decolonization is about land and about creating the conditions necessary so that Indigenous peoples have the opportunity to connect with and live sustainably on their traditional territories. In Freire's (1970) well-known critical text, *Pedagogy of the Oppressed*, his analysis of the relationship between the colonizer and the colonized sees the need for critical pedagogy in which students are co-creators of knowledge in a process of liberation. Tuck and Yang are critical of Freire's analysis because of its positioning f decolonization primarily as an individual psychological process. They believe the unsettling work required is the repatriation of Indigenous peoples to their land and their traditions for those who are able to undertake these lifestyles. The First Nations involved in this study are doing the work required to begin providing these opportunities for families. As well, the First Nations are creating the tools they require to support the economic and social environments they desire.

The use of digital technology for education, knowledge acquisition, and socialization needs to be carefully questioned and challenged by educators and First Nation leaders. The lack of online Indigenous language resources, the dominant use of English online, the technical dependencies, and the financial and social costs associated with digital technology installation and use: these are some of the unsettling historical and current challenges of technological adoption being considered by First Nation leaders and educators as they invest in these tools.

One key challenge for digital technology use related to decolonization in remote First Nations is the dominance of Western languages. Many authors have identified the central role of Indigenous language in maintaining Indigenous culture (Battiste, 2013; Simpson, 2014). Almost all Indigenous languages in Canada are endangered, and easy access to the dominant Western languages online means that community members spending their time online are immersing themselves in Western culture. The target audience for most online content and services is the

"Western" population (Pannekoek, 2001; Pasch, 2015) and English is the overwhelmingly prevalent language used on the Internet, while many scarcely-used and endangered Indigenous languages are virtually non-existent.

As a result, the Internet and associated technologies may fuel the disappearance of Indigenous languages even as the communities strive to preserve them. To deflect the globalizing force of technology, the literature highlights the importance of providing community members with access to localized online resources catered to community-specific needs (Dyson & Hendriks, 2007; Gordon, 2006). This will help to ensure the protection that Indigenous peoples require to maintain ownership and control over their knowledge, language, and culture (Nickerson & Kaufman, 2005).

Furthermore, much of the existing material representing Indigenous peoples on the Internet imposes an outsider worldview that misrepresents and objectifies the culture, thereby furthering a colonialist agenda and contradicting the holistic values that Indigenous cultures uphold (Iseke-Barnes & Danard, 2007; Perley, 2009; Todd, 1996). At the same time, there are many examples of Indigenous organizations and communities using digital technologies to preserve Indigenous languages (Beaton, et al. in press). Pasch (2015) provides an excellent discussion of the "double-edged sword" of technology, including both utopian and dystopian views about bringing cutting-edge digital technologies into Inuit communities.

Digital technologies can support decolonization work. Being on the land, undertaking land-based economic and educational activities, supporting traditional and cultural practices—these activities require innovative approaches to education and skills training (Battiste, 2013; Potter, 2010; Walmark, 2010). As First Nation communities undertake these transitions, they are using digital technologies in many of the same ways the people and communities historically adopted other disruptive tools, including the use of guns for hunting, metal pots for cooking and other tools integrated into their communities, culture, and traditional practices. Using digital tools can be considered another colonizing effort by people examining these digital technology developments. For many Indigenous people living and working in these remote communities, digital technologies are often presented as another tool or weapon to protect and develop their communities and support the decolonization work required to defend their lands and resources from the colonizers. As they invest in digital developments in their communities, First Nation elders and leaders want to build online language resources, to share traditional and cultural activities and teachings in the language, to access information, to ensure safe spaces and activities on the land, to archive and protect local knowledge and language for future generations, and to create local social and business enterprises (Carpenter, 2010; Beaton & Campbell, 2014, Potter, 2010; Simon et al., 2014).

Numerous other Indigenous authors recognize the importance of the land and its relationship with Indigenous people (Alfred, 2009; Battiste, 2013; Corntassel, 2012; Coulthard, 2007 Grande, 2004; Palmater, 2011 Simpson, 2014). First Nation leaders struggle with colonial governments for nation-to-nation status and justice for communities to protect their rights and access to their traditional lands (Barker, 2009). Simpson (2014) described this battle over the land that continues today as the longest resistance struggle in Canada since the first settlers arrived in North America. Corntassel (2012) describes how Indigenous people understand their responsibilities (rights) and relationships (resources) with the land and their role in protecting the land and waters for future generations. The resurgence (reconciliation) being undertaken by

Indigenous people is evident in a renewed strength and commitment to traditional knowledge and practices among the youth (Corntassel, 2012). As this article highlights, the people living and working in remote First Nations continue to practice their traditional lifestyles that require them to be close to the land.

Along similar lines, in her book, *Decolonizing Education,* Battiste (2013) explains the importance of an Indigenous learning experience grounded in the language and traditions of the First Nations supporting decolonization. The historical and contemporary settler government-imposed education curriculum oppresses and marginalizes the First Nation communities and people by working to remove them from the land and thereby disappear from the Canadian landscape (Battiste, 2013; Donald, 2009; Snelgrove, Dhamoon & Corntassel, 2014). The KO First Nations in Northwestern Ontario, as partners in our research, created and are successfully operating locally owned education environments that support the language and traditions of the communities. These activities are understood by the KO communities as indigenizing efforts of their learning and education systems. The effective use of their locally owned, developed, controlled, accessible, and operated digital tools and network support their educational environments and their decolonizing efforts (Beaton & Campbell, 2014; Carpenter, 2010). Their efforts are understood as an extension of the broader principals of Ownership, Control, Access and Possession (OCAP) (Assembly of First Nations, 2007, 2010; Schnarch, 2004).

The writings of Battiste, Corntassel, Tuck and Yang suggest that creating local and regional First Nation owned educational opportunities that address local needs and priorities, language and historical challenges is a decolonizing practice. The importance of the current research is framed by understanding the political and historical forces that shape how the communities and the people came to this point in their existence. A critical theoretical approach highlights that the First Nations' work with education, traditional languages and lifestyles is being achieved under challenging conditions but with renewed determination (Battiste, 2013; Corntassel, 2012; Grande, 2004; Tuck & Yang, 2012).

First Nations control of First Nations education is the goal of all Indigenous communities across Canada. Local First Nation education programs and services struggle to deliver culturally appropriate opportunities for students while trying to work with the federal government bureaucracy. Their school environments are underfunded, demand extensive reporting, work within the legacy of residential schools, often operating in poor facilities along with many other obstacles (AFN, 2010; Battiste, 2013; Royal Commission on Aboriginal Peoples, 1996). Finding innovative strategies to overcome these obstacles is a constant effort by community leaders and educators in remote First Nations. Local schools and education programs are using digital technologies in many ways to address many of these challenges (Beaton & Campbell, 2014; Lockhart, Tenasco, Whiteduck & O'Donnell, 2014; Whiteduck, Tenasco, O'Donnell, Whiteduck, & Lockhart, 2014).

The effective use of digital technologies in the development and delivery of education programs in First Nations across Canada is being researched and published by the SSHRC-funded research project, First Nations Innovation, based at the University of New Brunswick. The former Chief and Education Director of Elsipogtog First Nation worked with the research team to produce the article, "Post-secondary distance education in a contemporary colonial context: Experiences of students in a rural First Nation in Canada" highlighting the important role of digital technologies in the facilitation of new educational opportunities in First Nations

(Simon et al., 2014). The theoretical base for community participatory research and these new educational opportunities using digital technologies is well grounded in the works of Indigenous leaders and academics. A comprehensive literature review about digital technology adoption in Indigenous communities in Canada describes how community members, First Nations and their regional organizations are making use of these tools (Beaton et al., in press).

The KO First Nations and Their Online Education Opportunities

> I use the Internet access with just about everything I do. I research and check up on the things that I do online. One example is I looked up on how to clean a carburetor on a chainsaw. I use the Internet most of the time while trouble shooting just about everything. I honestly do not know what I would do without Internet access now.
>
> –KO community member, online survey, 2014

The beautiful but harsh Canadian Shield in the northwestern region of Ontario is the location of the six First Nations that the Keewaytinook Okimakanak (KO) tribal council serves. The six remote First Nations are only accessible by plane throughout most of the year. For a few weeks each winter a temporary road is constructed on the frozen lakes and across the Canadian Shield to haul in supplies of fuel and construction materials. Five of the First Nations are permanent (year-round) communities. McDowell Lake First Nation only has seasonal residents conducting traditional lifestyles of hunting and fishing as they work to develop their local infrastructure.

Fort Severn, a Cree community in Treaty 9, is the northernmost settlement in Ontario located on the shore of the Hudson Bay and the former location of the first fur-trading fort in Ontario. The other five KO First Nations—Keewaywin, Deer Lake, North Spirit Lake, Poplar Hill and McDowell Lake—are Oji-Cree and Ojibway communities located in Treaty 5 along the Western Ontario border shared with Manitoba. Both Treaty 5 and Treaty 9 include education as a treaty right. In the KO communities, education, both formal and informal is recognized as a right and has a very high priority for First Nations (AFN, 2010; Walmark, 2010).

The total on-reserve population in the five permanent communities is approximately 2,900 with another 850 members living off-reserve. The on-reserve population is very young, with approximately 50% of the people under the age of 18 (AANDC, 2014). The five year-round communities all have K–8 elementary schools with the Deer Lake School going to Grade 10; Deer Lake is the largest community with 1,000 residents and the other communities have resident populations between 400 and 500.

The KO tribal council delivers second-level support services and programs directed by the chiefs of these First Nations who make up the Board of Directors for the not-for-profit organization. They are all members of Nishnawbe Aski Nation, their regional political organization, the Chiefs of Ontario, the provincial political organization and the Assembly of First Nations, their national political organization. All of these representative organizations include education as an important policy priority (AFN, 2010; Carpenter, 2010; Carpenter, Gibson, Kakekaspan, & O'Donnell, 2013).

Living in these small, remote communities can be a challenge for the teachers and others who come from far-away places. Most are unfamiliar with the remoteness, the various levels of services, challenging facilities, and the different infrastructure. The First Nations people who live in these communities do so because this is where their families and ancestors have always lived

and where they want to raise their children to know their history and traditions. They have a deep connection to the land and their history of being there (Battiste, 2013).

Many of the challenges of providing education services in these unique remote environments are completely unfamiliar to people living in cities—for example the lack of a reliable power supply. Poplar Hill First Nation needed a new school for many years to replace their 60-year-old, wooden, mold-infested structure. But with their rapidly growing population there was a need to upgrade their existing diesel powered generators to be able to build and support the new school. They worked on their power upgrade requirements for many years and only recently accessed the infrastructure required. Their long awaited new school is now under construction with the opening to take place in the fall of 2016.

Lifelong learning initiatives continue to be a priority in each of these remote communities. Within the local schools, the importance of the local language and traditions is emphasized in local elder teaching programs, traditional activities, and native language classes. Using digital technologies for formal and informal education and distance education makes it possible for everyone in these communities to stay close to their traditional lands and continue participating in the land-based activities that have always been practiced by the people in this region (Beaton & Campbell, 2014). All of these opportunities are possible because of the broadband networks owned and controlled by the KO First Nations and supported by their tribal council KO (Beaton & Campbell, 2014; Carpenter, 2010).

Each First Nation school has an early childhood education program for four and five year olds. Deer Lake and Poplar Hill First Nations work with Health Canada to operate their Headstart education and childcare program for the young children and their families. Health Canada funds a limited number of Headstart programs in First Nations to help prepare young children, ages 3 and up, along with their families for successfully attending school. There is a strong demand for childcare programs and services in all the communities so parents can take on employment opportunities whenever they arise; however, daycare services do not exist in any of the communities. Family and community gatherings and special occasions provide the primary opportunity for the young children to participate, contribute, and learn about the importance of the local traditions and culture.

Along with the local primary school operated by the First Nation, another formal education opportunity includes the Keewaytinook Internet High School (KIHS) that has a classroom in each community for teenagers and young adults. KIHS, operating since 2000, is a digitally enabled Ontario accredited secondary school environment where students can now receive their diploma in their home First Nation (Potter, 2010; Walmark, 2010). Students in KIHS classrooms in each partner First Nation are required to attend school and complete all the required work that is presented online. Student support is provided by the local qualified high school teacher who teaches their area of specialty online to students in the other First Nation KIHS classrooms across the region. The local teacher acts as a local mentor for the students in the community where they live. Specific questions about the school or courses are supported by regional administrative staff and the teachers in the other classrooms using a variety of digital tools.

The Wahsa Distance Education learning centre is also available in these First Nations supporting adult students who are completing their high school program. The digital tools in

these classrooms are often used for other online education courses and upgrading programs. Both the elementary and high school classrooms are well equipped with digital equipment (McMahon et al., 2014). Working with locally trained technicians and classroom facilitators makes it possible for community members to get the support they require to complete formal courses as well as skills upgrading programs. Other regional programs are supported by regional First Nation organizations working together to provide skills training in areas such as band administration, tutor escort, classroom assistant, and teacher trainer, as a few examples. Contact North, Ontario's distance education network, also works with different institutions to provide education programs in these communities.

Videoconferencing is a popular tool used by community members to meet with students, instructors, and administrators when required. Videoconferencing is also used for professional development courses offered by KO, primarily to staff working in the community health centres. Keewaytinook Okimakanak Telemedicine (KOTM) offers videoconference workshops and training for its staff and community members on a regular basis (Carpenter et al., 2013; O'Donnell et al., 2009; O'Donnell, Beaton, & McKelvey, 2008).

Community members use digital technologies for informal and self-directed learning. The use of cell phone services for safety and sharing information while on the land is now an important component for planning these land-based activities (McMahon et al., 2011). Many community members share information online about hunting, fishing, and many other traditional economic activities. From cradle-to-grave, the local residents in these First Nations learn about and share stories and experiences of surviving on the land that they love while living in harmony with the resources available. These stories are passed along from generation to generation forming a rich history connecting everyone and everything in their traditional territories together. Community members are producing videos, sharing pictures, writing about their experiences, and posting stories online to document and record for others to know about their traditional activities and developments (Budka, Bell, & Fiser, 2009).

There have been very few community-based studies of the experiences with digital technologies for employment based in these remote communities. Our study's aim is to contribute new knowledge based on information obtained from adult learners in these remote First Nations about formal and informal training experiences with digital technologies. The two primary research questions considered in this study are:

- How are adults living in five remote KO First Nations using digital technologies for education?
- What are their experiences with these opportunities and their perspectives on digital technologies in their communities?

Participatory Action Research: The Online Survey With KO

> [We need] continued upgrading on technology services to be up to the same speed as the cities. And future cell service along existing winter road alignments to be able to call for help for travelers that have vehicle breakdowns or accidents.
>
> –KO community member, online survey, 2014

The chiefs of the KO First Nations passed a tribal council resolution authorizing this research and the publication of the results following guidelines managed by their research institute. Our methodological approach was holistic, community centered and participatory. The chiefs of the KO First Nations established the KO Research Institute (KORI) in 2004 to partner with other research institutions and researchers while ensuring their stories, knowledge, and data are protected and properly represented. Following the principles of OCAP – Ownership, Control, Access, Possession (AFN, 2007; Battiste, 2013; Beaton & Campbell, 2014; Schnarch, 2004), the research, the process, and the data obtained from the study along with the papers and reports produced are owned and controlled by KO and the KO First Nations. Keewaytinook Okimakanak First Nation leaders direct and support their Research Institute as an active partner in the FNI research project that produced this research. KORI staff worked closely with the researchers and the communities to support their participation in the research from start to finish.

Our paper highlights the participatory action research methods central to working with First Nations, as documented by various Indigenous authors (Battiste, 2013; Smith, 2012 Wilson, 2008). Participatory action research (PAR) is even more challenging for most academics due to the time, financial, and personal commitments required. As discussed later in this paper, PAR requires a strong partnership between everyone involved in this work. Establishing trust, transparency, accountability, constructive, beneficial activities, and relationships that work for the community, its members, and the research team takes a very long time (Kindon, Pain, & Kesby, 2007). Professors and most academic researchers are required to teach and be on campus for most of their time. Securing adequate funding to support PAR in far-away, difficult-to-reach communities is always a challenge. Within the academy the entrenchment of colonial and capitalist structures, programs, and policies, makes time a scarce and valued commodity. Too often academics without the required resources and support systems are pressured to publish or perish in a timely manner.

Identifying PAR research activities that will produce useful outcomes mutually beneficial for everyone involved is another time-consuming but essential component of the PAR methodology. Being able to properly conduct the research, obtain the data, and then share the information in a respectful manner according to community customs requires time and financial resources both scarce resources for most academics. Creating and supporting meaningful relationships with the community leaders and members requires a long-term commitment. PAR is under constant pressure to be recognized within the academy as it often challenges "ways of thinking, learning and being in the world" (Kindon, Pain, & Kesby, 2007, p. xxiii). The strength of PAR is its flexible structure supporting methods and theories required in different research environments. First Nations are requiring that academic authors working with First Nations will attempt to describe and write about Indigenous methods and theories while avoiding the one-size-fits-all generalizations often assumed in many publications.

Community-based research (CBR) is one description that some researchers use for PAR. It is always a challenge to find adequate resources, especially the time and money required, to travel, meet, plan, deliver, analyze, fund, report, publish and then start all over again in these expensive remote environments as required by the communities. These and other pressures will be discussed throughout this paper along with the effective use of communication technologies to offset some of these challenges. The only way this research could be delivered using PAR is with intensive use of digital technologies.

Two recent articles about the participatory action research (PAR) methods used in this work were co-authored with First Nation members to detail the theories, methodologies, time and effort required to successfully use PAR in the remote First Nations. Both articles highlight the long-term relationship and local capacity development work required to effectively undertake this research work using the ICT tools and networks put in place by the First Nations (Beaton et al., in press; Beaton & Carpenter, 2015).

The work involved in planning, developing, field testing and delivering the survey and the questions with the researchers, KORI, the KO staff, and the KO First Nation researchers was only possible because digital technologies are an acceptable communication tool in these communities (Carpenter et al., 2013). Online meetings with everyone involved in this research began several months before the survey was opened to the communities. It was important to ask the questions and information required by the communities and the KO programs to support their work. Conducting the survey and analyzing the information collected included digitally distributing materials to support the community researchers. Developing local First Nation capacity to create and administer surveys was a desired outcome for this work.

Discussions and planning for the survey began in the spring of 2013 with all the partners involved in the research. The KO Research Institute (KORI) and KNET had worked with university researchers in 2011 to conduct an online survey involving many First Nations across Northwestern Ontario working with KNET. KO was interested in doing another survey with just their member First Nations to assist the community leadership and program managers in their planning for effectively addressing the needs and priorities of the people in the communities. The online survey was open for two months beginning in February, 2014. Community researchers were contracted to support community members to complete the online survey containing 27 questions. The research team designed the survey to gather both quantitative and qualitative information so community members could share their ideas about local programs and services.

When the survey was completed, we worked with our partners to prepare reports for the community that were presented in person and discussed with community members and leadership, and the KO program managers. Follow-up interviews and reports using the survey information and meetings with each of the KO First Nations were conducted during the summer of 2014 when we traveled into each community. Future papers, research, and reports are anticipated outcomes from these community visits. These questions and the feedback provided from the survey results support local community and regional program and service planning and developments addressing local needs and priorities. In the discussion that follows the next section containing the survey findings, we examine how these research findings relate to the decolonization work being undertaken in these First Nations.

Survey Results

> I need my cable line hooked up in order to get Internet because I am doing online courses. I have to go next door where they do have the Internet.
>
> –KO community member, online survey, 2014

Demographic Profile of Respondents

This article considers only the people living most of the time in the KO First Nations and the information they provided in the survey about education and their use of digital technologies.

According to the latest government records, the total on-reserve population in the KO First Nations is 2,903 (AANDC, 2014). Of these, about 50% are under the age of 18 and were therefore ineligible to do the survey, leaving approximately 1,450 eligible adults; of these, 209 started the survey and answered some of the questions. This represents an overall 14% response rate from the KO on-reserve adult population. Of the 209 people who started the survey and live in the KO First Nations, only 15 were not KO First Nation band members. These could be band members of other First Nations or non First Nation people (teachers, nurses, etc.) living in the community.

One of the communities had a low number of respondents, likely the result of community trauma because of three suicides of young people during the 8-week period the survey was open. In this community, there were 17 people who started the survey with 14 surveys being completed with an adult population of approximately 250 people representing 7% of the people. The high number of suicides in these small communities is a tragic outcome of the challenges of living in a colonial relationship (Palmater, 2011). The impact of suicides in these small remote communities is severe.

Respondents represented a range of ages, from 18 to 69, with the majority 40 years or younger. More than 43% had completed less than a high school diploma, about 19% had completed high school, and the remainder had some post-secondary education or qualifications. This formal education profile is representative of the on-reserve population, where many do not complete high school for a variety of reasons. It should also be noted that the number of adults going back to complete their high school qualifications is increasing, largely due to the online secondary school programs on-reserve such as Wahsa and KIHS (Potter, 2010; Walmark, 2010).

Most of the survey respondents (62%) worked full-time or part-time in their community and most (79%) rarely or never travel outside their community. Among the common regular activities indicated were taking care of children, sharing skills and teaching others, cooking wild meat or local food and hunting, trapping and fishing.

How Respondents Use Digital Technologies for Education

To answer the research question, what online education opportunities are the people living in these five remote KO First Nations using, we are including some of the comments provided to a number of the survey questions. Completing the survey provided community members with the opportunity to provide information about their use of these tools and to share their thoughts about what they would like to see and the problems they are experiencing. They provided both positive and negative feedback on the existing learning and educational opportunities along with constructive recommendations about what is needed to support digital technologies in their community. There are many references to KIHS throughout the comments since most people are familiar with this online learning opportunity in their community.

The Internet has become a resource for learning something new. When asked what they do when they want to learn something new, most respondents (83%) indicated that they use social media sites (MyKnet, Facebook, etc) for this purpose every day. Often (daily or weekly) they search the web (84%) to learn something new, while others go online to ask a friend (66%). Daily or weekly they watch a video to learn how to make something or complete a task (45%). Every day, respondents share information using social media with someone living in same community (61%), with other Facebook users (61%), another KO First Nation (41%), another

community in northwestern Ontario (38%), living elsewhere in Canada (34%), with other MyKnet.org users (21%), and another country (17%).

The survey responses show the respondents are using online tools extensively for informal learning and sharing information. About half (51%) said they share skills or teach others online often (daily or weekly) while only 8% indicated they never undertake this activity. Telling or writing stories online is often done by 24% of the group with 19% never doing this activity. 18% of the respondents often share their art or music online, and 48% listen to music or look at art online created by Aboriginal people. Daily or weekly activities included sharing news and stories on social media (57%), reading stories about First Nations (51%), searching for information about First Nations and Aboriginal people online or posting announcements about different events (42%).

Videoconferencing is recognized as a valuable tool for the people in the communities. One respondent shared the following:

> For those parents who cannot travel to see their child who is in high school [in a city], there should be video open to the parents…to get a chance to catch up on their child progress and if he/she is having problems out there. Not to lose that closeness between a parent and a child. (KO community member, online survey, 2014)

At the same time, several community members recognized the need for more support to use videoconferencing effectively. One wrote, "Training should be taught to full time employees how to use video conferencing." The responses also highlighted that some online training opportunities are not well known in the communities. For example, one person suggested, "Ongoing training for health staff should be offered through video conferencing." In fact, KO offers a comprehensive program of ongoing training for health staff via videoconferencing. This finding points to the need for more effective promotion of these opportunities to community members.

The Keewaytinook Internet High School (KiHS) is the most visible, long lasting, and obvious online education opportunity in the five KO communities and it is clear from the survey that it has a big impact in the communities. Many of the comments referenced KIHS as a delivery model for expanding educational opportunities. Only 2% of respondents did not know about KIHS and 16% use the service daily. Most respondents (80%) indicated that a member of their family is or has been a KiHS student. More than half (58%) believes that KiHS students receive an excellent education (37% did not know), and 69% will recommend KiHS to someone else in the next year. Sixty-eight percent believe KiHS should be expanded, with only 1% believing it should not.

As discussed, other formal education environments in the KO First Nations that make extensive use of digital technologies include the Wahsa Distance Education Centre and the local school. These facilities and their use of digital technologies are included in the survey by the questions concerning where the people are working and how they are using these tools. Additional information is provided in the following section containing qualitative feedback from the survey concerning their learning and education experiences.

Respondents' Experiences With Online Learning and Education Opportunities and Their Perspectives on Digital Technologies in Their Communities?

Respondents made supportive comments about KIHS and its online high school program in different sections of the survey. Many of the respondents are familiar with this online education program because it is available in each of the First Nations. For example, on respondent wrote:

> I like the KiHS [because] my daughter is attending the local KIHS. She is still too young for us to let her go out to high school by herself. I also like the Internet service—it is an easy way to communicate with family in other communities. (KO community member, online survey, 2014)

Along with the positive there are critical comments about some of the challenges in trying to operate these types of online services. One community member wrote, "KiHS teachers need more support in our community. They arrive highly motivated and become discouraged because they are entirely independent in running their programs." Another community member wrote "No more advanced technology, it is scary!"

But there is always the need for improvements as several people wrote about the need for better, faster Internet, improved technical support services along with regular training for staff. A community member's final comment on the survey highlights the ongoing need for more information:

> Faster Internet…Trained / Educated Workers…If there are any new technology products/services the community should get workshops/ presentations/information sessions on the product or service from knowledgeable workers. Not everyone is familiar with all the services maybe an open house to present what we have so far (advertised so we all know). (KO community member, online survey, 2014)

Comments about other educational opportunities highlight the range of development possibilities that local digital technology supports. Several people wrote about the need for post-secondary programs with comments such as "Access to online college/training programs/courses like KiHS to go with the new school coming up. We do not have the luxury of being able to walk out the door and have access to these services." These comments indicate a need for more information and support so community members know about available online post-secondary opportunities and what resources are required to access them.

The survey successfully encouraged creative individuals to share their visions for their communities as the following comment demonstrates:

> I would like to see a job that would take kids and other age people to go out into a camp. I would like to have a centre or some building of some sort that would hold educational equipment like flight simulators, small shops for carpentry and mechanics, something for them that they can learn and use as a tool to become a role model for others. (KO community member, online survey, 2014)

Others wrote about the need for equitable services and the opportunities it would bring for future developments. "I would like true high-speed Internet that allows proper

downloading/uploading and streaming videos. Access to this speed would allow learning of new things in many new ways."

Discussion and Conclusions

> All technology should always be up to date and [need to upgrade digital] to supply the communities with access to all modern technology
>
> –KO community member, online survey, 2014

First Nation elders and leaders in these remote communities understand how digital technology can be a double-edged sword as they develop and manage these communication tools (Paush, 2015). Similar concerns and awareness were evident when the leaders supported the introduction of radio and television into their communities more than fifty years ago. The desire to share their stories and access the information improving local safety and expanding the choices for community members are important factors for supporting the introduction of digital technologies in their communities.

Decolonization efforts require people to be on the land in an informed and meaningful manner (Simpson, 2014, Tuck & Yang, 2012). Digital technologies can bring more immersion into Western culture while at the same time providing the means to be sustainable on the land (Pannekoek, 2001; Pasch, 2015). It is a delicate and conscious balancing effort to be aware and concerned with what is actually being undertaken by the elders and leaders. Owning and controlling these digital tools and the network connections is an important aspect of managing the content and messages being shared online. Influencing and producing local material in the local language is another opportunity being undertaken by different Indigenous producers across the country described by the survey participants.

The survey responses and data highlight how the people working, learning, sharing, and surviving in these remote communities are living very close to the land (Simpson, 2014). The theme of doing activities on the land including harvesting, hunting, trapping, fishing, canoeing, and camping was common with most people completing the survey. For the people living and surviving in the KO First Nations, "decolonization is not a metaphor"—it is their way of life and they are working hard to assist their children and future generations to continue their traditions, language, and culture (Battiste, 2013; Tuck & Yang, 2012). The survey responses demonstrate how digital technology offers people the ability to stay in their communities and learn what they need to live sustainable lives in these challenging environments. Access to and protection of traditional lands, languages, and local lifestyles is an ongoing challenge as colonial governments continue to impose capitalist policies supporting the transfer of their lands and resources to corporate interests in far removed urban centres (Alfred, 2009; Barker, 2009; Corntassel, 2012; Coulthard, 2007; Donald, 2009; Grande, 2004).

When responding to the online survey, the people living in these remote communities continually supported and wrote about their involvement with learning, education, and other activities that demonstrate their strong relationship with the land and all its resources. Their historical and contemporary commitment to learning about and working in these challenging environments supports the decolonization work being undertaken by everyone in the communities (Simpson, 2014; Snelgrove, Dhamoon, & Corntassel, 2014).

The critical theoretical analysis challenges the established theories about the requirements for education opportunities in remote communities and especially remote First Nations. The study provides evidence of First Nations using digital technologies to support ownership and control of their own educational opportunities and the development of innovative solutions addressing local needs and priorities. KIHS is an excellent example of a locally facilitated First Nation secondary school delivering courses and support services resulting in high school graduates celebrating their graduation in their own home community, surrounded by family, friends, and community members (Potter, 2010; Walmark, 2010).

Using this critical theory lens, our study strongly suggests that the people living in the KO First Nations are busy doing the work required to ensure their educational opportunities as well as their education system are locally owned and controlled. Land-based activities, language programs and learning from the elders and traditional people have always existed in these communities (Simpson, 2014). Now the adults—and everyone in these communities, including children, young people, parents and families—have choices to continue to live land-based lifestyles using digital technologies and locally-owned and managed infrastructure that supports initiatives that the people require.

Challenging contemporary regimes of truths and hegemony is now possible as remote and rural First Nations accessing digital technologies to create and distribute their own stories and experiences in various online media (Carpenter, 2010). As Budka (2012) shows in his research, First Nations are using social media to effectively share their stories and create their online voice. The challenge will always be finding the listeners and learners who are willing to consider other truths and ways of seeing our relationship to the land and all life forms. Land claims, Aboriginal and treaty rights, reconciliation, resurgence, responsibilities, relationships—all require immediate corrective measures by governments and settlers (Battiste, 2013; Corntassel, 2012; Snelgrove, Dhamoon, & Corntassel, 2014; Tuck & Yang, 2012; Palmater, 2011). Current educational hegemonies need to change to reflect a balanced understanding including both Indigenous people and settlers as everyone begins to learn and share past and contemporary experiences and understandings. Incorporating First Nation history as detailed by First Nation regimes of truths will help shape a more cooperative, inclusive, and collaborative learning and sharing environment for all Canadians. The use of digital technologies to support educational opportunities in remote First Nations as highlighted in this study is one of the many steps that are required for decolonization to occur across Canada. Celebrating the successes and acknowledging the people in these challenging environments helps community members continue their important work.

References

Aboriginal Affairs and Northern Development Canada (AANDC). (2014). *Aboriginal peoples & communities—First Nation profiles* (*Deer Lake, Fort Severn, Kee-way-win, McDowell Lake, North Spirit Lake, Poplar Hill*). Retrieved from http://pse5-esd5.ainc-inac.gc.ca/fnp/Main/Search/FNListGrid.aspx?lang=eng

Alfred, T. (2009). Colonialism and state dependency. *Journal of Aboriginal Health, 5*(2), 42-60. Retrieved from http://www.naho.ca/jah/english/jah05_02/V5_I2_Colonialism_02.pdf

Assembly of First Nations (AFN). (2007). *OCAP: Ownership, control, access and possession – First Nations inherent right to govern First Nations data*. Retrieved from http://64.26.129.156/misc/ocap.pdf

Assembly of First Nations (AFN). (2010). *First Nations control of First Nation education: It's our vision, it's our time*. Retrieved from http://www.afn.ca/uploads/files/education/3._2010_july_afn_first_nations_control_of_first_nations_education_final_eng.pdf

Barker, A. J. (2009). The contemporary reality of Canadian imperialism: Settler colonialism and the hybrid colonial state. *American Indian Quarterly, 33*(3), 325 - 351.

Battiste, M. (2013). *Decolonizing education: Nourishing the learning spirit*. Saskatoon, SK: Purich.

Beaton, B., & Campbell, P. (2014). Settler colonialism and First Nations e-communities in Northwestern Ontario. *The Journal of Community Informatics, 10*(2).

Beaton, B., & Carpenter, P. (2015). Creating appropriate participatory action research with remote First Nations. *Antistasis, 5*(2), 50 - 61. Retrieved from https://journals.lib.unb.ca/index.php/antistasis/article/view/24295/28154

Beaton, B., Perley, D., George, C., & O'Donnell, S. (in press). Engaging remote Indigenous communities using appropriate online research methods. In N. Fielding, R. M. Lee, & G. Blank (Eds.), *The Sage handbook of online research methods* (2nd ed.) London, UK: Sage.

Budka, P. (2012). *Report on the MyKnet.org and Facebook online survey*. *April-December 2011*. Retrieved from http://meeting.knet.ca/mp19/course/view.php?id=7

Budka, P., Bell, B. L., & Fiser, A. (2009). MyKnet.org: How Northern Ontario's First Nation communities made themselves at home on the World Wide Web. *Journal of Community Informatics, 5*(2).

Carpenter, P. (2010). The Kuhkenah Network (K-Net). In J. P. White, J. Peters, D. Beavon, & P. Dinsdale (Eds.), *Aboriginal policy research VI: Learning, technology and traditions* (pp. 119 - 127). Toronto, ON: Thompson Educational.

Carpenter, P., Gibson, K., Kakekaspan, C., & O'Donnell, S. (2013). How women in remote and rural First Nation communities are using information and communication technologies (ICT). [Special issue]. *Journal of Rural Community Development, 8*(2), 79 - 97.

Corntassel, J. (2012). Re-envisioning resurgence: Indigenous pathways to decolonization and sustainable self-determination. *Decolonization: Indigeneity, Education & Society*, *1*(1), 86 - 101.

Coulthard, G. (2007). Subjects of empire: Indigenous peoples and the 'politics of recognition' in Canada. *Contemporary Political Theory*, *6*(4), 437 - 460.

Donald, D. T. (2009). Forts, curriculum, and indigenous métissage: Imagining decolonization of Aboriginal-Canadian relations in educational contexts. *First Nations Perspectives, 2*(1), 1-24.

Dyson, L. E., & Hendriks, M., (Eds.). (2007). *Information technology and Indigenous people: Issues and perspectives*: Hershey, PA: Information Science.

Freire, P. (1970). *Pedagogy of the oppressed*. New York, NY: Herder and Herder.

Gordon, J. P. (2006). *Building a digital technologies network: A guide for small and remote Indigenous communities*. Vancouver, BC: First Nations Technology Council.

Grande, S. (2004). *Red pedagogy: Native American social and political thought*. Lanham, MD: Rowman & Littlefield.

Iseke-Barnes, J., & Danard, D. (2007). Indigenous knowledges and worldview: Representations and the Internet. In L. E. Dyson, M. Hendriks, S. Grant (Eds.), *Information technology and Indigenous people* (pp. 27-36). Hershey, PA: Information Science.

Kindon, S. L., Pain, R., & Kesby, M. (2007). *Participatory action research approaches and methods: Connecting people, participation and place*. London, UK: Routledge.

Lockhart, E., Tenasco, A., Whiteduck, T., & O'Donnell, S. (2014). Information and communication technology for education in an Algonquin First Nation in Quebec. *Journal of Community Informatics, 10*(2).

McMahon, R., Gurstein, M., Beaton, B., O'Donnell, S., & Whiteduck, T. (2014). Making information technologies work at the end of the road. *Journal of Information Policy , 4*(1).

McMahon, R., O'Donnell, S., Smith, R., Walmark, B., Beaton, B., & Simmonds, J. (2011). Digital divides and the 'first mile': Framing First Nations broadband development in Canada. *The International Indigenous Policy Journal, 2*(2). Retrieved from: http://ir.lib.uwo.ca/iipj/vol2/iss2/2

McMullen, B., & Rorhbach, A. (2003). *Distance education in remote Aboriginal communities: Barriers, learning styles and best practices*. Prince George, BC: College of New Caledonia Press.

Molyneaux, H., O'Donnell, S., Kakekaspan, C., Walmark, B., Budka, P., & Gibson, K. (2014) Social media in remote First Nation communities. *Canadian Journal of Communication*.

Nickerson, M., & Kaufman, J. (2005). *Aboriginal culture in the digital age*. Aboriginal Voice Cultural Working Group Paper. Toronto, ON.

O'Donnell, S., Beaton, B., & McKelvey, F. (2008). *Videoconferencing and sustainable development for remote and rural First Nations in Canada*. Retrieved from http://nparc.cisti-icist.nrc-cnrc.gc.ca/npsi/ctrl?action=shwart&index=an&req=5764202&lang=en.

O'Donnell, S., Perley, S., Walmark, B., Burton, K., Beaton, B., & Sark, A. (2009). Community-based broadband organizations and video communications in remote and rural First Nations in Canada. In L. Stillman, G. Johanson, & R. French (Eds.), *Communities in action* (pp. 107 - 119). Newcastle upon Tyne, UK: Cambridge Scholars.

Palmater, P. (2011). Stretched beyond human limits: Death by poverty in First Nations. *Canadian Review of Social Policy, 65/66*, 112 - 127.

Pannekoek, F. (2001, May 25-26). Cyber imperialism and the marginalization of Canada's Indigenous peoples. Paper presented at The Handing Down of Culture, Smaller Societies and Gobalization, Université Laval, Laval, QC.

Pasch, T. J. (2015, July). Towards the enhancement of Arctic digital industries: 'Translating' cultural content to new media platforms. *Jostrans, the Journal of Specialized Translations*, 24.

Perley, S. (2009). Representation and participation of First Nations women in online videos. *Journal of Community Informatics. 5*(1).

Potter, D. (2010). Keewaytinook Internet High School review (2003–2008). In J. P. White, J. Peters, D. Beavon, & P. Dinsdale (Eds), *Aboriginal policy research VI: Learning, technology and traditions* (pp. 148 - 157). Toronto, ON: Thompson Educational.

Royal Commission on Aboriginal Peoples. (1996). The report of the Royal Commission on Aboriginal Peoples. Ottawa, ON: Minister of Supply and Services Canada. Retrieved from http://www.collectionscanada.gc.ca/webarchives/20071124124315/http://www.ainc-inac.gc.ca/ch/rcap/sg/sga4_e.html

Schnarch, B. (2004), Ownership, control, access, and possession (OCAP) or self-determination applied to research: A critical analysis of contemporary First Nations research and some options for First Nations communities. *Journal of Aboriginal Health, 1*(1), 80 - 95.

Simon, J., Burton, K., Lockhart, E., & O'Donnell, S. (2014) Post-secondary distance education in a contemporary colonial context: Experiences of students in a rural First Nation in Canada. *The International Review of Research on Open and Distance Learning, 1*(15), 1 - 19.

Simpson, L. (2014). Land as pedagogy: Nishnaabeg intelligence and rebellious transformation. *Decolonization: Indigeneity, Education & Society, 3*(3), 1 - 25.

Smith, L. T. (2012). *Decolonizing methodologies: Research and Indigenous peoples* (2nd ed.). London, UK: Zed Books.

Snelgrove, C., Dhamoon, R. K., & Corntassel, J. (2014). Unsettling settler colonialism: The discourse and politics of settlers, and solidarity with Indigenous nations. *Decolonization: Indigeneity, Education & Society, 3*(2), 1 - 32.

Todd, L. (1996). Aboriginal narratives in cyberspace. In M. A. Moser & D. Macleod (Eds.), *Immersed in technology: Art and virtual environments* (pp. 179 - 104). Cambridge, MA: MIT Press.

Tuck, E. (2009). Suspending damage: A letter to communities. *Harvard Educational Review*, *79*(3), 408 - 429.

Tuck, E., & Yang, K-W. (2012). Decolonization is not a metaphor. *Decolonization: Indigeneity, Education & Society, 1*(1), 1 - 40.

Walmark, B. (2010). Digital education in remote Aboriginal communities. In J.P. White, J. Peters, D. Beavon, & P. Dinsdale (Eds.), *Aboriginal policy research VI: Learning, technology and traditions* (pp. 141 - 147). Toronto, ON: Thompson Educational.

Whiteduck, G., Tenasco, A., O'Donnell, S., Whiteduck, T., & Lockhart E. (2014). Developing an e-community approach to community services in Kitigan Zibi Anishinabeg First Nation. *Journal of Community Informatics, 10*(2).

Wilson, S. (2008). *Research is ceremony: Indigenous research methods*. Black Point, NS: Fernwood.

Culture in Schooling in the Inuvialuit Settlement Region

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Abstract

We describe research on Inuvialuit culture in schooling in the Inuvialuit Settlement Region in the northwestern Northwest Territories in Arctic Canada. A mixed-methods case study using questionnaires in the region's six communities explored students', parents,' and high school teachers' perspectives on Inuvialuit culture in the schools. While students and parents were pleased that local culture is reflected in the schools, most would like to see more Inuvialuit culture become part of schooling. Teachers would like to know more about Inuvialuit culture and history and would like professional development to help them teach Inuvialuit students more effectively. This research suggests that policy in the Northwest Territories to move towards culturally responsive schooling is yet to be fully embodied. It should be prioritized.

Keywords: Arctic Canada; Inuvialuit education; culturally responsive schooling

Culture in Schooling in the Inuvialuit Settlement Region

In Canada's Western Arctic, the Inuvialuit[1] students of the Inuvialuit Settlement Region (ISR)[2] have significantly lower school achievement than students in the rest of the Northwest Territories and Canada (Inuvialuit Regional Corporation [IRC], 2013). Despite recent changes to school policies and programming across the Northwest Territories and Nunavut, northern schools continue to operate primarily from a EuroCanadian framework with the majority of high school teachers arriving from the south (Aylward, 2009; Berger, 2009; McKechnie, 2014; Rasmussen, 2011). Culturally responsive schooling theory (e.g., Castagno & Brayboy, 2008; Ladson-Billings, 1995) suggests that Indigenous students may achieve more academic success with curriculum that reflects their culture and familiar pedagogy that prioritizes teacher-student relationships, and, that they also deserve a school environment that affirms their cultural identity. This article looks at students', parents' and high school teachers' perspectives on Inuvialuit culture in schooling in the ISR, using the lens of culturally responsive schooling and particularly what it can look like in Arctic contexts (e.g., Alaska Native Knowledge Network [ANKN], 1998; Barnhardt & Kawagely, 2005). We argue that students' and parents' desires for more Inuvialuit culture in schooling must be honored, and that high school teachers' openness to learning about Inuvialuit culture, and improving their teaching of Inuvialuit students, creates an opportunity for growth towards more culturally responsive schooling.

Culturally Responsive Schooling and Northwest Territories Education Policy

There is a significant body of research suggesting that school achievement increases with teaching that uses the "cultural knowledge, prior experiences, frame of reference, and performance styles of ethnically diverse students to make learning more relevant to and effective for them" (Gay, 2010, p. 31)—often called culturally responsive schooling or teaching. Culturally responsive teachers get to know their students, their cultural heritage, and experiences (Villegas & Lucas, 2002). They move beyond the superficial treatment of culture to develop and implement curriculum and pedagogical practices that are meaningful and relevant to the students they are teaching (Castagno & Brayboy, 2008).

Much work has been done on culturally responsive schooling in Alaska where the ANKN (1998) published the *Alaska Standards for Culturally Responsive Schools*. The *Standards* call for cultural knowledge to be the basis for education rather than as something to be taught in schools as a subject. Barnhardt (2009) has written about how the environment and local culture can become the "foundation for all learning" (p. 4), the starting point and bridge to school knowledge, and particularly Western science. Lipka et al.'s (2005) work has, similarly, showed how students can succeed when mathematics instruction is based on familiar cultural practices. There is evidence that much work is necessary in schools in the Canadian Arctic to implement schooling that is responsive to the culture, traditions, language, and practices of the host communities (Higgins, 2011; Lewthwaite & McMillan, 2010; McMillan, 2013).

Taking culture seriously in Arctic schooling has been frequently recommended, and parents across the north have long called for increases in local culture in their children's schooling (e.g., Berger, 2008; Arctic Institute of North America, 1973; Aylward, 2004; National Committee on Inuit Education, 2011; Northwest Territories Legislative Assembly Special Committee on Education, 1982; Tagalik, 2010). Nunavut, in the Eastern Arctic, is working to move Inuit ways and values into schooling (McGregor, 2012; Tagalik, 2010) and in the

Northwest Territories there is a major emphasis in educational policy that suggests Inuvialuit culture should be prioritized in classrooms in the ISR. This policy includes the *Aboriginal Language and Culture-based Education Departmental Directive* (Northwest Territories Education Culture and Employment [NWT ECE], 2004), the *Aboriginal Student Achievement Education Plan* (NWT ECE, 2011), and the *Education Renewal and Innovation Framework: Directions for Change* (NWT ECE, 2013).

Lacking from the literature is research looking at Inuvialuit culture in ISR schools, what today's students and parents want in schools in terms of Inuvialuit culture, and how teachers, who are not from the region, see Inuvialuit culture and their ability to teach in a culturally responsive manner. This article contributes in these areas and suggests ways to build teacher capacity in culturally responsive teaching.

The Study and Researchers

The Inuvialuit Regional Corporation (IRC),[3] looking to understand how to increase Inuvialuit student school achievement and to determine if NWT education policies adequately respond to the educational needs and realities of the Inuvialuit, initiated the study in cooperation with the Beaufort Delta Education Council. Questions related to Inuvialuit culture were one part of the broader research (Johnston & Berger, 2014); they are the focus here. Jennifer, a EuroCanadian who had lived in Inuvik for seven years and had worked as a researcher for IRC for three years, led the research. Paul, a EuroCanadian, was asked by IRC to work with Jennifer in an advisory capacity. Paul taught Grade 7 in Nunavut in the 1990s and has conducted research meant to support Inuit in creating Nunavut schooling that meets the wishes and needs of Inuit. He teaches at Lakehead University in Thunder Bay, ON. Melissa, also EuroCanadian, joined in writing this article. She is a Ph.D. candidate at Lakehead University, working on reflective practice in teacher preparation for teaching Indigenous students.

In 2016, we are concerned about being three White people writing about Inuvialuit schooling. We are somewhat comforted that the research was initiated by an Inuvialuit organization and that we presented the research findings on two occasions to the Beaufort Delta Education Council—an elected steering committee for the schools in the ISR—which is using the report on the broader study in the professional development of area teachers.

A Mixed-Methods Case Study Using Questionnaires

As a case study (Yin, 2003) on Inuvialuit culture in schooling in the ISR, this mixed-methods research used questionnaires (Gay, Mills, & Airasian, 2009) to determine youth, parent, and teacher views about culture in schooling in the ISR. Youth and parents in the ISR communities were invited to take part in IRC youth and parent questionnaire in March, 2013. Criteria for youth participation included being in Grades 7 - 12 or having attended high school within the last five years. Criteria for parent participation included having a child or children in Grades 7 - 12 or having children who attended high school within the last five years. Both youth and parents heard about the research through a community presentation, advertising via radio, flyers placed at their door, a phone call to homes identified on IRC's Inuvialuit Beneficiary list, or information from IRC disseminated in schools by teachers and principals. Participation was voluntary and participants' identities protected. Those administering the questionnaires were instructed to allow participants to not answer any question and to stop the interview if participants felt uncomfortable. They had contact information so they could refer participants for health or mental

well-being support if they because very upset during completion of the questionnaire.

The youth questionnaires for the broader research included 53 questions, some with multiple parts. The question types included: demographic; Likert Scale response with 5 point scale from "strongly agree" to "strongly disagree"; choose the best answer; one or several word answers; choose all that apply; yes/no; rating scale questions; and open-ended questions. Some questions were directly related to Inuvialuit culture in schooling, such as, What about this region and its people would you like your teachers to know, or know more about? In others, the connection was more tangential; for example, "missing hunting" was reported in answer to: What would be the pros and cons of moving away for schooling? For this reason, it is not possible to say that a certain number of the questions were culture-related and used in the analysis. Examples of some key questions are given in reporting the findings. The parent questionnaires included 49 questions, of similar types.

Questionnaire completion took place in participants' homes or an office identified by Jennifer or an IRC Community Field Worker (CFW), typically an Inuvialuit community member, trained by her. Jennifer asked the questions and recorded answers for 20 students and the CFWs for 140 students, while she completed questionnaires with 50 parents and while CFWs did this with 87 parents. The questionnaires took between 20 - 30 minutes to complete for youth and 30 - 40 minutes for parents.

Teachers were invited to take part in the IRC teacher questionnaire in September, 2013. The questionnaires were designed, following a preliminary analysis of the student and parent questionnaires, to get teachers' ideas about some of the salient issues identified by parents and students. Teachers were sent an electronic version distributed to the regions' high school teachers by the Supervisor of Schools to print, complete, and mail back to the IRC, and four weeks later a link to an online version on Survey Monkey. The teacher questionnaire included 36 Likert scale questions and four open-ended questions. The questions focused on teachers' experiences and thoughts about teaching Inuvialuit students in the ISR. Some examples appear in the reporting of key findings.

Participants

Of the 160 youth who completed the questionnaire, 97 were female, 62 male, and one unknown. Students in Grades 7 - 12 made up 76%, with most from Grades 10 - 12. Three percent were graduates, nine percent had stopped school, and two percent were in alternative programs. Participants were informed that they could decline to answer any question, and not all questions were relevant for all participants, so the actual number of respondents varied across questions—including for this one where data on grade is missing for 10% of youth participants.

With just 1200 students in ISR K-12 schools (Beaufort District Education Council, n. d.), approximately 550 of whom are in Grades 7 - 12, this sample of 160 high school students and recent students captured data from about 22% of all high school students across the six communities in the ISR. Students received a $50 gift certificate to the local store for participating. This, and the fact that adults who could be perceived as being connected to the schools facilitated the questionnaire completion, may have biased the sample, and we do not claim that our interpretations represent all ISR high school students; we do, however, believe that with this large sample from all communities there is reason to pay attention to the findings.

Most of the 137 parent respondents were Inuvialuit (95%), with a small number of Métis, Gwich'in, and other Indigenous peoples. More women than men, by almost three to one, completed the parent questionnaire, though nine participants did not declare their gender or specify "other." At the time of the interview, the majority (92%) of respondents had at least one child in high school. As with the students, we cannot claim that what we report represents all Inuvialuit parents in the ISR, but with a large sample drawn from all communities, we have confidence that the views expressed will be recognizable to people in the region.

The teacher questionnaire asked teachers about their personal cultural background to determine the number of local versus Southern (originating from southern Canada; for convenience, we use "EuroCanadian") teachers. About 75% of the 37 participants were EuroCanadian, with a range of experience teaching in the ISR from just beginning to over seven years. There are approximately 45 high school teachers in the ISR (BDEC, n. d.), most of whom are EuroCanadian. Responses to the questionnaire from nine Indigenous educators lead us to believe that the questionnaires may have been distributed more widely than to just high school teachers because there are fewer than nine Indigenous high school teachers in the region. The sample was not random and voluntary participation may have biased the sample; still, 28 EuroCanadian high school teachers represent well over half of EuroCanadian high school teachers in the ISR.

Descriptive statistics such as the percentage distribution of answers to Likert Scale questions were calculated and are reported here. Although this article focuses on Inuvialuit in the Western Arctic, many Arctic communities share similar histories, schooling history and socio-economic conditions (Darnell & Hoem, 1996), and these communities may recognize our findings and judge some of the recommendations to be relevant.

Student, Parent and Teacher Perspectives

Here we provide a description of Inuvialuit students', parents,' and primarily non-Indigenous educators' perspectives on cultural knowledge and content included in schools. Each group acknowledges the presence and importance of Inuvialuit culture in ISR schools. Many parents and students want an increase and most teachers are open to learning more.

Inuvialuit Students' Perspectives

The youth questionnaire asked a number of questions about the presence of Inuvialuit culture in schools and curriculum, with some of the questions focusing on the knowledge and awareness that teachers possessed of Inuvialuit and the ISR.[4] Although almost none of the teachers in Grades 7 - 12 are from the ISR, almost three-quarters of youth "agreed" or "strongly agreed" that their teachers were "aware of the history" of the region and its people, while about 19% "disagreed" or strongly "disagreed" and eight percent answered "don't know." Ninety-five percent of the youth said that their school "respects/honours the cultural backgrounds of students." These are very encouraging findings, although students would still like teachers and the schools to pay more attention to culture.

The open-ended question: "What about this region and its people would you like your teachers to know, or know more about?" was answered by 114 people. Their answers were coded for everything they named. Culture was referred to most frequent at 51%, land at 25% and language at 11 %. Residential School history was recorded by eight percent and six percent said

"nothing." While deep knowledge and understanding might take many years to acquire (McMillan, 2015), one participant identified what might be key, saying: "I am okay if they are not aware as long as they are open to learning." With a respectful attitude and willingness to learn, teachers new to the Arctic can make great strides (Tompkins, 2006).

Current territorial government policy is aimed at increasing teachers' knowledge of Inuvialuit culture and history (NWT ECE, 2013) and culturally responsive teaching theory suggests it could increase student achievement and well-being (Castagno & Brayboy, 2008). For example, cultural difference in Inuit schools in Northern Quebec led EuroCanadian teachers to scold students for "cheating" when Inuit teachers would have encouraged the same peer helping behaviour—connected as it was to the deep Inuit cultural value of cooperation (Crago, Eriks-Brophy, Pesco, & McAlpine, 1997). Western school values can clash strongly with Inuvialuit values (Brody, 2000; Douglas, 1998; Okakok, 1989). Understanding this can help teachers avoid, and solve, conflicts.

Youth were asked about the optimum level of Inuvialuit cultural content in school; 154 answered and eight provided additional comments. Some—17%—checked "there is enough Inuvialuit cultural content." One comment illustrates: "I respect culture, but school should be separate." The other 83% of respondents wanted more Inuvialuit cultural content, with 36% checking "there should be more Inuvialuit culture in a few courses," 11% checking "there should be more Inuvialuit culture in every course," 20% checking "there should be a course devoted to Inuvialuit culture," and 16% checking "there should be more in every course *and* a course devoted to Inuvialuit culture." The majority of youth participants thought that their teachers were respectful of Inuvialuit culture, but there remains a strong call for more Inuvialuit culture in schooling. This finding resonates with the desire for more culture expressed by Inuit students and parents in Nunavut in the Eastern Arctic (Aylward, 2004; Berger, 2008).

It should be noted that the option to indicate the need for a deeper school redesign—that would see schooling *based* in Inuvialuit values and culture instead of trying to add them into the current EuroCanadian system—was not offered on the questionnaire. Such a school system, or a truly bicultural one, would mean a strong possibility for student success and well-being (Barnhardt, 2009; T. R. Berger, 2006). Simply adding "Inuvialuit culture" into the existing school program and courses does not address the power imbalance that is at the root of colonialism, or the imperative to protect rather than transform Inuvialuit identity (see Tagalik, 2010). Without deep change, adding culture will not lead to culturally responsive schooling that affirms Inuvialuit identity (see Ladson-Billings, 1995).

Inuvialuit Parents' Perspectives

Inuvialuit culture and history are intimately connected to the land and 73% of parents said their child takes part in school-based on-the-land activities. When parents were asked for the number of days children spent with family on the land during the school year, 44% reported four to 10 days, and 10% reported spending more than 10 days. The land and land activities remain very important for many Inuvialuit (Johnston, 2007), and we expect more would have been reported if the cost of equipment for land travel were not so high (see Berger, 2008).

We asked whether there had been "more than three times in any year when your own family's on-the-land activities have conflicted with school." Of the 107 parents who answered, half responded "yes." This resonates with a long-standing tension in Arctic schooling. School

takes such a large chunk of time that it would be very difficult to become an expert in land skills while attending full-time (Henze & Vanett, 1993), and yet the way Western school curriculum is organized, missing chunks of time at school can mean missing key concepts or techniques (Macquire & McAlpine, 1996). Having students complete modules with guidance might help students with many absences continue to make progress (Berger, 2008), but there is no easy solution. If EuroCanadian teachers understand the crucial importance of land activities to the education of Inuvialuit students, they should be able to respond with respect when students miss school because they are on the land with their families.

Parents were asked if they thought there was enough cultural content in what their child was learning. Out of 129 parents who responded to this question, 13% chose "yes, there is enough Inuvialuit cultural content" and 87% expressed a need for more. Over a third indicated the highest option presented—that "there should be more in every course *and* a course devoted to Inuvialuit culture." The strong desire for more Inuvialuit culture in schooling continues an unbroken chain of findings that Inuvialuit and Inuit across the Arctic want schools to include more of their culture (e.g., AINA, 1973; Aylward, 2004; Berger, 2008; GNWT, 1982; Nunavut Department of Education, 2006). Related to the amount of Inuvialuit content in schooling, 94% of parents agreed or strongly agreed that it is important for teachers to have awareness of the region, people and culture.

Many parents—77%—said they saw evidence of Inuvialuit culture in the schools, and most parents—89%—said that they feel comfortable in their child's school. The majority—74%—said they are often invited to be involved in decisions at their child's school. These numbers are very positive. Local control is thought to be important in parental support for schools and in student success and well-being (Cummins, 1986; Harrison, 1993; Lipka, 1989). As McMillan (2015) wrote in the Nunavut context, Indigenous people must, in fact, be in control of policy, curricula, and the school system (p. 25). Involving parents in decisions is one step towards local control and it sends a message of respect. More investigation is needed to describe the type of decisions parents have been involved in, and what the involvement has looked like.

It is also positive that so many parents reported feeling comfortable in the schools. With the legacy of Residential Schooling and traumatic experiences in local schools, it is understandable when Indigenous parents feel uncomfortable in schools (Kavik, 2007). While it is possible that parents who feel comfortable in schools might have been more likely to participate in this research than parents who do not, biasing the findings, the findings suggest that efforts are made by teachers and administrators to welcome parents and to reflect the communities in the schools. This is a good base on which to build efforts to bring more Inuvialuit culture into schooling.

Teachers' Perspectives

Thirty-seven educators, most of whom were non-Indigenous high school teachers, were asked a series of questions concerning their views on culture and its relevance to learning. Overall, there is a high level of awareness that culture is important. Most (78%, N=29) believed that a strong cultural identity is important in Inuvialuit student success, and the same number reported that their schools and classrooms welcomed Elders and community members. A few answered "neutral" to these questions. This may reflect some ambiguity; for example, if a teacher wants to include Elders but feels that there are no funds to support doing so, "neutral"

may have been chosen. It may, however, indicate resistance to the idea that local culture is important in schooling. In cases where teachers are resistant to the idea that schooling must reflect the culture of the students, Tompkins (2006), a past principal in Nunavut, found that it was very difficult to help them become culturally responsive teachers. She recommended trying to avoid hiring such people.

Teachers were also asked whether "there is enough Inuvialuit content in the curriculum." Here, the participant responses were more mixed. Many either "strongly agreed" (eight percent) or "agreed" (38%), with 27% "neutral" and 24% "disagreeing" or "strongly disagreeing." Asked whether "a strong sense of Aboriginal cultural heritage and identity is fostered in the school in which I teach," 74% answered "strongly agree" or "agree."

While there is considerable danger of misinterpreting educators' responses, and we recommend further research that engages educators in the ISR in conversations, we interpret these findings in the following way. The curriculum of schools in the ISR remains largely EuroCanadian, with *much more* work to be done in creating Inuvialuit curriculum and shifting school practices to being grounded in Inuvialuit ways and values. There may be considerable work needed to help EuroCanadian teachers to understand how deeply Eurocentrism structures Arctic schooling and how much work needs to be done to change that (McKechnie, 2014). It is positive that most teachers acknowledged the importance of culture and cultural identity. In a larger study of EuroCanadian teachers in Nunavut, Aylward (2009) also found that teachers acknowledged the importance of culture, but maintained Eurocentric beliefs about culture in schooling. EuroCanadian teachers occupy the awkward position of being agents of colonialism.

In a related question, when asked whether "a school focus on individual achievement may cause tension for students from a culture that values cooperation," 49% "strongly disagreed" or "disagreed," 29% answered "neutral," and only 22% "agreed." This is not surprising, since many EuroCanadians are socialized to *not* need to think about cultural difference, as almost everything in southern Canada functions on EuroCanadian norms (Schick, 2000). As Mi'kmaq scholar Marie Battiste (2005) wrote, we have all been marinated in Eurocentric thought. As the questions suggests, however, there is strong evidence that at the level of deep values, Western schooling and Indigenous cultures have significant clashes (Brody, 2000; Douglas, 1998; Henze & Vanett, 1993; Okakok, 1989) and students suffer because of it (Stairs, 1991). When teachers are not aware of the tensions value differences can create, they are unable to consciously address them to avoid the problem or mitigate the damage. Fortunately, most teachers indicated the desire to learn more about teaching in the contexts of the ISR—including teaching across cultures.

Looking Forward: Increasing Teacher Capacity

Most high school teachers in the ISR are of EuroCanadian descent and are from outside of the communities and the Western Arctic. It can, therefore, be assumed that in most cases their initial knowledge of the people, culture, and history of the region would be limited. Their initial teacher education was very likely inadequate in preparing them to teach in Indigenous contexts (Harper, 2000; Oskineegish, 2013). Thus, actions taken *after* arrival are important in the success of the teaching experience, in reducing the rate of staff turnover, and in increasing the degree of connection between the school and community. We asked the teachers questions regarding the preparation they received prior to arriving in the region and their learning about the community

and people after arriving. We asked whether they had modified their teaching style, and about their desire to learn more about teaching Inuvialuit students.

Overall, teachers felt underprepared, had learned much on the job, and would like to learn more. Asked about preparation prior to arrival, 76% did not feel "well versed" in "the cultural and historical context of the region," though 91% did come to feel so in the time they had spent teaching in the region. Teachers are clearly open to learning despite the already steep learning curve of teaching in a new place and culture and the busyness this entails. Almost all—97%—indicated that "I would like to learn more about local knowledge and culture," and 89% that they "would like to learn more about the history of the region and the people who live here."

In an open-ended question, teachers were asked how they would prefer to learn more about the region's people and culture. Thirty-three people responded and the most prevalent method of learning involved interfacing with the community, by inviting or continuing to invite Elders and other informal cultural resource people into the classroom to share knowledge, history, and experiences, and by learning in a hands-on manner outside of the classroom, on the land or in the community. One teacher noted that the in-servicing opportunities of the Northern Studies teacher should be available to all teachers. Another wrote:

> I would like to learn in the context of active learning. 'On the land' experiences at Reindeer Station and other significant sites would be useful. Also, learning in a context which is easily transferable to student learning would be an asset. (Teacher Respondent, questionnaire, September 2013)

This sentiment resonates strongly with Barnhardt and Kawagely's (2005) work in Alaska, documenting the power of land camps and Elders to ground learning about Western science in local experience—building bridges to Western curriculum and educating EuroCanadian teachers.

While some of the preferred ways to learn could be pursued independently of the schools, and may need to be if McKechnie's (2014) thoughts on the lack of government capacity to provide adequate professional development are correct, active facilitation by school leadership would be very beneficial (Aylward, 2009). Sufficient funds to pay Elders for teaching and for leading land experiences will be essential.

Teachers overwhelmingly (91%) indicated that they had modified their teaching styles for the cultural contexts of their classes, and that they would like to learn teaching techniques to be better teachers of Inuvialuit students (83%). An open-ended question about how teachers would prefer to learn more about teaching Inuvialuit students was answered by 24. A number of people wrote something general, such as "professional development," while others were more specific; for example, "through targeted professional development and resources" or "What works? What doesn't, and why?" Participants wrote that they would like to learn through observation, or observations of a master teacher, and through dialogue with other teachers. Reading, online learning and presentations were mentioned, as were "research and in-class practice." Teachers mentioned learning from the community and "hands-on." Learning preferences varied widely. The idea of focused professional development from people who are "specialists" or who have "extensive training and experience teaching Aboriginal students" was strongly expressed.

In related questions, 74% of teachers indicated that they have a good relationship with the parents of their students, and 86% indicated that they would like to know more about engaging parents in their children's learning. These are also encouraging results, and it is possible that professional development focused on Inuvialuit culture, closer ties with the community, and greater parental engagement may be approached concurrently as community members are invited into classrooms to share knowledge and skills. Some authors recommend collaboration with community members for learning in Arctic schooling (e.g., ANKN, 1998; McMillan, 2015, Walton et al., 2014). Whalan and Wood's (2012) Australian model of action learning with community members may be especially useful.

It is very promising that a large majority of teachers indicated the desire to learn more about teaching Inuvialuit students. There is substantial evidence that Indigenous students struggle when asked to learn in unfamiliar ways without support (e.g., Castagno & Brayboy, 2008; Faircloth & Tippeconnic, 2010). EuroCanadian teachers can become more effective in teaching Inuvialuit students. They can build cultural knowledge by engaging in the community where they are teaching (Higgins, 2011; Lewthwaite, Owen, Dorion, McMillan, & Renaud, 2013; McMillan, 2013; Tompkins, 2006) and from the relationships with students, colleagues, and community members (Oskineegish & Berger, 2013; Pashagumskum, 2014). Just knowing about cultural differences can help them avoid misjudging the ability of their students (Crago & Eriks-Brophy, 1994), while knowing the history of colonialism, including Residential Schools, can help teachers understand and respond with respect to the social challenges faced by many (Goulet, 2001). Locally relevant curriculum can provide a vehicle for thoughtful teachers to learn along with their students (McGregor, 2012; McKechnie, 2014; McMillan, 2015).

Based on participants' comments, it is not possible to recommend one particular type of professional development since the teachers' needs and preferences vary. Drawing on local and regional expertise and creating many opportunities for teachers to share best practices is needed. Over 40 years ago, AINA (1973) recommended a university course to orient new teachers to Arctic realities, a four-week intensive orientation, and five months of continued intensive training as the northern teaching career began. Given the enormity of learning a new culture and worldview (McMillan, 2015), that could provide a good start. The more support that can be provided, the better. Our findings suggest that, like teachers across the Arctic (Berger & Epp, 2007) and in other Indigenous settings (Harper, 2000), teachers in the ISR are eager to become more effective and ready and willing to learn.

Conclusion

Most students and parents want more Inuvialuit culture in the schools and most teachers would like to learn more about Inuvialuit culture and teaching Inuvialuit students. While basing high school on Inuvialuit rather than EuroCanadian culture would require a complete redesign of formal schooling and very many Inuvialuit teachers and administrators, our findings are promising for the continuing efforts to move Inuvialuit culture into the schools. Official policy, such as the NWT ECE *Aboriginal Student Achievement Plan* (2011), confirms the importance of local culture and the need for students to be proud of who they are, and acknowledges that this depends on teachers. There are broader issues to attend to as well, such as the role of colonialism and its impact on communities. Students, parents and teachers in this research were well aware of these problems, and they are discussed in territorial policy (NWT ECE, 2013). Strongly moving more Inuvialuit culture into schools will help.

Policy in the ISR calls for more Inuvialuit culture in schooling. Students and parents indicated their desire for more. High school teachers signaled their desire to learn. Literature on culturally responsive teaching suggests that professional development connected to communities can be powerful (Castagno & Brayboy, 2008). The time is right to work together on moving Inuvialuit culture more strongly into formal schooling.

References

Alaska Native Knowledge Network. (1998). *Alaska standards for culturally responsive schools*. Author. Retrieved from http://www.ankn.uaf.edu/publications/standards.html

Arctic Institute of North America. (1973). *Man in the North technical paper: Education in the Canadian North—Three reports: 1971 - 1972.* Montreal, PQ: Author.

Aylward, M. L. (2004). *Summary report of the Sivuniksamut Ilinniarniq Consultations.* Iqaluit, NU: Nunavut Department of Education.

Aylward, M. L. (2009). Culturally relevant school in Nunavut: Views of secondary school educators. *Etudes/Inuit/Studies, 33*(1/2), 77 - 93.

Barnhardt, R. (2009). Alaska Native Knowledge Network: Connecting education to place. *Connect,* Sept./Oct., 4 - 8.

Barnhardt, R., & Kawagely, A. O. (2005). Indigenous knowledge systems and Alaska Native ways of knowing. *Anthropology & Education Quarterly, 36*(1), 8 - 23.

Battiste, M. (2005). You can't be the global doctor if you're the colonial disease. In P. Tripp & L. Muzzin (Eds.), *Teaching as activism: Equity meets environmentalism* (pp. 121 - 133). Monteal, PQ: McGill-Queen's University.

Beaufort District Education Council. (n. d.). *Home: Our schools*. Retrieved from http://www.bdec.nt.ca/

Berger, P. (2008). *Inuit visions for schooling in one Nunavut community.* (Unpublished doctoral dissertation). Lakehead University, Thunder Bay, Ontario, Canada.

Berger, P. (2009). Inuit language, culture, and parental engagement in schooling in one Nunavut community. *Canadian Journal of Native Education, 32*(1), 73 - 92.

Berger, P., & Epp, J. (2007). "There's no book and there's no guide": The expressed needs of Qallunaat educators in Nunavut. *Brock Education, 16*(2), 44 - 56.

Berger, T. R. (2006). *"The Nunavut project": Conciliator's final report*. Report on the Nunavut Land Claims Agreement implementation contract negotiations for the second planning period 2003 - 2013. Retrieved from http://www.ainc-inac.gc.ca/pr/agr/nu/lca/nlc_e.pdf

Brody, H. (2000). *The other side of Eden: Hunters, farmers and the shaping of the world.* Toronto, ON: Douglas and McIntyre.

Castagno, A., & Brayboy, B. (2008). Culturally responsive schooling for Indigenous youth: A review of the literature. *Review of Educational Research*, *78*(4), 941 - 993. doi:10.3102/0034654308323036

Crago, M. B., & Eriks-Brophy, A. (1994). Culture, conversation, and the co-construction of interaction: Implications and applications for intervention. In J. F. Duchan, L. E. Hewitt, & R. M. Sonnenmeier (Eds.), *Pragmatics: From theory to practice* (pp. 43 - 58). Englewood Cliffs, NJ: Prentice Hall.

Crago, M. B., Eriks-Brophy, A., Pesco, D., & McAlpine, L. (1997). Culturally based miscommunication in classroom interaction. *Language, Speech, and Hearing Services in Schools, 28*(3), 245 - 254.

Cummins, J. (1986). Empowering minority students. *Harvard Educational Review, 56*(1), 18 - 36. doi: 10.17763/haer.56.1.b327234461607787

Darnell, F., & Hoem, A. (1996). *Taken to extremes: Education in the far North.* Oslo, NO: Scandinavian University Press.

Douglas, A. S. (1998). *"There's life and then there's school": School and community as contradictory contexts for Inuit self/knowledge.* (Unpublished doctoral disseration). McGill University, Montreal, PQ, Canada.

Faircloth, S. C., & Tippeconnic, J. W. (2010). The dropout/graduation rate crisis among American Indian and Alaska Native students: Failure to respond places the future of Native peoples at risk. Retrieved from: http://www.civilrightsproject.ucla.edu/

Gay, G. (2010). *Culturally responsive teaching: Theory, research, and practice* (2nd ed.). New York, NY: Teachers College Press.

Gay, L. R., Mills, G. E., & Airasian, P. W. (2009). *Educational research: Competencies for analysis and applications* (9th ed). Upper Saddle River, NJ: Merrill/Pearson Hall.

Government of Northwest Territories (GNWT). (1982). *Learning, tradition and change in the Northwest Territories.* Yellowknife, NWT: Northwest Territories Legislative Assembly Special Committee on Education.

Goulet, L. (2001). Two teachers of Aboriginal students: Effective practice in sociohistorical realities. *Canadian Journal of Native Education, 25*(1), 68 - 82.

Harper, H. (2000). "There's no way to prepare for this": Teaching in First Nations schools in northern Ontario—issues and concerns. *Canadian Journal of Native Education, 24*(2), 144 - 157.

Harrison, B. (1993). Building our house from the rubbish tree: Minority-directed education. In E. Jacobs & C. Jordan (Eds.), *Minority education: Anthropological perspectives* (pp. 147 - 164). Noorwood, NJ: Ablex.

Henze, R., & Vanett, L. (1993). To walk in two worlds or more? Challenging a common metaphor of Native education. *Anthropology and Education Quarterly, 24*(2), 116 - 134.

Higgins, M. (2011). Finding points of resonance: Nunavut students' perspectives on science. *in education, 17*(3), 17 - 37.

Inuvialuit Regional Corporation (IRC). (2013, April 14). *Inuvialuit indicators*. Retrieved from http:/inuvialuitindicators.com

Inuvialuit Regional Corporation. (n. d.). *Brief history*. Retrieved from: http://www.irc.inuvialuit.com/about/history.html

Johnston, J. (2007). *A Qualitative study of the Inuvialuit practice of "going out on the land"*. (Unpublished master's thesis). Royal Roads University, Victoria, BC, Canada.

Johnston, J. & Berger, P. (2014). Inuvialuit Settlement Region perspectives on education in the Beaufort Delta. Inuvialuit Regional Corporation.

Kavik, L. (2007, February 5). CBC Radio Sounds Like Canada. (S. Rodgers, Interviewer)

Ladson-Billings, G. (1995). Toward a theory of culturally relevant pedagogy. *American Educational Research Journal, 32*(3), 465 - 491.

Lewthwaite, B., & McMillan, B. (2010). "She can bother me, and that's because she cares": What Inuit students say about teaching and their learning. *Canadian Journal of Education, 33*(1), 140 - 175.

Lewthwaite, B., Owen, T., Doiron, A., McMillan, B., & Renaud, R. (2013). Our stories about teaching and learning: A pedagogy of consequence for Yukon First Nation settings. *Interchange, 44,* 105 - 128.

Lipka, J. (1989). A cautionary tale of curriculum development in Yup'ik Eskimo communities. *Anthropology and Education Quarterly, 20*(3), 216 - 231.

Lipka, J., Hogan, M. P., Webster, J. P., Yanez, E., Adams, J. P., Clark, S., & Lacy, D. (2005). Math in a cultural context: Two case studies of a successful culturally based math project. *Anthropology and Education Quarterly, 36*(4), 367 - 385.

Macquire, M., & McAlpine, L. (1996). Attautsikut/together: Understanding cultural frames of reference. *Alberta Journal of Educational Research, 42*(3), 218 - 237.

McGregor, H. (2012). Curriculum change in Nunavut: Toward Inuit Qaujimajatuqangit. *McGill Journal of Education, 47*(3), 285 - 302.

McKechnie, J. (2014). Reconciling the role of a Quallunaat teacher in Nunavut. *Radical Pedagogy, 11*(20). Retrieved from http://www.radicalpedagogy.org/radicalpedagogy.org/Reconciling_the_Role_of_a_Qallunaat_Teacher_in_Nunavut_files/McKechnie.pdf

McMillan, B. (2013). Inuit legends, oral histories, art, and science in the collaborative development of lessons that foster two-way learning: The return of the sun in Nunavut. *Interchange, 43,* 129 - 145.

McMillan, B. (2015). Educating for cultural survival in Nunavut: Why haven't we learned from the past? *Paideusis, 22*(2), 24-37, Retrieved from http://journals.sfu.ca/pie/index.php/pie/article/view/421/225

National Committee on Inuit Education. (2011). *First Canadians, Canadians first: National strategy on Inuit education 2011*. Ottawa, ON. Inuit Tapiriit Kanatami.

Northwest Territories Education Culture and Employment (NWT ECE). (2004). *Aboriginal language and culture based-education departmental directive*. Retrieved from: http://www.ece.gov.nt.ca/files/EarlyChildhood/directives/Aboriginal%20Language%20and%20Culture%20Based%20Education%20Dept%20Directive.pdf

Northwest Territories Education Culture and Employment (NWT ECE). (2011, August). *Aboriginal student achievement education plan.* Retrieved from: https://www.ece.gov.nt.ca/files/Early-Childhood/asa/ASA%20Education_Plan_Final%20Document.pdf

Northwest Territories Education Culture and Employment (NWT ECE). (2013). *Education renewal and innovation framework: Directions for change*. Retrieved from: https://www.ece.gov.nt.ca/files/ERI/eri_framework_tabled.pdf

Northwest Territories Legislative Assembly Special Committee on Education. (1982). *Learning, tradition and change in the Northwest Territories*. Yellowknife, NWT: Northwest Territories Information.

Nunavut Department of Education. (2006, May 26). Made-in Nunavut Education Act: What we've heard from Nunavummiut so far. (Newsletter in *Nunatsiaq News*). Iqaluit, NU: Author.

Okakok, L. (1989). Serving the purpose of education. *Harvard Educational Review, 59*(4), 405 - 422.

Oskineegish, M. (2013). *How can non-Native teachers develop culturally responsive programs in remote First Nations communities? Learning from the experts.* (Unpublished master's thesis). Lakehead University, Thunder Bay, ON, Canada.

Oskineegish, M., & Berger, P. (2013). The role of the non-Native teacher in remote First Nations communities in northern Ontario. *Canadian Journal of Native Education, 36(1)*, 113 - 125.

Pashagumskum, S. (2014). *First Nations student engagement in secondary school: Enhancing student success in a northern Eeyou community.* (Unpublished doctoral dissertation). Lakehead University, Thunder Bay, ON, Canada.

Rasmussen, D. (2011). Forty years of struggle and still no right to Inuit education in Nunavut. *Interchange, 42*(2), 137 - 155.

Schick, C. (2000). 'By virtue of being White': Resistance in anti-racist pedagogy. *Race Ethinicity and Education, 3*(1), 83 - 102.

Stairs, A. (1991). Learning processes and teaching roles in Native education: Cultural base and cultural brokerage. *The Canadian Modern Language Review, 47*(2), 280 - 294.

Stake, R. E. (1995). *The art of case study research*. Thousand Oaks, CA: Sage.

Tagalik, S. (2010). Inuit Qaujimajatuqangit: The role of indigenous knowledge in supporting wellness in Inuit communities in Nunavut. Prince George, BC: National Collaborating Centre for Aboriginal Health. Retrieved from http://www.nccah-ccnsa.ca/en/publications.aspx?sortcode=2.8.10&publication=6

Tompkins, J. (2006). *Critical and shared: Conceptions of Inuit educational leadership.* (Unpublished doctoral disseration). University of Toronto, Toronto, ON, Canada.

Villegas, A. M., & Lucas, T. (2002). Preparing culturally responsive teachers: Rethinking the curriculum. *Journal of Teacher Education, 53*(1), 20 - 32.

Walton, F., O'leary, d., Metuq, L., Hainnu, J., Pitsiulak, S., Flaherty, E., Eejeesiak, N., Merkosak, J., & Wheatley, K. (2014). This school feels like ours now; It belongs to the community: Engaging parents and Inuit educational leaders in policy change in Nunavut. [Special Issue]*Northern Public Affairs, 2*, 49 - 52. Retrieved from http://www.northernpublicaffairs.ca/index/wp-content/uploads/2016/03/NPA-Vol-2-Special-Issue-Walton-et-al.pdf

Whalan, F. & Wood, K. (2012). Action learning based professional development. In N. Burridge, F. Whalan, & K. Vaughan (Eds.), *Indigenous education: A learning journey for teachers, schools and communities* (pp. 23 - 32)**.** Rotterdam, NL: Sense.

Yin, R. K. (2003). *Case study research: Design and methods* (3rd ed.). Thousand Oaks, CA: Sage.

Endnotes

[1] Inuvialuit are Inuit peoples of the western Arctic.

[2]The ISR comprises the communities of Inuvik, Tuktoyaktuk, Paulatuk, Aklavik, Sachs Harbour and Ulahaktok.

[3]The IRC represents the Inuvialuit beneficiaries in the ISR under the 1984 Western Arctic Claims Settlement Act (IRC, n. d.).

[4]The questions used the term 'Beaufort Delta Region' rather than Inuvialuit Settlement Region. It is a slightly larger region that includes two communities that are not part of the ISR.

Teacher Attrition in a Northern Ontario Remote First Nation: A Narrative Re-Storying

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Abstract

Increasing teacher retention in First Nations communities has been identified in the literature as requiring attention. When attrition rates are high and teacher efficacy, quality of student experience, and overall academic achievement is compromised, efforts to mobilize plans for stability are needed. Through a narrative re-storying approach this paper unpacks the challenges and opportunities related to teacher attrition in one remote First Nation community in Northern Ontario. Although teacher attrition is inevitable, it is necessary to re-envision attrition factors as a plan for retention. Community integrated induction and mentorship programming, and continuous and multi-year contracts are two possible approaches to boost retention. Teacher education is also explored as a long-term approach to address teacher attrition from a system perspective. In all approaches, collaborative effort, engagement, and funding are needed from the federal government, local education authorities, and faculties of education to increase teacher retention in remote First Nation communities.

Keywords: teacher retention; teacher efficacy; attrition factors; mentoring and induction programs

Teacher Attrition in a Northern Ontario Remote First Nation: A Narrative Re-Storying

Teacher attrition rates in Northern First Nations communities are estimated to be as high as 40% annually. (Anderson, Orton & Horwick, 2004; Kitchenham & Chasteauneuf, 2010; Mueller, Carr-Stewart, Steeves & Marshall, 2012). This statistic is critically important in the discourse of First Nations education because "teacher recruitment and retention, closely connected with teacher efficacy, are considered as causal factors that influence the quality of student learning and educational achievement" (Mueller et al., 2012). First Nations organizations also have identified teacher attrition and retention as an issue requiring further attention (Chiefs of Ontario, 2004; Assembly of First Nations, 2012). Stability in the teaching force is especially important in the First Nations context because the relational ontology of Indigenous ways of knowing and learning (Ermine, 1995; Simpson, 2000; Wilson, 2007) makes trusting relationships central not only between teachers and students but also with parents and communities as a whole. Furthermore, the problem of teacher retention has assumed new urgency since the Aboriginal population is quickly growing, with a large portion being school-aged children (Statistics Canada, 2008). This demographic reality will compound and magnify issues of teacher attrition and, ultimately, the greatest impact will be felt by students.

To date, explanations for teacher transience in First Nation communities have been linked to the payment of lower salaries, the lack of pensions, the absence of union protection, and a general lack of conditions comparable to what teachers employed in provincial systems enjoy (Anderson et al., 2004; Chiefs of Ontario, 2004; Kitchenham & Chasteauneuf, 2010; Mueller et al. 2012). Teachers are often responsible for implementing culturally relevant teaching practices, which require ongoing critical reflection, communication, and community engagement (Oshkineegish & Berger, 2013). Two studies by Wotherspoon (2006, 2008) deal directly with teachers' work in Aboriginal communities. Contributing to the recent literature on neoliberalism and educational reform, the focus of these studies is on the intensification of teachers' work and how those points of intensification are in contradiction to the needs of schools in Aboriginal communities. Undoubtedly, all of these factors are relevant as teachers make decisions about staying in or leaving their positions. However, I discovered that factors contributing to attrition are deeply intertwined and connected not only to material circumstances but also to the teachers' desired career progression and their own personal circumstances with family, children, and relationships. Using a narrative re-storying approach, this study unpacks and explores the complexities of teacher attrition, for non-local teachers, in one remote First Nations community in Northern Ontario. To protect confidentiality, I have named this community Grassy Hills. After summarizing the research design, I offer a brief description of Grassy Hills to provide the situating context for the research on teacher attrition. Then I discuss the methodological reasons for utilizing a re-storying approach embedded within the narrative tradition. I then re-story a conversation among four teacher characters who collectively represent all the participants in my inquiry as a method to conversationally reveal considerations that lead to attrition. Finally, a brief discussion highlights some possible options for ameliorating attrition.

Research Design

This paper reports on part of a larger inquiry that focused on a central question: What is the nature of teachers' work in a remote First Nations community in Northern Ontario? A case study approach was adopted to maintain a scope specific to the teachers and how they conceived of the issues and concerns that dictated their work and lives in the community. A case study approach

allowed for the depth and richness needed to understand the heavily contextual and complex dynamic of teachers' work.

Both individual interviews and focus groups were conducted during a two-week data collection period in the early spring of 2013. Both elementary and secondary teachers responded to an open call for participation. Fifteen out of a possible 30 teachers actively participated in interviews that lasted an average of one-and-a-half hours, but in some cases up to three hours. I also conducted two focus groups with two and three teachers respectively. The teachers in the focus groups had participated in the individual interviews but expressed an interest in discussing specific issues in more detail in a group setting. It was during these focus groups that the connectivity among the factors contributing to teacher attrition came to life and I could begin to see how certain elements such as compensation were contextualized in more personal circumstances such as student debt or loans. The focus groups provided some of the most specific data revealed in the re-storying.

To protect the identity of the participants and the community, I will not share specific details about individual teachers. However, the 15 participants range in age from 22 to 60 plus and include both male and female teachers. Fourteen of the 15 participants were non-Aboriginal. The participants included experienced teachers, new teachers directly out of teacher education programs, and those for whom teaching was a second career. Some of the teachers had been in the community for more than three years and some had substantial experience working in First Nations schools but were new to the community of Grassy Hills.

The Community

The community of Grassy Hills is located in the Nishnawbe Aski Nation (NAN) in Northern Ontario. The community is remote and can be reached only by air, which reduces access to goods and services, including food. There are few employment opportunities, and access to clean drinking water, health care, and a variety of other social services is limited and has a negative impact on the daily life of the community's residents. The schools in Grassy Hills, as are all schools in the NAN, are federally funded but the federal government requires adoption of the provincial curriculum and associated policies on the grounds that they are needed to ensure transition opportunities for students who choose to continue to post-secondary education or leave the community to attend provincial schools in more urban areas (Drummond & Rosenbluth 2013; Paquette & Fallon, 2010). Teachers are required to have their provincial teaching certification through the Ontario College of Teachers and must be prepared to implement the Ontario provincial curriculum along with the local mandate to include more culturally relevant content for students through the existing curriculum.

Teachers are hired on contracts for a period of one academic school year. Each spring, contract renewals occur and often teachers are offered a contract and asked to return. Occasionally a teacher may not get such an offer of contract extension. During this period of contract renewal, teachers regularly engage with one another to discuss their thoughts about either accepting a contract renewal or declining and moving on to other opportunities. The teachers in Grassy Hills and many other First Nations schools in NAN, do not have union or federation representation. As a result, the teachers are entirely subject to the conditions and terms of their individual contracts. This often results in the assignment of additional teaching responsibilities and extracurricular commitments as well as compromised preparation time.

Compensation, benefit packages, and pension contributions are an active part of the recruitment and retention process (Mueller et al. 2012). However, the teachers in Grassy Hills are placed on a pay grid through an evaluation process and the benefits and pension contributions are standardized for all teaching staff so although it is a point of discussion, the standardized nature of the compensation and benefits package tends to neutralize comparative conversations within the teaching staff. According to participants, compensation, benefits, and pension contributions in Grassy Hills are comparable to the provincial average with the added benefit that housing is partially subsidized.

Narrative Inquiry and Re-Storying

The early work in narrative inquiry in education was developed as both a methodology and a way to understand the experiences of teachers (Connelly & Clandinin, 1990). In this case, I am utilizing narrative inquiry, specifically the process of re-storying, to better understand and make visible the experiences of teachers as they discuss, ponder, and negotiate their roles in the community of Grassy Hills. As already noted, much of the literature on teacher attrition focuses on factors such as compensation, workload, and location but a core goal of narrative inquiry is to study the professional and personal experiences through stories that have seldom been heard (Chase, 2005; Creswell, 2008). In other words, the purpose of narrative inquiry is to ask questions to seek deeper understanding of a particular life experience (Pinnegar & Dayne, 2007). Utilizing narrative inquiry in this research has allowed the complexities of the experiences of teachers to emerge through story. Such an approach takes on particular significance, since, as I observed in my research journal, participants regularly shared their experiences with me through story.

Re-storying is the researcher's process of taking apart data and then reassembling parts of it into a different narrative framework, in this case a dialogue or conversation among four characters. Creswell (2008) concisely outlines the process of re-storying:

> After [the research participants] tell a story about their experiences, narrative researchers retell (or re-story or remap) the story in their own words. They do this to provide order and sequence to it. Re-storying is the process in which the researcher gathers stories, analyzes them for key elements of the story (e.g., time, place, plot, and scene), and then rewrites the story in a chronological sequence. (p. 519)

In the section that follows, I have re-storied themes in the data around factors of attrition. To do this, I have created a dialogue among four teachers who will be introduced in the next section. These four characters represent a convergence of all the participants and bring voice and a collective conversation to bear on teachers' thinking about whether or not they will return for another academic year. It is a story of tensions, decision-making, exploration, and insights into the challenges and opportunities teachers experience during their time living and teaching in a remote First Nations community in Northern Ontario.

Introducing the Participants

Let me introduce you to Brett, Caitlin, Sue, and Dale, the four composite teacher-characters I have created by attending faithfully to the filed texts I gathered.

Brett came to teaching as a second career and began his teaching practice in a Grade 8 class in Grassy Hills. He is always engaged in new technologies in education and connects regularly with other teachers in his division to talk about incorporating educational technologies into the classroom. Although Brett has been in the community for three school years, each spring he reconsiders his options. Brett is currently engaged to be married and in the future would like to buy a home and have a family. In his time outside of school, Brett loves coaching the boys' hockey and basketball teams and fishing with work colleagues.

Caitlin is a first-year teacher and started teaching high school English and art in Grassy Hills directly out of her teacher education program. She loves her art programming and enjoyed putting on a student art exhibit this year. Caitlin has substantial student debt and is working toward paying it off. She is an avid cross-country skier and loves the cold and snowy winters. Because she grew up in a small town, Caitlin understands and really enjoys the close-knit community of Grassy Hills and the sense that everyone is connected and knows one another. She also visits regularly with Sue for support and guidance.

Sue is a veteran teacher with more than 20 years in the profession. She teaches Grade 3 in Grassy Hills and has done so for the past five years. She is nearing retirement and brings to Grassy Hills many experiences in teaching both internationally and with First Nations schools from across the country. Sue has three grandchildren and a husband in a southern urban location that she visits as often as possible. Sue is a mentor to many of the new teachers and takes the time to support them and show them the ropes. Sue also brings a wealth of expertise in literacy and her work over the past five years has really helped increase literacy levels in the elementary school.

Dale came to Grassy Hills after 12 years teaching in international contexts around the world. He is originally from a rural town in Northern Ontario and decided to return home and explore the North of his very own province. As a high school geography and history teacher for the past two years, Dale maintains a strong interest in culture, language, and the local history. Dale works with Elders to bring local history to life in his classes and enjoys hunting and trapping with a few friends in the community. He recently has experienced some health issues, and his wife who lives in Southern Ontario is very concerned about him.

Over dinner at Sue's house, Brett, Caitlin, Sue, and Dale are discussing whether they will return for another year of teaching in the community. It is spring, and the contracts for the next academic year have been delivered. All four have been asked back for another year and the conversation begins as Dale enters the kitchen and asks Sue if she will be returning the next year.

Are You Coming Back Next Year?

Dale: So, Sue, are you coming back next year?

Sue: That is the question of the day right now isn't it? I am really not sure. There are just so many things to consider. My granddaughter just turned three and I saw the pictures from her birthday party and I feel like I missed a really important event. When things like that—family stuff—comes up it makes it really hard to want to stay. On the other hand, I am so close to retirement and I just love the students here. I can't imagine teaching anywhere else. Besides, at this point I am just thankful to

have been offered a contract. I heard Joe wasn't asked back for another year. What about you Dale?

Dale: I am kind of in the same place. You know, I have had a few health scares lately and my wife back home is really concerned. She thinks I should come home and look for a teaching position in the provincial system so I can be closer to her and health care. But, you know, just last week I had Elders come into the class and it went so well. My history programming is really coming together and I think it has taken the last two years of work to see it all come together now. And plus, the fishing has been amazing this spring! I feel terrible for Joe, but I think many people are just keeping quiet about everything and being thankful for their own contract. No one wants to rock the boat right?

Caitlin: Are you talking about fishing again Dale?

Dale: Of course, have you been yet?

Caitlin: Not yet but I am hoping to get out. The skiing this past winter was just amazing. I got to explore the area and see some places off the river I would never have seen without my skis. I am really excited for next year because I want to take my students and do some activities outside and get out in the community.

Sue: So, you have already decided to come back for another year?

Caitlin: I guess so. To be honest, I have student debt up to my ears and being here is helping me pay it off and helping me to gain experience that I might be able to use one day when I go back to Southern Ontario. I took this job right out of my education program because I knew I would never get hired in Southern Ontario. I don't think it will hurt to stay another year. Although it does scare me knowing that next year I may not get offered a contract. It just makes everything feel so temporary.

Sue: It really is a great experience for you, Caitlin, and you have come such a long way this year.

Caitlin: Thanks Sue. Besides, the art show was a major hit and I have already started talking to artists in the community about joining in next year and having a sale as well. I just don't feel ready to go yet. What about you Brett? You have been here for three years already. What are you doing for next year?

Brett: That's a tough one! I am not sure right now. I am trying to consider all my options. In some ways, I don't want to leave. I am comfortable here and you guys know how much I love my Grade 8 group. We finally got all the iPads into the classes and I really want to see how that will work out for next year. I think my group will be small next year, only 18 students, so that's a bonus, too. But, you know, my fiancée back home is ready to buy a house and start a family so the pull to go home is certainly there.

Dale: That is a tough spot, Brett. It's really hard to maintain those relationships at home when you're here for 10 months of the year.

Brett: So true. But here is my issue. Even if I wanted to leave and go back home to Southern Ontario, how would I even get to job interviews if I could get one? If an interview happens in May in Toronto, let's say, how would I ask for leave from my position here to go for an interview? It would cost a fortune and then who would cover my class—it's not like we have supply teachers. It's like being between a rock and a hard place. And, the pay here is basically the same as down south. I have been able to save up some money for a down payment.

Caitlin: I didn't think of all that stuff. You guys have some tough decisions. Do you think our experience teaching here is valued in the provincial system? How long can I stay and still make a successful transition to the provincial system?

Sue: Well, Dale, you might have something to say about this because you have also taught internationally, but I think the experience is really valuable and can be translated to other places. But I also know the job market for new teachers is totally different now than when I started.

Dale: Yeah, it's a different world down south, Sue. Most new teachers are competing to just get on a supply list. Most people wait years to get hired on more permanently.

Caitlin: Maybe it's a good thing that I stay here for now. Things down south don't look so good and I don't know if I want to take my chances and maybe get a on a supply list somewhere. Even then it might take years before I get my own class. I just love having so much freedom and flexibility in my teaching here.

Brett: That's true but I guess you have to plan for some transition time. You know I worked in a completely different field than education before I started teaching and it took a few years to get things started. In some ways, I think I might plan my exit from here more than a year in advance. I could save up money to get me through waiting to find a new position. I might even have to go back to my old job just to get me through, but I really don't want to do that.

Dale: This is also such a hard decision to make at this time of year because you start to feel so positive at the end of the school year, you're more reflective and the weather gets nicer and you feel like you will have a rest over the summer. This is not an easy decision. I also find myself asking around about who else will come back, in terms of administration, although I never really trust much of what I hear since there are so many politics. I am glad I can trust you guys.

Sue: For sure, especially the administration! If things were to change drastically with who the principals are right now, that would seriously impact my decision.

Caitlin: Are the principals going to leave?

Brett: Well, they, too, have contracts for only a year so they are probably thinking some of the same things we are.

Caitlin: Oh, if my principal left, I don't know what next year would be like at all. I kind of made my decision assuming most people would be back and things would

be basically the same. I have seen how other people get stuck with so many extra-curriculars and fundraising. I would be worried if a new principal came and delegated all that to me.

Sue: Hopefully most people stay, but every year people leave and new people come and that makes it so hard for the kids and for the teachers who stay as well. It's like every year we are getting to know new people and helping them out.

Caitlin: That's so true Sue. I would be lost without you guys helping me along the way. Who would have been there to help me with my unit plans and figure out how to get keys and everything else you helped me with?

Dale: So true. That's one of the things that really keeps me here: Knowing that I have established really strong routines with the kids and other staff and the new students coming in each fall know me and know what to expect. Each year gets easier with the kids. It's just the politics of the school, the gossip, and trying to fly under the radar that make it tough.

Brett: For sure, you get to know the parents and the students and how everything works. It's one of those things that keep me put. But, you're right, Dale, all the stuff about not knowing what can happen to your job from one day to the next freaks me out and I know I couldn't cope with that in the long-term.

Caitlin: Well, I guess part of it for me was also knowing that Bev and Sam would be back. Since we teach together and live side by side, I felt more comfortable knowing they would be here, too. I know who I will be living with and I feel like they are my family up here and I need them. It would be hard to come back and not really know anyone.

Dale: Being connected here is such a big deal. For the most part I feel pretty good but I have those down days where I just feel so frustrated because things didn't work out the way I wanted at school. I feel unrecognized and I just get angry and want to be in a place where my work is acknowledged. I know so many staff that feel that way and have kinda' just decided to toe the line and stay out of trouble's way.

Caitlin: Yeah, I know how you feel. The art show was great. The kids loved it and I had a great time with it but no one ever said thanks for doing that. It was almost like it was expected of me. A thanks would have been nice!

Brett: Same thing happened with the iPads in all the classes. I got a grant for us to buy those and did all the set up and training for them and not a single teacher or administration person said anything to me. It would have been nice to be recognized in some way. But I guess I have to remind myself I didn't do it for recognition.

Sue: That was great work, Brett, and Caitlin, your art show was amazing! It can be tough to feel invisible and that's how I feel sometimes. I still, after five years, feel like an outsider. I see the boundaries of what I can and can't be involved in and

sometimes that makes me feel like all this work goes for nothing. And sometimes I don't know if I have done something wrong, so I worry about stepping on toes.

Brett: Sue! It is not for nothing. At the end of day, we can only focus on the students. Everything else just gets so messy and complicated and can totally mess up my head. I am here to teach and the students are my focus. If I pay attention to being worried about my job all the time, it's just going to eat me up.

Sue: I know. I guess some days I just get down. I also know that as I get closer to retirement, I kind of want to leave on a high note. I don't want to stay and leave angry and bitter and annoyed. I love teaching and I want to finish off still being able to say that.

Dale: OK, guys, this was a good talk but none of us actually answered my original question. Are you coming back next year?

Caitlin: Can we just eat dinner now?!

Discussion

The complexities of teacher attrition are revealed throughout this dialogue. Factors such as compensation, position instability, contract length, family commitments, school dynamics, administrator roles, geographic location, personal commitments, and financial goals, among others, have been included to reflect the variety of issues that teachers discussed in terms of their own considerations about staying or leaving. Although each of these factors has importance alone, they are often intertwined and individual teachers place different values or weights on those that are more or less meaningful or relevant to them.

Attrition

One important distinction here is that participants in this case are not discussing their attrition from the profession of teaching; rather, they are discussing their attrition from the teaching force in the community of Grassy Hills. Their decision making is focused on the site of their work as teachers, and is attrition from place, rather than attrition from the profession. Consistent across all participant data is the assumption that it is inevitable that leaving the community will occur. The only question teachers pondered was when.

Single year contracts create a short-term vision of retention, which is problematic for the community in a number of ways. If beginning teachers utilize positions in a First Nation school as a training ground that can be abandoned once teaching skills have been developed, they benefit individually and the next schools they work at also reap benefits. However, schools like Grassy Hills are drained of resources and experience and the First Nation students essentially become subjects and sites where teachers hone their skills and experiment with their practice in ways to refine it and gain the expertise needed to be hired elsewhere, for more permanent positions. When experienced teachers leave, they similarly deprive the community and students of their knowledge and expertise and the school loses mentors for the beginning teachers who are hired. In addition, constant teacher turnover has a negative outcome for students by compromising trust and disrupting school dynamics (York-Barr, Ghere, & Sommerness, 2007).

Trust is a foundational component of educational relationships and when teacher turnover is high, establishing those trusting school relationships becomes an ongoing challenge because students become cynical or apathetic and resist relationships as a protective device to avoid feeling betrayed or hurt.

Policy Recommendations

There are both short- and long-term policy related recommendations that attend to issues teachers in Grassy Hills experience. In the re-storied narrative several issues were raised. Sue's character clearly depicts the role of induction and mentorship support needed and valued by teachers. Brett, Dale, and Caitlyn often refer to the relationships made with community members and emphasize a desire to become connected and involved in community life through coaching and other recreational opportunities, such as hunting, fishing, and skiing. Finally, the re-storied narrative also emphasizes the tensions around decision making with regard to length of tenure. Brett, Sue, Caitlyn, and Dale all discussed their reasons for either staying in the community or leaving. Due to single year contracts in Grassy Hills, this becomes a topic of conversation for all teachers every year. The discussions are about short-term stays rather than settling in for longer term, more secure contracts. How then can the Local Education Authority (LEA) re-envision attrition factors as a plan for retention? In the short-term, induction and orientation programming, community inclusion, and continuous or multi-year contracts are strategies or approaches that could mediate some of the issues raised by the teachers.

Induction and mentoring programs. According to a large body of literature, induction programming, consisting of support, guidance, and orientation, is shown to support retention, particularly in the early stages of a career (Cherubini, 2007; Ingersoll & Kralik, 2003; Ingersoll & Smith, 2004). Although many of the teachers in Grassy Hills are not in the early stages of their career, they are in the early stages of their time teaching in a First Nation community and, as such, induction programming would offer support. Given that the teachers are provincially certified and the schools are implementing provincial curriculum, why has the Ontario Ministry of Education's New Teacher Induction Program (NTIP) not been made available to beginning teachers in Grassy Hills? Although Grassy Hills schools are federally funded and the NTIP program is provincial, there have been circumstances in the past where federal-provincial agreements have been negotiated. For example, Grassy Hills schools are inspected by the Ontario Ministry of Education on a regular basis because they implement the Ontario curriculum. Could a similar agreement be established where NTIP is made available to teachers in Grassy Hills? The NTIP is intended to support new teachers through induction, mentorship, and professional development. Built into the NTIP is a process whereby new teachers undergo a formal performance appraisal for the first two years of the program. Supporting performance appraisals of teachers would align with having continuous contracts, ensuring steady progression during the early years of a teacher's practice in Grassy Hills. Where turnover is high and retention is an ongoing struggle, NTIP could be utilized as one foundational component of a retention strategy.

However, the model for induction and mentoring programs would have to be understood differently in a First Nation context. Teaching in Grassy Hills is as much about what happens in the community as what happens in the school and, as such, a mentoring program would require that life in school and beyond the school be supported. Incoming teachers could be partnered with a more experienced teacher and a member of the community The involvement of

community members, local staff, and Elders would be a necessary component to integrate teaching and learning about Indigenous approaches to child rearing, development, culture, worldview, and community values and dynamics. A model for induction programming that draws on experienced teachers alongside members of the community would also serve to ease disruption during critical transition times. When teacher turnover is high, community members and staff members, such as educational assistants who are primarily from the community, could play an integral role by providing continuity between academic years, which could mediate the negative impact of higher levels of attrition and better support students, new teachers, and the school community.

Implementing an induction or mentoring program that draws on a partnership between teachers and community members would not only orient new teachers to the community and schools but could also potentially better integrate teachers into community activities and community members into school events and programming, promote better relationships and understanding between teachers and community members, and boost retention by decreasing teacher isolation.

Contracts. Continuing, or at least multi-year, contracts could help reduce high teacher turn-over rates and provide a body of more experienced teachers capable of better supporting mentoring and induction programs, alongside members of the community. In Grassy Hills, contract terms are one year and contract offers are re-issued annually based on funding periods and projected student populations. Continuity in the teaching force might assist in stabilizing student populations from year to year and mediate one of the factors that currently dictate single year contracts. However, the LEA would need to maintain authority to end contracts if student populations were low or funding was reduced. In a geographically isolated area, challenges to teachers' work are compounded by a lack of external connection and support from a larger body representing teachers. Creating a stable long-term approach to teacher retention would require that additional support be available for both teachers and the LEA to formally negotiate contracts, resolve grievances, and advocate for improved teaching and learning conditions.

Of course developing community integrated mentoring and induction programs as well as continuous contracts as approaches to boost retention assume involvement and willing participation from the staff, community members, Elders and the LEA. This may or may not be feasible depending on the situation, funding, context, and existing relationships within the community. Although short-term policy recommendations can attend to the immediacy of retention, long-term policy planning also plays a significant role in teacher retention. Teacher education with collaborative stakeholder involvement can play an important role in long-term planning to improve teacher retention in northern and remote First Nation communities.

Teacher Education. In order for short- and long-term policy recommendations to materialize, stakeholders must become engaged and invested in the goal of improving teacher retention in remote First Nation communities. Stakeholders in this systemic long-term approach to improve teacher retention are Faculties of Education across the province, which provide teacher education programs as well as professional development opportunities through additional qualification courses. There are two ways that teacher education can improve teacher retention in First Nation communities. The first recognizes education as a site of reconciliation (Truth and Reconciliation Commission of Canada, 2015).

One response to the TRC calls to action would be to develop Indigenous teacher education programs and increase teacher education opportunities for members of First Nation communities in the North. Having qualified teachers within the community of Grassy Hills, who are from Grassy Hills, would help to eliminate a number of personal factors which play such a significant role in teacher attrition. However, Faculties of Education will need to meet the needs of First Nation students, recruit more First Nation students, and sustain authentic relationships with First Nation educational stakeholders in remote locations. It must also be noted that teacher education programs directed at supporting the development of Aboriginal teachers to work in their home communities is a high priority for some Faculties of Education that can most adequately attend to the issues of attrition identified here. However, due to the demographics of the participants in this study, the inquiry focused on the experiences of teachers who were not from the community of Grassy Hills. Second, teacher education programs need to better address Aboriginal issues in education and better prepare non-Indigenous teachers for work outside of the southern urban centers of Ontario. Universities can provide undergraduate and teacher education programs that facilitate the integration of Aboriginal perspectives across curriculum.

Conclusion

Increasing teacher retention in First Nations communities has been identified in the literature, both academic and grey, as requiring attention. When attrition rates are high and teacher efficacy, quality of student experience, and overall academic achievement is compromised, efforts to mobilize plans for stability are needed. The literature has demonstrated various factors contributing to attrition and retention of teachers in First Nations communities, but the remote First Nations educational context in Ontario requires innovative policy and procedural reform to improve teacher retention based on the notion that attrition is inevitable. Through a narrative re-storying approach I have introduced a collective dialogue demonstrating the complexity of various attrition factors. In Grassy Hills, the attrition factors were both professional and personal and I have argued that, although teacher attrition is inevitable, particularly because of personal factors, it is necessary to re-envision attrition factors as a plan for retention. Two short-term approaches were outlined to attend to the professional attrition factors with the aim of increasing teacher retention: community integrated induction and mentorship programming, and continuous and multi-year contracts are possible approaches to boost retention. Teacher education is one long-term approach that was outlined to address teacher attrition from a system perspective. In all approaches, collaborative effort, engagement, and funding are needed from the federal government, local education authorities, and Faculties of Education to increase teacher retention in remote First Nation communities.

References

Anderson, D., Horton, L., & Orwick, S. (2004). First Nations teacher education: Issues for First Nations communities. In Chiefs of Ontario (Eds.), *The new agenda: A manifesto for First Nations education in Ontario.* Toronto, ON: Chiefs of Ontario. Retrieved from http://www.chiefs-of-ontario.org/education/manifesto

Assembly of First Nations. (2012). *Soul of sovereignty: The impact of culturally responsive education on the academic achievement of First Nations students*. Educational Secretariat of the Assembly of First Nations. Retrieved from http://www.afn.ca/uploads/files/education/soul-of-sovreignty.pdf

Chase, S. E. (2005). Narrative inquiry: Multiple lenses, approaches, voices. In N. K. Denzin & Y. S. Lincoln (Eds.), *The handbook of qualitative research* (3rd ed., pp. 651 - 679). Thousand Oaks, CA: Sage

Cherubini, L. (2007). Speaking up and speaking freely: Beginning teachers' critical perceptions of their professional induction. *Professional Educator, 29*(1), 1 - 12.

Chiefs of Ontario. (2004). *Case study of teacher salaries/non-salaries issues*. Retrieved from www.chiefs-of-ontario.org

Connelly, F. M., & Clandinin, D. J. (1990). Stories of experience and narrative inquiry. *Educational Researcher*, *19*(2), 1 - 14.

Creswell, J. W. (2008). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research.* Upper Saddle River, NJ: Pearson Education.

Drummond, D., & Rosenbluth, E. K. (2013, December). The debate on First Nations education funding: Minding the gap. *Queens University Policy Studies, Working Paper 49*. Retrieve from http://www.queensu.ca/sps/working_papers

Ermine, W. (1995). Aboriginal epistemology. In M. Battiste & J. Barman (Eds.), *First Nations education in Canada* (pp. 101 - 112). Vancouver, BC: UBC Press.

Ingersoll, R., & Kralik, J. (2003). *A review of empirical research in the effects of teacher mentoring programs in elementary and secondary schools*. Denver, CO: The Education Commission of the States.

Ingersoll, R., & Smith, T. (2004). Do teacher induction and mentoring matter? *National Association of Secondary School Principles Bulletin*, *88*(638), 28 - 40.

Kitchenham, A., & Chasteauneuf, C. (2010). Teacher supply and demand: Issues in northern Canada. *Canadian Journal of Education*, *33*(4), 869 - 896.

Mueller, R., Carr-Stewart, S., Steeves, L., & Marshall, J. (2012). Teacher recruitment and retention in select First Nations schools. *in education, 17*(3), 56 - 71.

Oshkineegish, M., & Berger, P. (2013). The role of the non-Native teacher in remote First Nations communities. *Canadian Journal of Native Studies*, *36*(1), 113 - 125

Paquette, J., & Fallon, G. (2010). *First Nations education policy in Canada: Progress or gridlock?* Toronto, ON: University of Toronto Press.

Pinnegar, S., & Daynes, G. D. (2007). Locating narrative inquiry historically. In D. J. Clandinin (Ed.), *Handbook of narrative inquiry: Mapping a methodology* (pp. 3 - 34). Thousand Oaks, CA: Sage.

Simpson, L. (2000). Anishinaabe ways of knowing. In J. Oakes, R. Riew, S. Koolage, L. Simpson, & N. Schuster (Eds.), *Aboriginal health, identity and resources* (pp. 165 - 185). Winnipeg, MB: Native Studies Press.

Statistics Canada. (2008). *Aboriginal identity population by age groups, median age and sex, 2006 counts, for Canada and census metropolitan areas and census agglomerations—20% sample data* (table). Aboriginal Peoples Highlight Tables. 2006b Census. Statistics Canada Catalogue no. 97-558-XWE2006002. Ottawa. Released January 15, 2008. http://www12.statcan.ca/english/census06/data/highlights/aboriginal/index.cfm?Lang=E

Truth and Reconciliation Commission of Canada. (2015). Calls to Action. Retrieved from http://www.trc.ca/websites/trcinstitution/index.php?p=3

Wilson, S. (2007). Guest editorial: What is an Indigenist research paradigm? *Canadian Journal of Native Education, 30*(2), 193 - 195.

Wotherspoon, T. (2006). Teachers' work in Canadian Aboriginal communities. *Comparative Education Review*, *50*(4), 672 - 693.

Wotherspoon, T. (2008). Teachers' work intensification and educational contradictions in Aboriginal communities. *Canadian Review of Sociology*, *45*(4), 389 - 419.

York-Barr, J., Ghere, G. S., & Sommerness, J. (2007). Collaborative teaching to increase ELL student learning. *Journal of Education for Students Placed at Risk, 12*(3), 1 - 34.

Filling in the Gaps: Lessons Learned From Preservice Teachers' Partnerships With First Nations Students

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Abstract

In this paper, I report on a school-university collaborative research project that examined ways to merge the out-of-school literacy resources with school literacy practices for First Nations students in a small city in Western Canada. The project involved three interconnected groups of research participants: (a) a teacher researcher study group; (b) students from the participating teachers' classes; (c) preservice teachers who were partnered with the students in literacy partnerships. Grounded in a "funds of knowledge" perspective, and utilizing ethnographic research methods, this qualitative study explored how students' linguistic and cultural resources from home and community networks were utilized to reshape school literacy practices through their involvement in the Heritage Fair Program. This paper focuses on select lessons the preservice teachers learned through their partnerships with the First Nations students. Study findings suggest that the collaboration increased preservice teachers' understanding of how Aboriginal culture could contribute to more successful teaching practices.

Keywords: funds of knowledge; preservice teachers; literacy practices; racism

Filling in the Gaps: Lessons Learned From Preservice Teachers' Partnerships With First Nations Students

As I was scanning the titles in a recent issue of the Canadian Journal of Education, the title of an article, *Are You Providing an Education That is Worth Caring About? Advice to Non-Native Teachers in Northern First Nations Communities* (Oskineegish, 2015), caught my attention. Memories of my first teaching position in a northern First Nations community 35 years ago filled my mind; doubts that I had provided such an education to my first students rose to the surface. Drawing on research that has been conducted with non-Native teachers in remote First Nations and Inuit communities (for example, Agbo, 2007; Berger & Epp, 2007; Harper, 2000), Oskineegish (2015) makes the point that "many of the difficulties that teachers experience stem from a lack of training and preparation in culturally appropriate practices, a disconnection from community and feelings of isolation" (p. 3). Although my first teaching experience was in British Columbia, I faced similar challenges. My teacher education program had taught me little about linguistic and cultural diversity in general, and next to nothing about Aboriginal students in particular.[1] I learned by trial and error, and I still cringe when I recall some of the mistakes I made. My lack of preparation for teaching in such a context was not the only reason that my initial teaching position was so difficult. I taught predominantly First Nations students in a district school where connections with the community were close to non-existent; that the school district was 200 miles away on a mostly gravel road was part of the problem. The lack of connection between school and community in my first teaching position deeply concerned me. Over the next several years, I taught at two band-operated schools in First Nations communities, at the time housed in former residential schools (both were later replaced with new buildings). While the facilities were poor, connections to the community were strong, and in contrast to my first teaching experience, I could not help but notice the positive results for my students. In retrospect, I realize that this was because the expectations of and opportunities for culturally responsive teaching (Battiste, 2013; Chartrand, 2012; Kanu, 2011; Nardozi, Restoule, Broad, Steele & James, 2014) were more readily available. These conflicting experiences shaped my career, first as a teacher in First Nations communities, and then as a teacher educator. Given that I was less than well prepared to begin teaching in a First Nations community**,** I have a vested interest in preparing preservice and in-service teachers for linguistically and culturally diverse classrooms.

Accordingly, this paper reports on a research project designed to examine which practices and knowledges of Canadian Aboriginal students not necessarily acknowledged in school may provide Aboriginal students with access to school literacy practices. The project was a school-university collaboration, involving three interconnected groups of research participants: (a) a teacher researcher group; (b) Aboriginal students from the participating teachers' classes; (c) preservice teachers in my language and literacy curriculum classes who were partnered with students in the participating teachers' classes. Rather than the all-too-common remedial approach, this study took a different stance by stepping back from the notion that teaching and learning problems reside in the traits of students or their families to consider ways to merge the out-of-school resources of students with school literacies. This paper will focus on one aspect of the preservice teacher component of the study–the heritage fair partnerships.

Theoretical Framework

The research was grounded in sociocultural theories of learning and teaching, which emphasize the inherently social and situated nature of learning, and view the activity of learners as positioned within the context of practice (Lave & Wenger, 1991; Rogoff, 2003). Within a broad sociocultural framework, the study utilized third space theory, in conjunction with the concept of "funds of knowledge." Moje et al (2004) describe third spaces as hybrid spaces where the knowledges and discourses (Gee, 1996) from "the 'first space' of people's home, community and peer networks merge with the 'second space' of the Discourses they encounter in more formalized institutions such as work, school, or church" (p. 41). My research extended this view of third space in its consideration of how Aboriginal students' funds of knowledge (Moll, Amanti, Neff, & Gonzales, 1992) from home and community networks can be utilized to reshape school literacy practices. Funds of knowledge are "the essential cultural practices and bodies of knowledge that households use to survive, to get ahead, or to thrive" (Moll & Greenberg, 1990, p. 321). These perspectives complement work in the New Literacy Studies (Maybin, 2006; Street, 1999) and multiliteracies (Cope & Kalantzis, 2000; Kress, 2000; New London Group, 1996). The New Literacy Studies build on the tradition of documenting literacy in local communities, giving prominence to out-of-school literacy practices, while multiliteracies advocate a multiplicity of channels for meaning-making, hybrid text forms, new social relations and the increasing prominence of linguistic and cultural diversity (Schultz & Hull, 2002). Because these approaches view diversity as a resource rather than a deficit (Cummins, Chow, & Schecter, 2006; Schecter & Cummins, 2003), they open up literacy pedagogy to a wider range of learning and teaching. This is pertinent to my study as research suggests that many school literacy practices constrain access to school literacy practices, particularly for students from minority backgrounds (Gee, 2004; Pease-Alvarez & Schecter, 2005; Toohey, 2000; Wiltse, 2006).

Parallel shifts have been occurring in the field of teacher education, with sociocultural perspectives on language and learning being integrated into preservice and inservice teacher education. The result is a more critical teacher education, which incorporates the view that teachers' responsibilities include challenging the marginalization of minority groups (Cochran-Smith; 2004; Hawkins, 2005; Willett & Miller, 2004). As Canadian schools become increasingly linguistically and culturally diverse spaces (Ryan, Pollock & Antonelli, 2009), this is important, given that practicing teachers in schools and candidates in teacher education programs remain predominantly White, monolingual, and middle class (Carson & Johnston, 2000; Mujawamariya & Mahrouse, 2004; Pirbhai-Illich, 2013).

Research Methods and Context

The research was a qualitative study, utilizing ethnographic research methods. I drew on the work of educational researchers who have used ethnographic studies to understand children's language and literacy practices, both in school (Maybin, 2006; Toohey, 2000; Wallace, 2005) and out-of-school (Long, Peck, & Baskins, 2002; Schultz & Hull, 2002). Within a broad ethnographic case study design, my research utilized students-as-researchers as a way to negotiate the politics of researching "other people's children" (Delpit, 1995). Data sources include field notes from classroom observations, heritage fair artifacts, preservice teachers' case study assignments and transcripts from audiotaped teacher researcher meetings and semi-structured interviews of select students and preservice teachers. Data for this paper are limited,

for the most part, to the interviews and case study assignments of select preservice teachers.[2]

The study began with the teacher researcher group, which consisted of six teachers (three Aboriginal, three non-Aboriginal). We met on a monthly basis to explore pertinent sociocultural literature and to discuss related classroom practice. Three of the teachers taught at Wolfwood School,[3] the band-operated school on the nearby First Nations reserve, while the other three taught at inner city public schools with significant numbers of Aboriginal students. During the first term of the study, we made plans for the literacy partnerships between our respective students that would begin in the second term. It was an essential component of the study that whatever shape the literacy initiatives took would be decided with teacher input, and not be imposed by me. As I taught two classes of preservice teachers (30 students in each class), my intention was that the students of two of the teachers would be involved in the first year of the study. A Grade 5 teacher who taught for the local school district requested support for the science fair projects her students would be undertaking in the winter term. Another Grade 5 teacher, Gayle, who taught at Wolfwood School, wanted the mentorship to center on her students' heritage fair projects. The result was that one class of my preservice teachers collaborated with students for the science fair projects, while the other class worked with students on the heritage fair projects. This paper will focus only on the heritage fair collaboration, and on the preservice teachers' experiences. Because Gayle had fewer students in her class than I did, a small number of students from the Grade 4 and the Grade 6/7 classes participated so that each preservice teacher had a partner (the teachers of these students were also research participants, from the teacher researcher group). Data for this paper is from the first year of the study; however, due to its success during the first year, in the second year all three of the teachers at Wolfwood School involved their students in the heritage fair partnerships.

The preservice teacher participants were education students at a small primarily undergraduate university in the interior of British Columbia. For the research project, one of my classes was partnered with students in Grades 5 who attended Wolfwood School, operated by the local First Nations band. Just a few years old at the time of the study, the school followed the provincial Ministry of Education curriculum, in addition to offering programming in Aboriginal language, history, and culture. The school was situated next to the former residential school, which now houses band offices and a museum on the history of Indian Residential Schools (IRS); many of the students had relatives who had attended the residential school. From our classroom window at the university, we could see both buildings across the river that wound its way through the valley. The partnerships between the students and preservice teachers centered on the Heritage Fair Program (also known as Historica), a multi-media educational program developed to increase awareness and interest in Canadian history, unique community events and/or family culture. Students undertake research in developing their projects and present their completed displays at school, regional and/or provincial fairs. My preservice teachers were paired with the students as part of a case-study assignment "that places the teacher-education student in the role of researcher, investigating pedagogically relevant questions" (Sleeter, 2005, p. xii). Over the course of the project, four visits were made to the school during course time for partners to meet. Through the one-to-one mentorship, the students received support with research, data collection, writing, and visual representation, while the preservice teachers had the opportunity to learn about children's language and literacy practices in a situated approach, and to learn from the partnerships with students from a First Nations community.

I received research ethics approval for the study from the Human Subjects Committee at the university in which I conducted the research. Approval was granted in two stages, first for the teacher participants in the teacher-researcher group, and later, for the students and preservice teachers when the partnerships were to begin.

Study Findings

While there were exceptions, study findings indicated that the preservice teachers, by and large, were not well-prepared for teaching Aboriginal students. Some had stereotypic notions of these students and their families, while others lacked an understanding of the historical and contemporary realities of Aboriginal communities. At the same time, the research suggested that an engagement with students from diverse backgrounds offers one possibility for preservice teachers to begin to understand how "learning to teach means coming to terms with particular orientations toward knowledge, power and identity" (Britzman, 2003, p. 33).

Stereotypes, Misconceptions, and Gaps

In February 2015, Maclean's magazine published a feature issue on Canada's problem with racism directed towards Aboriginal Canadians, and the claim that Winnipeg is the most racist city in Canada. In the article, Nancy Macdonald (2015) reports that "one in three Prairie residents believe that many racial stereotypes are accurate" (p. 19). This statistic is higher than reported elsewhere in Canada. Although the research for my project was conducted in British Columbia, not in one of the Prairie Provinces, study findings yielded no shortage of racial stereotypes in Canada's most western province. For example, while many of the preservice teachers had limited personal experience with Aboriginal people, they were familiar with the stereotypes. A case in point is Sandra. In the following interview excerpt, Sandra explains: "I've lived here pretty much my whole life and you definitely don't hear great things about Native people. Yeah, that they're lazy, that they're poor, that they behave poorly." Another illustration can be found with Carolyn: "Well, in the past, I have heard people talk about stereotypes, describing how some First Nations groups are uneducated and they can't articulate clearly." While these students make the point of describing what they have heard, not what they necessarily think, one of their classmates, Marilyn, explains how her personal biography left her with preconceived notions about Aboriginal people:

> Being from Northern Saskatchewan, I grew up with that idea that they're poor, and they're less educated. My grandmother was a foster mom and she took in a lot of Aboriginal children and I had the idea they were abandoned, they were rejected, and that many of them had FAS (fetal alcohol syndrome). So, that was always my perspective because that's what I had been exposed to.

The preservice teachers' comments call to mind Vetter, Haig-Brown and Blimkie's (2014) research that describes a First Nations, Métis, and Inuit cross-curricular infusion in teacher education at York University's Faculty of Education, Barrie Site. This culturally responsive teaching came about from conversation with preservice teachers, the majority of whom were non-Aboriginal. Vetter et al (2014) note that two major gaps existed in their understandings:

> The first gap represented the issues that had been omitted from their prior education, such as the existence and intergenerational impact of residential schooling. The second gap encompassed what they thought they knew and how

> that knowing was often misconstrued by misconceptions and stereotypical beliefs. (pp. 309 - 310)

In like vein, the remarks shared by my research participants demonstrate ways in which their knowing was affected by misconceptions and stereotypes.

The similarities between the two studies regarding gaps in understandings continued with omissions from the participants' previous education. A number of the preservice teachers in my project noted that they had learned very little about IRS) experiences in their own schooling. Susan, for example, describes the partnership at Wolfwood School as her "first experience with Aboriginal people. Growing up, I didn't have any friends or classmates who were Aboriginal." In the following interview excerpt, Susan laments not having learned about Aboriginal people and issues earlier:

> I had the very general stereotype of how Aboriginal people or First Nations chose not to be part of our community, and to live on reserve land, all of those claims that were more about how we came in and took over and tried to change them so much that we forgot to understand who they were and to try to work together instead. I found that I was glad to learn about that. But, I was shocked that I don't remember that being a part of my school curriculum. I wish that I'd known more because it would have made me more sensitive to seeing stories in the media or just hearing, "Oh that's another drunk so and so on the road." I don't like that, but that's what's out there.

Astonishingly, for many of the research participants in my study, until their coursework in the education program, this type of racism was "what's out there." That they had got this far without having such stereotypical views and misconceptions disrupted speaks to the gaps in our education system regarding Aboriginal issues. Fortunately, there was more than one course in their program in which these preservice teachers learned about Aboriginal history and contemporary issues. Concurrent with the language and literacy course in which the research project was situated (the first year of a two-year program), they had a history of education course in which they learned about residential schooling; in the second year of the program, they would also take a course entitled, Teaching First Nations Children.[4] Does the coursework make a difference? Susan's comment, a continuation of her previous remarks, suggests that that the answer may be a partial yes:

> I'm disappointed that it wasn't part of my education, 'cause I feel like it could have been a little bit different, understanding where their families would be coming from in terms of residential schools. I can't even imagine how that must have been. I don't know if I feel guilt per se, but I just feel so badly that I didn't know about this before.

Whether coursework alone can result in substantive change is a pertinent query. In response to a racist comment posted on Facebook by a Winnipeg teacher, Brad Badiuk (reported in *Maclean's*), David Mandzuk, the Dean of Education at the University of Manitoba, acknowledged that, while education students have had to take at least two courses on Aboriginal education over the past five years, this might not be enough to result in substantive change in teachers' perspectives (Dhillon, 2014). I concur that coursework on its own will not suffice. For example, in their article, *Examining Teachers' Beliefs About Teaching in Culturally Diverse Classrooms,* Cabello and Burstein (1995) find that while education programs may attempt to alter the belief systems of preservice and in-service teachers, personal experience is more likely

to effect change in their beliefs. It is also crucial to examine the affective domain of teaching and learning. Of significance here is Ottmann and Pritchard's (2010) literature review, *Aboriginal Perspectives and the Social Studies Curriculum.* The authors draw on numerous studies (for example, Clarke & Drudy, 2006; Griffith & Nguyen, 2006; Richards, Brown & Forde, 2007; Yero, 2002) to demonstrate that, while knowledge and skill development is important for quality teaching and student learning, "teacher attitudes and perspectives influence learning and the teaching of Aboriginal perspectives" (p. 21). In brief, this research relates to my study in terms of emphasizing the need for teachers to be reflective and to explore their own backgrounds and feelings towards cultural difference.[5] Research shows that this is more likely to happen if preservice teachers have opportunities for involvement with Aboriginal students as part of, or in addition to, their coursework. For example, Hare's (2015) study of instructors who were teaching a new required course on Indigenous education in a teacher education program at a university in Western Canada reveals that "effective teaching strategies with preservice teachers…include connecting with the Aboriginal community and learning from place" (p. 101). This is a key reason why I wanted my preservice teachers to be partnered with Aboriginal students in projects that included community involvement.

Susan's mention of White guilt, earlier, points to another possible issue related to coursework of this nature. Nancy, one of her classmates, expressed similar sentiments:

> I have only recently begun to understand the horrors that White society inflicted on Aboriginal peoples. I feel very sorry, and although I personally was not responsible, I carry some of the guilt of the White people.

Studying difficult histories can indeed be challenging—how could it be otherwise? Learning about residential schooling and its aftermath can be considered "difficult knowledge," which Pitt and Britzman (2006) argue may include "narratives of historical traumas such as genocide, slavery, and forms of social hatred and questions of equity, democracy and human rights" (p. 379). But, this learning is crucial, if, as Susan suggests, the stereotypes and misconceptions that abound are to be disrupted. The preservice teachers were experiencing a measure of what Boler and Zembylas (2003) refer to as a "pedagogy of discomfort," one that recognizes and problematizes the daily habits and routines that are largely shaped by dominant values and assumptions and highlights gaps and absences in current curricular practices. It stands to reason that an introduction to difficult histories may cause discomfort. Nancy describes the impact of learning about the horrific legacy of residential schooling: "Due to my lack of experience with Aboriginal children and culture, I did not feel qualified to adequately meet the needs of the children at Wolfwood School." Accordingly, Nancy hoped to be placed at the other school for the science fair project partnerships. Nancy's uneasiness is not unusual. An example can be found in Deer's (2013) study, an examination of the perceptions and attitudes of preservice teachers towards the integration of Aboriginal perspectives in education. Deer found that many of his research participants, most of whom were non-Aboriginal, experienced apprehension regarding the prospect of integrating Aboriginal perspective into the curriculum. Deer (2013) reported a number of reasons for the apprehension, including "fear of failure, discomfort with the subject matter, guilt, and not being Indigenous" (p. 204). My concern is whether or not such newfound knowledge will mobilize or immobilize future teachers. As Boler and Zembylas (2003) make clear, moving into a pedagogy of discomfort "can be very discomforting and demands substantial negative emotional labor such as vulnerability, anger, and suffering…However, emotional labor…can produce favorable results, including self-discovery,

hope, passion and a sense of community" (p. 129).[6] Had Nancy been given a choice, she would have avoided contact with Aboriginal students; clearly, this would have been a missed learning opportunity. Nancy goes on to explain: "I soon learned that my apprehension was unfounded because I had a fabulous learning experience. I enjoyed getting to know a great kid. I also observed a teacher who was an amazing role model for the kids and for myself."

While Nancy was anxious about the partnerships at Wolfwood School, Marilyn, the participant from Northern Saskatchewan, approached the project influenced by preconceived ideas she brought with her to the program:

> I thought that going to Wolfwood School would bring me face-to-face with students who were sheltered and disadvantaged. Unfortunately, that inhibited my idea of who Aboriginal children were.

Indeed, Marilyn's background experiences had drastically limited her perspective and understanding of Aboriginal students. Regrettably, her comments echo literature in the field. For example, in their study of preservice teachers' discriminatory judgments, Riley and Ungerleider's (2008) make the claim that "ascribed characteristics of race, ethnicity, sex, or even physical appearance…may influence a teacher's expectations even before the student has had an opportunity to perform" (p. 380). Given the lack of Canadian empirical studies to support claims of discrimination against Aboriginal students, Riley and Ungerleider (2008) designed a study to determine whether preservice teachers' judgments about the performance of Aboriginal students were discriminatory. Fifty preservice teachers were asked to assess the records of 24 students and to make placement decisions accordingly. Based on their assessments, students would be placed in remedial, conventional, or advanced programs. This study's findings showed that "preservice teachers systematically devalued the performance of students whom they were led to believe were of Aboriginal ancestry in comparison with their non-Aboriginal counterparts with identical student records" (Riley & Ungerleider, 2008, p. 378). Had Marilyn begun teaching without having these impressions disrupted, the results would likely have been detrimental to any Aboriginal students she may have in future classrooms. The ways in which involvement in the project made a difference for Marilyn and her classmates will be explored in the following section.

Filling in the Gaps and Disrupting Stereotypes

My preservice teachers learned much from their partnerships with the students. The gaps in their understandings continued to narrow; at the same time, they also learned something about "cultivating student success for First Nations students" (Oskineegish, 2015, p. 1).

Marilyn's student partner, Pippa, played a significant role in shifting the negative preconceptions with which she began the project:

> Pippa literally showed this to be quite false when she opened her scrapbook and showed me all the marvelous places she has been to. She was well versed, she didn't have a language barrier, and here we were talking about London and Scotland and it was so exciting. It changed who I was.

Pippa defied the stereotypes Marilyn held–Pippa was neither sheltered nor disadvantaged; rather, she was an excellent student, spoke fluent English, and had strong computer skills, as evidenced in the following comment:

> Pippa is fluent on the computer and was able to bypass the safety net the school set up for students when she wanted to show me something on YouTube. I was amazed at her Internet savvy; I could learn so much from her! Pippa's knowledge of the Internet gave her greater access to her heritage fair project topic–paranormal activity within Canada.

And, learn Marilyn did! In an interview, Pippa explained:

> My dad's kind of like a computer geek so he shows me everything…and then I turn out to be a computer kid, too! Probably the hardest thing for my partner is that she never got how I did the pictures like that. It seems like I was teaching her. For example, I taught her a bit of how to add a picture.

During the course of the project, Pippa's father visited the class to give a lesson on how to add images downloaded from the Internet. As well, Pippa's father accompanied her in the field as she conducted research for her project (for example, they visited a former tuberculosis sanatorium which had the reputations of being haunted). Being witness to this type of family involvement in the students' heritage fair projects defied many of the preservice teachers' prior expectations. For instance, working with her partner, Alison, did not confirm the stereotypes that Sandra had grown up hearing about Aboriginal people. Alison completed her heritage fair project on Kenny McLean, an all-around "Indian cowboy." Sandra, who had "heard other people say things like…their parents don't want them" found that

> Alison was just like a breath of fresh air, honestly. She was open. It was good for me to see because, even though her parents weren't together anymore, she had a strong family life, I could tell she was supported at home, while I expect there's some kids that go to that school that don't have that. With Alison, it was nice to see a happy well-balanced kid who liked school and liked talking about her family.

In an interview, Alison, who loved rodeo barrel racing, told me how she came to decide on her topic:

> First I asked my stepdad, "What project should I do that's something Canadian, and something like rodeoing?" And he's like, "How about Kenny McLean?" I said, "Sure, what does he do?" I found out he's an all-around world champion—he's a bronc rider and he's a calf roper, team roper. That's how I decided to do Kenny McLean.

When it came to having stereotypes about parental involvement of Aboriginal students shattered, Carolyn's experience was similar. For her heritage fair project, aptly entitled *Locked up Indians*, her partner, Philippa, had interviewed her paternal and maternal grandmothers about their experiences in two different residential schools. Carolyn explained:

> The past stereotypes that I've heard, Philippa was not a part of them at all. Her parents are very, very involved in her education and she said they were always asking about homework. She was proud that her dad was one of these managers in the natural resources, so they were always asking about things like what are you doing, what are you reading about, and it made a difference…Also, compared to myself, Philippa's larger family group was involved, both grandmas and her aunt, in addition to her parents.

Of course, parental/family involvement in a child's education makes a difference. As a teacher working with First Nations students, the most significant difference I noted when I moved from teaching at a district school to teaching at band-operated schools was the way that parents/family members played a more active role in their children's education. There were a number of interconnected reasons for this (for example, congruence in curriculum between community and school; culturally responsive teaching; fewer negative associations to their own school experiences). The literature on Aboriginal parents' involvement in their children's education emphasizes how crucial it is that teachers not make assumptions in this regard (see Aquash, 2013; Bell, 2013; Martin, 2015; Matthew, 2005; Murphy & Pushor, 2004).

Not all the lessons learned were about disconfirming stereotypes or preconceived notions—for some of the preservice teachers, the lessons were about disrupting what they took for granted as non-Aboriginals, in particular as students of White privilege (Burleigh & Burm, 2013; Gillborn, 2006). Over time, Nancy came to the realization that she was viewing her partner through a middle-class lens. Nancy was paired with Cheryl, whose heritage fair project was on the Echo Mask that had been in her grandfather's family before being confiscated during a potlatch in 1921 and exhibited at the Canadian Museum of Civilization.[7] As part of the project, students were expected to conduct an interview; Nancy explained that Cheryl "wanted to interview her grandfather but did not know how since he lived several hours away." She continues:

> At this point, I was still seeing this student through my White, middle-class lens, and I wondered why she couldn't just call her grandfather on the phone. Fortunately, before I asked a tactless question and revealed my ignorance, my partner told me that she couldn't phone her grandfather because buying a calling card would be expensive. Instead, I helped her write a letter to her grandfather. When she was done, she informed me that she did not know where she could get an envelope or a stamp. In my middle class world, long distance phone calls, envelopes, and stamps are part of everyday life.

In her book, *Reading Classes: On Culture and Classism in America*, Jensen (2012) examines the ways in which middle-class teachers and administrators often misunderstood, ignored, or disrespected working-class children. While the context of Aboriginal students in Canada is markedly different from that of Jensen's (2012) study, the similarity to my research is in the ways in which students are often misunderstood, ignored, or disrespected. Not all students attending Wolfwood School had family circumstances comparable to Pippa or Philippa. The legacy of residential schooling affected families in various ways; a number of the students lived in poverty; some came from homes where family members struggled with alcohol or substance abuse. This, too, was an important gap to address. One of my goals for the project was for my students to realize that not all Aboriginal people are the same; while this should be obvious; it is still an all-too-common misunderstanding. Broad assumptions of any type regarding Aboriginal students (or of any group) are problematic. Rather than viewing children living in poverty or those from non-mainstream backgrounds from a deficit perspective (Comber, 2014; Dudley-Marling & Lucas, 2009; Dyson, 2015; Sharma & Portelli, 2014), educators need to consider how to lessen the "discontinuities that many children experience between their lives in- and out-of-school" (Comber, 2013, p. 361). Regardless of differences in family background, all the student participants brought funds of knowledge to school that could be utilized in their learning.

As the heritage fair projects required the student participants to examine and document linguistic and cultural practices in their local communities (Egan-Robertson & Bloome, 1998), they emphasized connections between home and community networks. I have written about the students' heritage fair projects as funds of knowledge elsewhere (Wiltse, 2014, 2015); for the preservice teachers, however, this was vital knowledge if they were to learn to teach from diversity as a resource perspective and to be positioned to create third spaces of improved literacy learning. Given space constraints, I will focus on one particularly pertinent example (in addition to the examples mentioned in brief in this paper). Darius, a 10-year-old boy who had recently moved from a small and isolated Aboriginal community in the northern corner of the province, was in his first year at Wolfwood School. Darius completed his project on hunting in Fort Wilson, a topic not only of personal interest, but also of family and community tradition (for example, he is the third generation of hunters, his uncle and grandfather taught him how to hunt, his grandmother makes jackets with the hides). According to his teacher, with the exception of his heritage fair project, Darius was rarely engaged in school literacies during the first year at his new school. His university partner, Kandy, who grew up in the lower mainland of B.C. describes her own schooling "as pretty much a bunch of White kids that lived all in the same area. 'Cause there was not really any variation of ethnicity that I was aware of, so I never even really thought about it." The project at Wolfwood School was provoking her to think:

> My partner actually got to explore this aspect of his life in school so he was pretty excited about doing his heritage fair project on hunting. Darius told me that he doesn't really like writing or reading, so it was good that he could see that there are ways for him to write and read and enjoy it. He really learned a lot about writing by going through that process. This made me realize that I will need to find a way for kids to be able to learn their own way, whether it's about hunting or going fishing with dad, while still learning the same skills.

Kandy's comment suggests that she has begun to understand that funds of knowledge represent a "positive (and we argue, realistic) view of households as containing ample cultural and cognitive resources with great, potential utility for classroom instruction" (Moll et al., 1992, p. 134). The import of this cannot be overemphasized, as exemplified in the following:

> Darius definitely said that he usually doesn't like writing very much in school but that he was excited about this project because he could find out about hunting and he got to call and talk to his uncle for the interview. So, it does help that he actually got to explore this aspect of his life in school.

That Darius was able to explore hunting, something he loved from his out-of-school life, made a dramatic difference to the way in which he invested himself in the research and writing required for his project. As Amanti (2005) explains, incorporating funds of knowledge is not about "replicating what students have learned at home, but about using students' knowledge and prior experiences as a scaffold for new learning" (p. 135).

Going Forward

In her article, *Disrupting Molded Images,* Dion (2007) examines the relationship between teachers and Indigenous subject material. Her view is that while teachers are being encouraged to include Aboriginal content across the curriculum, most "teachers, like the majority of Canadians, know little about Aboriginal people, history, and culture" (Dion, 2007, p. 330); rather their

understanding is informed by dominant discourses (Schick & St. Denis, 2005). Similarly, Scully (2015) makes the point that while "Indigenous education in teacher education must prioritize addressing the learning needs of Indigenous students, it must also serve to shift the gravely lacking common knowledge of most Canadians regarding Indigenous peoples in Canada" (p. 81). The project that my preservice teachers were involved in played a part, albeit small, in disrupting dominant discourses. Susan describes how this experience, in conjunction with what she had learned in coursework, had increased her awareness of "issues that had been omitted from their prior education":

> So I think, it's brought all of that together for me. I don't really know how I'm going to go forward with it, but at least it's there. I'm a lot more conscious of what I say and how I say it and how I'm viewing certain situations. And hopefully, if I come across negative comments by family members or other people, I'll have more of the strength and information behind me to make an argument that I can back up.

As Aboriginal journalist Wab Kinew contends, "Reconciliation with Native People is still the most pressing social justice issue Canada faces" (White, 2013). The comments made by Susan and some of her classmates leave no doubt. Since the completion of the research project reported on in this paper, the Truth and Reconciliation Commission of Canada on residential schooling has taken place in Canada, resulting in 94 Calls to Action. No longer should any Canadian student be able to say that he or she did not learn about residential schooling and its legacy in school.[8]

In terms of the second gap, how what students thought they knew was "misconstrued by misconceptions and stereotypical beliefs" (Vetter, Haig-Brown & Blimkie, 2014, pp. 309 - 310), I return to Marilyn, who had misperceptions and low expectations of Aboriginal students. Marilyn reported a change triggered by her partnership with Pippa:

> It will change my perspective and my teaching as well because I will not come into the classroom with such a low expectation or a low understanding of Aboriginal students. I will actually say, where have you been and what have you done, rather than have the preconceived idea that just because a child is Aboriginal doesn't mean that they are not well traveled or well spoken or do not have the experiences that an average Caucasian child has.

Given the research on teachers' expectations of Aboriginal and other minority students, this is promising. In considering the implications of Marilyn's comments, I revisit Riley and Ungerleider's (2008) study. These authors draw on research that concluded that "the self-fulfilling prophecy effects that occur in one year may, on average, lead to small differences between targets of high and low expectations that endure for a very long period" (Smith, Jussim & Eccles, 1999, p. 563) to emphasize their argument as to how preservice teachers' discriminatory judgments can drastically affect the academic achievement and opportunities of Aboriginal students. In closing, I return to Carolyn, who began the project having heard many negative stereotypes about Aboriginal people. When I asked Carolyn what she had learned from her partnership with Philippa that would impact her as a future teacher, her response was, "Well, that you can't judge a book by its cover; you definitely can't. If you label, you get what you expect." This is a cliché, perhaps, but significant learning nonetheless. Had I had a comparable experience in my teacher education program, I may have done better justice to providing the

Aboriginal students from my first teaching position an education that was worth caring about. For practicing teachers who are working in First Nations communities, Oskineegish (2015) recommends self-reflection, communication and community engagement, and having the right kind of attitude. This excellent advice I learned over the course of my teaching career, unfortunately a little too late for my first students.

References

Agbo, S. (2007). Addressing school-community in a cross-cultural context: A collaborative action to bridge the gap between First Nations and the school. *Journal of Research in Rural Education, 22*(8), 1 - 14.

Amanti, C. (2005). Beyond a beads and feathers approach. In N. Gonzáles, L. Moll, & C. Amanti (Eds.), *Funds of knowledge: Theorizing practices in households, communities and classrooms* (pp. 131 - 141). London, UK: Lawrence Erlbaum Associates.

Aquash, M. (2013). First Nations control of education: One community's experience. *Canadian Journal of Native Education, 36*(1), 59 - 76.

Battiste, M. (2013). *Decolonizing education: Nourishing the learning spirit.* Saskatoon, SK: Purich.

Bell, N. (2013). Just do it: Anishinaabe culture-based education. *Canadian Journal of Native Education, 36*(1), 36 - 58.

Berger, P., & Epp, J. (2007). "There's no book and there's no guide": The expressed needs of Qallunaat educators in Nunavut. *Brock Education, 16*(2), 44 - 56.

Boler, M., & Zembylas, M. (2003). Discomforting truths: The emotional terrain of understanding difference. In P. P. Trifonas (Ed.), *Pedagogies of difference: Rethinking education for social change* (pp.110 - 136). New York, NY: RoutledgeFalmer.

Britzman, D. (2003). *Practice makes practice: A critical study of learning to teach*. Albany, NY: State University of New York Press.

Burleigh, D., & Burm, S. (2013). Unpacking our White privilege: Reflecting on our teaching practice. *in education, 19*(2), 107 - 119.

Cabello, B., & Burstein, N. (1995). Examining teachers' beliefs about teaching in culturally diverse classrooms. *Journal of Teacher Education, 46*(4), 285 - 294.

Carson, T., & Johnston, I. (2000). The difficulty with difference in teacher education: Toward a pedagogy of compassion. *The Alberta Journal of Educational Research*, *46*(1), 75 - 83.

Chartrand, R. (2012). Anishinaabe pedagogy. *Canadian Journal of Native Education, 35(*1), 144 - 221.

Cochran-Smith, M. (2004). *Walking the road: Race, diversity, and social justice in teacher education.* New York, NY: Teachers' College Press.

Comber, B. (2013) Schools as meeting places: Critical and inclusive literacies in changing local environments. *Language Arts, 90*(5), 361-371.

Comber, B. (2014). Getting out of deficit: Pedagogies of reconnection. *Teaching Education, 15*(3), 293 - 310.

Cope, B., & Kalantzis, M. (2000). (Eds.). *Multiliteracies: Literacy learning and the design of social futures.* New York, NY: Routledge.

Clarke, M., & Drudy, S. (2006). Teacher for diversity, social justice, and global awareness. *European Journal of Education*, *29*(3), 371 - 386.

Cummins, J., Chow, P., & Schecter, S. (2006). Community as curriculum. *Language Arts, 83*(4), 297 - 307.

Deer, F. (2013). Integrating Aboriginal perspectives in education: Perceptions of pre-service teachers. *Canadian Journal of Education, 36*(2), 175 - 211.

Delpit, L. (1995). *Other people's children: Cultural conflict in the classroom.* New York, NY: The New Press.

Dhillon, K. (2014, December 2). *Brad Badiuk's 'racist' Facebook posts need action by Winnipeg school board: Trustee.* Retrieved from http://www.cbc.ca/news/canada/manitoba/brad-badiuk-s-racist-facebook-posts-need-action-by-winnipeg-school-board-trustee-1.2870734

Dion, S. (2007). Disrupting molded images: Identities, responsibilities and relationships-teachers and indigenous subject material. *Teaching Education, 18*(4), 329 - 342.

Dudley-Marling, C., & Lucas, K. (2009). Pathologizing the language and culture of poor children. *Language Arts, 86*(5), 362 - 370.

Dyson, A. H. (2015). The search for inclusion: Deficit discourse and the erasure of childhoods. *Language Arts, 92*(3), 199 - 206.

Egan-Robertson, A., & Bloome, D. (Eds.). (1998). *Students as researchers of culture and language in their own communities*. Cresskill, NJ. Hampton Press.

Gee, J. P. (1996). *Social linguistics and literacies: Ideologies in discourses.* New York, NY: Falmer Press.

Gee, J. P. (2004). *Situated language and learning: A critique of traditional schooling.* New York, NY: Routledge.

Gillborn, D. (2006). Rethinking White supremacy: Who counts in 'Whiteworld'. *Ethnicities, 6(*3), 318 - 340.

Griffith, K. G., & Nguyen, A. D. (2006). Are educators prepared to affect the affective domain? *National Forum of Teacher Education Journal*, *16*(3E), 1 - 4.

Hare, J. (2015). "All of our responsibility": Instructor experiences in the teaching of required Indigenous education coursework. *Canadian Journal of Native Education, 38*(1), 101 - 120.

Harper, H. (2000). "There is no way to prepare for this": Teaching in First Nations schools in Northern Ontario–issues and concerns. *Canadian Journal of Native Education, 24*(2), 144 - 157.

Hawkins, M. (2005). Becoming a student: Identity work and academic literacies in early schooling. *TESOL Quarterly, 39*(1), 59 - 82.

Jensen, B. (2012). *Reading classes: On culture and classism in America.* London, UK: IRL Press.

Kanu, Y. (2011). *Integrating Aboriginal perspectives into the school curriculum.* Toronto, ON: University of Toronto Press.

Kerr, J., & Parent, P. (2015). Being taught by Raven: A story of knowledges in teacher education, *Canadian Journal of Native Education, 38*(1), 62 - 79.

Kress, G. (2000). Multimodality. In B. Cope & M. Kalantzis (Eds.), *Multiliteracies: Literacy learning and the design of social futures* (pp. 182 - 202*).* New York, NY: Routledge.

Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation.* Cambridge, UK: Cambridge University Press.

Long, E., Peck, W., & Baskins, J. (2002). STRUGGLE: A literate practice supporting life-project planning. In G. Hull & K. Schultz (Eds.), *School's out! Bridging out-of-school literacies with classroom practice* (pp.131 - 161). New York, NY: Teachers College Press.

Macdonald, N. (2015, February 2). Welcome to Winnipeg: Where Canada's racism problem is at its worst. *Maclean's, 128*(4), 16 - 24.

Martin, G. (2015). Re-imagining Indigenous parent involvement in teacher education: One parent's experience in the public school system. *Canadian Journal of Native Education, 38*(1), 5 - 20.

Matthew, J. (2005). *Parents of First Nations students: Perspectives of their roles as literacy supporters*. (Unpublished master's thesis).University of Victoria.

Maybin, J. (2006). *Children's voices: Talk, knowledge and identity.* New York, NY: Palgrave/Macmillan.

Moje, E., Ciechanowski, K., Kramer, K., Ellis, L., Carrillo, R., & Collazo, T. (2004). Working toward third space in content area literacy: An examination of everyday funds of knowledge and discourse. *Reading Research Quarterly, 39*(1), 38 - 70.

Moll, L., Amanti, C., Neff, D., & Gonzales, N. (1992). Funds of knowledge for teaching: Using a qualitative approach to connect homes and classrooms. *Theory Into Practice, 31*(2), 132 - 141.

Moll, L. & Greenberg, J. (1990). Creating zones of possibilities: Combining social contexts. In L. C. Moll (Ed.), *Vygostksy and education: Instructional implications and applications of sociohistorical psychology* (pp. 319 - 348). New York, NY: Cambridge University Press.

Mujawamariya, D., & Mahrouse, G. (2004). Multicultural education in Canadian preservice programs: Teacher candidates' perspectives. *Alberta Journal of Educational Research, 50*(4), 336 - 353.

Murphy, B., & Pushor, D. (2004). Parent marginalization, marginalized parents: Creating a place for parents on the school landscape. *Alberta Journal of Educational Research, 50*(3), 221 - 235.

Nardozi, A., Restoule, J.P., Broad, K., Steele, N., & James, U. (2014). Deepening knowledge to inspire action: Including Aboriginal perspectives in teaching practice. *in education, 19*(3), 108 - 122.

New London Group. (1996). A pedagogy of multiliteracies: Designing social futures. *Harvard Educational Review*, *66*(1), 60 - 90.

Oskineegish, M. (2015). Are you providing an education that is worth caring about? Advice to non-Native teachers in northern First Nations communities. *Canadian Journal of Education, 38*(3), 1 - 25.

Ottmann, J. with Pritchard, L. (2010). Aboriginal perspectives and the social studies curriculum. *First Nations Perspectives 3*(1), 21 - 46.

Pease-Alvarez, L., & Schecter, S. (Eds.). (2005). *Teaching and community: Contributions of situated and participatory approaches to educational innovation.* Mahwah, NJ: Lawrence Erlbaum Associates.

Pirbhai-Illich, F. (2013). Crossing borders: At the nexus of critical service learning, literacy, and social justice. *Waikato Journal of Education, 18*(2), 79 - 96.

Richards, H. V., Brown, A. F., & Forde, T. B. (2007). Addressing diversity in schools: Culturally responsive pedagogy. *Teaching Exceptional Children*, *39*(3), 64 - 68.

Riley, T., & Ungerleider, C. (2008). Pre-service teachers' discriminatory judgments. *The Alberta Journal of Educational Research, 54*(4), 378 - 387.

Rogoff, B. (2003). *The cultural nature of human development.* Oxford, UK: Oxford University Press.

Ryan, J., Pollock, K., & Antonelli, F. (2009). Teacher diversity in Canada: Leaky pipelines, bottlenecks, and glass ceilings. *Canadian Journal of Education, 32*(3), 591 - 617.

Schecter, S., & J. Cummins, J. (2003). *Multilingual education in practice: Using diversity as a resource.* Portsmouth, NH: Heinemann.

Schick, C., & St. Denis, V. (2005). Troubling national discourses in anti-racist curricular planning. *Canadian Journal of Education, 28*(3), 295 - 317.

Schultz, K., & Hull, G. (Eds.) (2002). *School's out! Bridging out-of-school literacies with classroom practice*. New York, NY: Teachers College Press.

Scully, A. (2015). Unsettling place-based education: Whiteness and land in Indigenous education in Canadian teacher education, *Canadian Journal of Native Education, 38*(1), 80 - 100.

Sharma, M., & Portelli, J. (2014). Uprooting and settling in: The invisible strength of deficit thinking. *Learning Landscapes, 8*(1), 251 - 267.

Sleeter, C. (2005). Foreword. In L. Pease-Alvarez & S. Schecter (Eds.), *Teaching and community: Contributions of situated and participatory approaches to educational innovation* (pp. xi-xii). Mahwah, NJ: Lawrence Erlbaum.

Smith, A., Jussim, L., & Eccles, J. (1999). Do self-fulfilling prophecies accumulate, dissipate, or remain stable over time? *Journal of Personality and Social Psychology, 77,* 548 - 565.

Street, B. (1999). New literacies in theory and practice: What are the implications for language in education? *Linguistics and Education, 19*(1), 1 - 24.

Taylor, E.W., & Cranton, P. (2012). *The handbook of transformative learning: Theory, research, and practice.* San Francisco, CA: Jossey-Bass.

Toohey, K. (2000). *Learning English at school: Identity, social relations and classroom practice.* Toronto, ON: Multilingual Matters .

Wallace, C. (2005). Conversations around the literacy hour in a Multilingual London primary school. *Language and Education, 19*(4), 146 - 161.

White, D. (Producer). (2013, December 23). Canada Reads—The Orenda [Radio broadcast]. In *Airplay*. Whitehorse, YK: CBC.

Willett, J., & Miller. S. (2004). Transforming the discourse of teaching and learning: Rippling waters and shifting sands. In M. Hawkins (Ed.), *Language learning and teacher education: A sociocultural approach* (pp. 52 - 88). Clevedon, UK: Multilingual Matters Press.

Wiltse, L. (2006). "Like pulling teeth": Oral discourse practices in a culturally and linguistically diverse language arts classroom." *Canadian Modern Language Review*, *63*(2), 199 - 223.

Wiltse, L. (2014). Leaning over the fence: Heritage fair projects as 'funds of knowledge.' *Alberta Journal of Educational Research, 60*(2), 361 - 376.

Wiltse, L. (2015). "Not just "sunny days:" Aboriginal students connect out-of-school literacy resources with school literacy practices. *Literacy, 49*(2), 60 - 68.

Wiltse, L., Johnston, I., & Yang, K. (2014). Pushing comfort zones: Promoting social justice through the teaching of Aboriginal Canadian literature. *Changing English, 21*(3), 263 - 276.

Vetter, D., Haig-Brown, C., & Blimkie, M. (2014). Culturally responsive teaching: Stories of a First Nation, Métis, and Inuit cross-curricular infusion in teacher education. *Learning Landscapes, 8*(1), 305 - 321.

Yero, J. L. (2002). *Teaching in mind: How teacher thinking shapes education*. Hamilton, MT: MindFlight.

Endnotes

[1]In this paper, I use the term Aboriginal, which is inclusive of the Inuit, First Nations (formerly Indian), and Métis peoples of Canada, in a general sense. At other times, I use the term that is most appropriate for the particular context that I am addressing (i.e. First Nations or Indian).

[2] Interview protocol for the semi-structured interviews with the preservice teachers focused on three main areas: background experiences they had coming into the education program; what they learned from the partnerships about Aboriginal students, their families and communities; and how their learning about children's language and literacy learning was enhanced through their involvement in a situated and participatory experience.

[3] All names have been changed to protect anonymity.

[4] Content of this course includes an overview of the historical background of First Nations education in Canada and British Columbia, an examination of First Nations content in current curricula and the role of non-First Nations teachers in curriculum development projects, and an introduction to effective teaching practices for First Nations children, including building relationships with parents and community.

[5] Taylor and Cranton's (2012), *The Handbook of Transformative Learning: Theory, Research, and Practice,* provides additional insight to this topic**.**

An Investigation of the Role of Legends and Storytelling in Early Childhood Practices in a Kanien'kehá:ka (Mohawk) Early Childhood Facility

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Abstract

Through the course of Indigenous history, cultural and spiritual knowledge remains, in many places as faint as the smoke rising from the embers of last night's fire; in other places, with enough flame to ignite another log. In spite of the genocidal acts portrayed through colonialism's experimentation through religious doctrine, residential school, legislation, treaties broken and unbroken, reservations, and spiritual disregard, the Indigenous peoples of Turtle Island remain living, breathing and believing that their history is alive through the oral stories of their beginnings and endings. Indigenous education can only be defined through the culture of the people themselves. Historical Indigenous education was transferred orally for thousands of years with very little disruption or inconsistencies; therefore distinct meanings and connections were continuously addressed through one's lifetime through the wisdom of elder's legends and stories. The investigation of the role of legends and storytelling in an early childhood setting in Kahnawa:ke, Quebec is portrayed through a combination of research literature, classroom observations and personal interviews documented as portraiture. The main finding was that cultural legends and stories familiar to historical, ceremonial and spiritual practices are vital to the cultural foundation of the Haudenosaunee (peoples of the longhouse or the Iroquois) and Kahnawake'hró:non (people of Kahnawa:ke).

Keywords: Kanien'kehá:ka (Mohawk); ECE; early childhood education; cultural legends and stories; residential schools; storytelling

An Investigation of the Role of Legends and Storytelling in Early Childhood Practices in a Kanien'kehá:ka (Mohawk) Early Childhood Facility

> Indigenous peoples have every right to celebrate their continued existence, and to draw strength from the fact that their nations live on despite the terrible losses of the past 500 years. (Alfred, 1999, p. 33)

Indigenous peoples of the world have taught and learned through oral transference of knowledge for thousands of years. Current definitions of educational tools used to transfer cultural knowledge are today known or referred to as culturally based education, culturally relevant curriculum, and most pertinently, Indigenous education. Indigenous communities around the world have been working diligently to stem the multi-generational effects of residential schooling and foreign governing policies within Native/Aboriginal territories (Faries, 2004; McKeough et al., 2008). Promoting cultural knowledge's has become and essential foundation in revitalizing language, cultural practices, history and ceremony and song. The fluidity of the continuous traditions of storytelling combined with contemporary knowledge can provide the strength to sustain and regain what was and has been the original ways of knowing, learning and teaching (Archibald, 2001; Ho'omanawanui, 2010).

Methodology

> The realities of Indian belief and existence have become so misunderstood and distorted at this point that when a real Indian stands up and speaks the truth at any given moment, he or she is not only unlikely to be believed, but will probably be contradicted and "corrected" by the citation of some non-Indian and totally inaccurate "expert." (Rains, Archibald, & Deyhle, 2000)

Indigenous Research Knowledge

Knowledge varies from age, gender, race, geographical region, and unfortunately economic status. In *Research as Resistance*, Kovach (2005) writes about research methodologies and their relation to the silencing and absenteeism of voice from marginal societies, which she finds very disturbing (p. 21). Smith (1999) agrees that "Indigenous voices have been overwhelmingly silenced" and that Indigenous scholars struggle to write, theorize and research (p. 29).

Wilson (2001) explains that a dominant research paradigm is built on the belief that knowledge is an individual entity that can be gained and owned, whereas an Indigenous paradigm focuses on the belief that "knowledge is relational" and "shared with all of creation" (p. 177). He goes on to say that "Indigenous people need to do Indigenous research because we have the lifelong learning and relationship that goes into it. You are not just gaining information from people; you are sharing your information" (Wilson, 2001, p. 179).

The research procedure I chose to follow is situated within qualitative research. According to Creswell (2009),"Qualitative procedures rely on text and image data and has unique steps in data analysis, and draw on diverse strategies of inquiry" (p. 173). The qualitative approach I chose to examine my data was "constant comparative analysis" (Creswell, 2009, p. 13). This approach was best suited for my study because it helped "generate explicit categories[,] which can help to provide an understanding of the data" (Grove, 1988, p. 277), thereby, creating ample opportunity to bridge all data as relational.

The interviewing protocol I followed was a semi-structured protocol. This protocol fit my research because it allowed me to follow a set of prompts and provided room to ask follow-up questions that may develop during the interview (Brenner, 2006). This type of interviewing mirrors reciprocity between interviewer and interviewee and creates a relational dialogue. I audio recorded the interviews because, according to Brenner (2006), "an audiotape recording allows an interviewer to focus on the conversation with an informant and carries a more complete record of the informant's actual words" (p. 365).

My goal in the research was specifically to investigate cultural stories and legends and how they are currently used in an ECE classroom; my research involved three classrooms of 18-month to 4-year-old children: three teachers, 49 children, two parents, one grandparent, and two program administrators. My method combined interviews with classroom observations as well as teacher discussion of curriculum materials and artifacts. Classroom observations were scheduled after signed parent consent. Interviews were conducted in the April 2013. The research site is an early childhood facility located in Kahnawa:ke, Quebec. This facility is the largest center on the reserve that offers daycare services and preschool education as a stepping stone for Kindergarten. There are nine classrooms at this facility.

This article was developed through the findings of a Master's thesis. The content was selected carefully with the intent of having readers gain insight and understanding of the research and its significance to maintaining and or reviving Indigenous cultural knowledge in an early childhood educational setting. The main questions surrounding the research were as follows: "What role do cultural stories and legends play in early childhood education? Are cultural stories/legends an important part of Kanien'kehá:ka (people of the Flint) culture and identity? Do these stories/legends have any relevance to children's learning? What are some of the goals behind implementing legends through the curriculum?

Indigenous Storytelling

> Each individual story is powerful. But the point about the stories is not that they simply tell a story, or tell a story simply. These new stories contribute to a collective story in which every indigenous person has a place. (Smith, 1999, p. 144)

Prior to the unexpected arrival of European travelers, the continents now known as North and South America were occupied with its original people who lived and died within a specific cultural pattern that resonated with meaning and understanding of who they were as a society of human beings**.** Cultural beliefs were practiced, spoken, danced, sang, mourned, taught, and dreamt by the people. Their ideology shaped the culture of society and maintained a structure that was reciprocal from one generation to the next. This reciprocity was the practice of storytelling or legends. Indigenous nations used storytelling and legends as an educational tool to promote cultural values, knowledge, and identity (Archibald, 2001; Kanu, 2006; Kirkness, 1995). The story or legend was comprised of those values that reflected identity and the relationship with the environment and the animal world (Antone & Córdoba, 2005; Friesen & Friesen, 2007a; Duryea LeBaron & Potts, 1993; Lutz & Moritz-Arndt, 1995). This form of transference was an important tool specific to the continuity of the culture of that nation (Armstrong, 1987; Faries, 2004; Ho'omanawanui, 2010; Kanu, 2006; McKeough et al., 2008). Providing culturally relevant education through storytelling and legends familiar to that nation

helps create a connection to their cultural past in the present (Pence, Rodriquez de France, Greenwood & Pacini-Ketchabaw, 2007).

Historically, storytellers were mainly elders, but others, who were talented and skilled, were also important in the continuity of this oral transference. These stories or legends provided much more than local knowledge; they transferred the history of the land and the people, songs, ceremonies, entertainment, and spiritual guidance. Educating in this fashion consisted of close bonded interactions between all community members (Antone & Córdoba, 2005). In The Sacred Hoop, Gunn Allen (1992) states:

> American Indian myth is a story that relies preeminently on symbol for its articulation. It generally relates a series of events and uses supernatural, heroic figures as the agents of both the events and the symbols. As a story, it demands the immediate, direct participation of the listener. (p. 105)

The Kanien'kehá:ka

The Kanien'kehá:ka (people of the Flint) are one of the Six Nations of the Iroquois, also known as the Haudenosaunee (people of the longhouse). Prior the 17th century, there were only five nations that made up this Confederacy of Nations. The Tuscarora Nation was the last nation to unite the Six Nations peoples (Wallace, 1994). As a confederacy of nations, the Haudenosaunee (peoples of the longhouse) share a common system of beliefs and practices that have sustained their unity for centuries. The formation of the Confederacy was founded on Kaianere'kó:wa (Great Law of Peace). Haudenosaunee (people of the longhouse) political culture derived from these teachings of peace and diplomacy. Through many oral teachings is manifest the connection and validity of Haudenosaunee existence here on Mother Earth.

Indigenous Ways of Knowing and Teaching

> Because we are old, it may be thought that the memory of things may be lost with us, who have not, like you, the art of preserving it by committing all transactions to writing. We nevertheless have methods of transmitting…an account of all these things. You will find the remembrance of them is faithfully preserved, and our succeeding generations are made acquainted with what has passed, that it may not be forgot as long as the earth remains. (Kanickhungo, Haudenosaunee spokesperson, 1736 as cited in Rains, Archibald, & Deyhle, 2000, p. 337)

Indigenous ways of knowing and teaching have always stood in contrast to Eurocentric ideological perspectives on all matters concerning land, cultural/religious practices, government, and education. However long and hard the struggles were and continue to be, Indigenous communities now take a more active role in their education in order to preserve and promote a strong and balanced foundation for the continuity of cultural identity (Friesen & Friesen, 2007b; Ho'omanawanui, 2010). For many Indigenous nations, the coming of organized religion, separate governing systems and particularly education "is considered the time of greatest oppression, a period of cultural disruption marked by efforts of assimilation[,] which today are viewed more as tactics of extermination" (Kirkness, 1995, p. 30).

For decades, the challenges of reconstructing mainstream education to suit and identify with Indigenous culture have been extremely exhausting for those on the front lines of education and its policies. Reports upon reports have been made, identified, released, and then filed, in

regard to the immediate needs of Indigenous communities and their education system. A common result of these studies/reports is the lack of materials relevant to Aboriginal culture (Kirkness, 1995; Kanu, 2006), which is needed to create and deliver curriculum that is knowledgeable about and responsive to the students' cultural background and current community ideology.

In a YouTube video, Dr. Taiaiake Alfred (2010) speaks about the loss of traditional ways of knowing who one is and how that loss reflects many current community situations. He says that Indigenous education is a revolutionary act and a resurgence of indigeneity. He also explains that if one does not have the tools to pass on to the young people, then what will they have to work with; one is not going to solve their problems, but one can give them the tools, because the tools they now have are very poor. He goes on to say that the cultural foundation that the ancestors stood on to confront the challenges that they faced was huge, like a large rock, and that was their language, cultural knowledge, ceremonial engagement, social connections, and spirituality.

Today, Indigenous education is interwoven through various subject courses such as Native Studies, History of Aboriginal peoples, Native languages, Native Literature and Poetry, Native American Medicines, and so forth. Wilson and Wilson (2002) state that the more we articulate what an Indigenous perspective is and the more we clearly express our worldview, the more difficult it is for it to be accepted and understood by academia (p. 67). Hill (2002) reminds us that there are many hurdles in Indigenous education and at the very forefront there is the need to identify "exactly what it is, or what we want it to be" (p. 282). She goes on to say that we need to design systems and methods with unique delivery and convince our own people that it is viable and will prepare our children for the world out there (Hill, 2002).

Residential Schools

The arrival and establishment of European culture has heralded in some ways the beginning of the end of Indigenous, Native, or Aboriginal ancestral life ways (Faries, 2004; Kirkness 1995; Antone & Córdoba, 2005; Ho'omanawanui, 2010; Kanu, 2006). Over the centuries, European settlers have bestowed upon themselves the privilege to lay claim to land that does not belong to them and the right to exert dominance over the lives and cultures of the Indigenous peoples they encountered. Residential schools are only one of the foreign systems enforced on Indigenous peoples, but mark the most destructive and tragic disruption of an entire culture of people (Faries, 2004).

Residential schools have had very little benefit for Indigenous children and their families. Recent documentation and personal accounts have provided evidence of the abuse and trauma that occurred under these so-called "educational facilities" for Indigenous children. Historical documentation offers limited information on the children who attended residential schools and in regards to the events that occurred; what is available is presented "from the perspective of the government or the missionaries whose policies controlled them" (Haig-Brown, 1988, p. 25).

Today, both church and government and Indigenous peoples reflect their own perspective and carry the burden of guilt and shame of what had occurred within these government and church facilities whose goal was to "educate the Indian." Results of these policies have been long buried in the hearts, minds, and spirits of those who were once children of residential schools. Rebuilding education through decolonizing methods, for example by using storytelling to recite

our histories, can contribute to the reconstruction of current Indigenous educational practices and begin to offset the undetected viruses that remain incubating within the people and their current systems. The Creation Story of the Iroquois is one prime example of a multi-faceted story that reflects cultural meaning and affirms spiritual existence throughout its stages. Breaking down the stages as age appropriate curriculum content can perhaps more closely realign early childhood practices with an authentic holistic relationship to a place of origin and spiritual identity.

Indigenous Curricula

> Considering curriculum as culture is a way to attain a holistic understanding of education, not only as planned curricular content, but as experienced or lived in the presence of people and their meanings. (Joseph, 2011**,** p. 23)

Historically, Indigenous cultural patterns demonstrated living simultaneously with the land and the environment and teaching and learning through cultural, daily, and seasonal repetition, using oral legends and stories as the means of transmission of historical and spiritual doctrine (Armstrong, 1987). The cultural knowledge transmitted throughout one's life is a reflection of the spiritual core of the nation and its ability to facilitate historical governance, ancestral teachings, and the survival of a strong identity preserved for the coming generations (Faries, 2004).

Indigenous education and curriculum were non-existent, in the sense that learning and living was the whole process of education while the curriculum was the environment and the knowledge of the people. However, the evolution of non-Indigenous education promoted through centuries of White Eurocentric doctrine and philosophy has left very little room for the development and acceptance of Indigenous ideologies and knowledge's as relevant curriculum in mainstream academia.

In my interview with Owiso:kon (a grandparent), she talked about how stories are no longer done the same as they used to be. She referred to new technologies and children sitting in front of the television instead of listening to real stories. She said, "Our history and our whole culture is based on storytelling; Whites believe we don't have a history based on fact because there are no written documents proving it." She recalled hearing stories from her grandmother. She said, "Religion hid the stories; it made people not want to tell them anymore."

Indigenous education is based on an experiential form of learning. Ouellette (2011) states that the Dena Tha prefer to learn by personal experience, by watching someone who knows how to do things, and by listening to narratives and stories; therefore, the learning occurs through observation rather than instruction, making the knowledge personal. Looking at curriculum from an Indigenous perspective requires internal cultural knowledge, history, geography, language, and the spiritual knowledge of the people themselves and this should be the primary job of the community at large. Therefore, the education and curriculum is drawn from familiar community contexts that will support and validate the cultural norms through educational endeavors. Simultaneously, it needs to be acknowledged that there would also be the need for non-Indigenous content; teaching about other cultures of the world and the current political or environmental issues through the latest technologies should not be avoided because a "curriculum must take into account the students' current and future needs" (Ouellette, 2011, p. 198).

For many communities, current curriculum guidelines remain aligned with government criteria. However, the push and demand for interweaving cultural knowledge has grown since the 1970's, but one of the main challenges is the lack of curriculum development (Ouellette, 2011). The demand is rising; however, "the actual implementation is not occurring on a significant basis" (Faries, 2004, p. 2).

Early Childhood Education

Early childhood programs were developed based on a community's needs, which mirrored the broader society at large. The initial intent was to cater to working parents and those who went back to school seeking job skills (Greenwood, 2006). Aboriginal Head Start programs were established as on reserve programming to support working mothers and families in need of assistance in early childhood care. In other instances ECE programming provided a support for families in need of early intervention stemming issues of domestic violence, alcoholism, drug abuse, poverty and physical abuse that raised child safety concerns (Greenwood, de Leeuw & Fraser, 2007).

The root of such problems within many Indigenous communities point directly and indirectly to the longstanding colonial practices of previous and current governing bodies. The emotional, spiritual, psychological, and physical abuse suffered by the children who attended residential schools was profound and the effects are openly visible today. The establishment of Canada's Indian Act affected native communities as well. This act created reserves, controlled governing systems, banned Indigenous customs, and set educational protocols initiated by residential and day school structure (Greenwood et al., 2007).

Bodrova (2003) writes that Vygotsky believed that the social condition of the child was a "basic source" of her and his development. And that other people and the cultural environment of the child do more than modify what is within the child: "They actually shape both the content and the nature of this child's emergent mental functions" (Bodrova, 2003, p. 31). Through Indigenous ways of learning and knowing, children's lives can be profoundly influenced through listening to stories and legends that provide knowledge and spiritual guidance and in turn formulate the intellectual knowledge of a child in those early years.

Early Childhood Education in Kahnawa:ke

Culturally and historically, early childhood care and daycare services were non-existent in Kahnawa:ke. The largest facility in the community is the Step-by-Step Child and Family Center. They have nine classrooms with children from the age of 18 months to 5 years old. They run an offsite center that enrolls children under the age of 1 year and transfers them to the larger center once they reach 18 months old. Today, early childcare services are in high demand and these early services are relative to the social and cultural changes that have affected most Indigenous communities. In British Columbia, several nations now offer early childhood care services that incorporate parent services and community events that are intended to bring back the trust and relationship of the close knit family care that Indigenous peoples once practiced (Ball, 2004).

The Step-by-Step Child and Family Center is not only a daycare center, but it is also an early childhood and family center. Over the years, families have been invited to participate in school events and community gatherings held at the center. There is a part-time speech therapist and a psychologist available on staff. A dental hygienist makes scheduled visits for the four- and

five-year-old children. The center also collaborates with Shakotiia'takehnhas Community Services in regard to early interventions whereupon the child must receive early childcare services due to her or him being placed in foster care within the community. The support services available are not only for those in need of intervention, but also, the center offers and promotes events that often include the community and or all families of the children attending the school. Often there are luncheons for working mothers and special luncheons for grandparents and fathers.

Classroom Observations

I introduce portraits of classroom observations where the recorded stories have been interwoven with the research literature and my insights. Through a qualitative methodological lens, portraits are "the examination of the ways in which the researcher deals with her or his lenses and tools" (Chapman, 2005, p. 34). The researcher's voice is heard "through the central themes" of the data being presented (Chapman**,** 2005, p. 34).

A Big Book Story

On May 14, 2013, I entered Sonia's classroom (Classroom 1) during storytelling time. I arrived a bit early as the teacher had asked me not to disturb the flow of the morning routine. The children were somewhat familiar with me being that I had visited twice already to speak with the teacher; her name is Sonia. On one previous visit I sat with a little girl who was finishing her snack. I said hello to her and she immediately invited me to a party at her house. I gladly accepted and she rushed off to the sink washed her hands and discarded her garbage. At the "official" observation, the routine was similar. I entered and said "hello" to the children; they were busy cleaning the remainder of their snacks and readily preparing for circle time. Circle time is the place and time to gather in preparation for the day's routines and to share any pertinent information about guests, events, outings, or personal celebrations and, of course, story time.

On this day, Sonia chose to tell the children the Creation Story using a big book that was nicely illustrated and was laminated and bound with yarn. It was evident that the person who put this big book together had some artistic skill. The drawings were done in colorful markers on large poster boards and resembled professional animated artwork with an Indigenous artist style. The children all sat on the floor in front of Sonia and another teacher sat among the children acting as a second set of hands and eyes and through my observation, it was obviously needed to ensure no "monkey business" was taking place. I sat along the window in order to create a place for my recorder and a secure surface on which to write my notes.

The story began with Sonia recapping the title of the book (The Creation Story) and asking the children what they remembered about the story.

One child replied, "Is that the special one?"

Sonia replied, "Yes, that's the special one."

After reading the first page, the teacher asked, "What do you see?"

The children replied by naming the pictures of the fruit. The children were very attentive to the story and sat in amazement as though they were hearing it for the first time. The half circle

became tighter as the children moved closer to one another; they looked very relaxed and comfortable leaning on one another trying to get the best possible view of the big book. The children are aged three and one child recently turned four years old. One little girl was distracted by something on the window ledge; then Sonia engaged her with "please pay attention" and called out her name. The little girl looked towards the big book and then returned to her distraction, which was now at the edge of her pant leg.

Culturally and historically elders taught through stories, ceremony, speaking to the children about relationships, and leading by example. The stories reflected a relationship to earth, land, water, animals, and encompassed the most complex understanding of the universe. Listening to stories taught listening skills and helped deepen one's thoughts about community, identity, respect, and spirituality. It was a natural process of education and is rarely used in today's Native societies (Archibald, 2001).

As Sonia read on it was evident that the children knew this story by their eagerness to provide the answers to the questions posed. The story was now at the part where Sky woman falls through a hole in the sky.

She asked, "Where did she go?"

Several children raised their hands in the air and waited to be called on to give their answer. A woman falling through a hole in the sky sounds irrational, mythical, and unrealistic. Gunn-Allan (1992) states that "an American Indian myth is a story that relies preeminently on symbol for its articulation" and "it demands the immediate, direct participation of the listener" (p. 105).

We arrived in the story where birds and water animals offered assistance to Sky woman.

Sonia asked, "What happened to her?"

The children replied, "She's on the turtle's back."

She read on and asked the children "Which animals dove down to the bottom?"

Voluntarily one child shouted, "Otter" then another child repeated, "Otter."

Sonia asked, "What other animals helped her?"

"The muskrat," one child said.

Sonia repeated the question and another child yelled out, "Beaver."

Sonia said "Thank you," and repeated, "The beaver."

"What are they looking for?" she asked.

The children, in unison, shouted out, "Dirt."

The animals were now diving to the bottom of the ocean to retrieve some dirt for Sky woman. In the story, Sky woman uses the dirt to create a land base to walk upon and she plants the seeds and roots that she grabbed at before falling through the hole in the sky.

The children were engaged and verbally participating in the story. The circle again became closed in and smaller in radius as they slid towards the big book on Sonia's lap. One boy jumped up from the floor and began to demonstrate how Sky woman planted her roots and seeds. He started to move his feet side to side in the motion of a windshield wiper blade of a car.

He stood in place moving his feet and telling Sonia, "This is how she planted."

As he demonstrated how Sky woman plants upon the turtle's back, he began naming vegetables in Kanien'keha (Mohawk). He said, "Ó:nenste, Ononh'òn:sera" (corn, squash).

Sonia responded to his enthusiasm with, "Yes that's right;" then she repeated the vegetables in Kanien'keha (Mohawk). She continued to praise him and added another vegetable, Osahé:ta (beans). These vegetables are also related to *Ohèn:ton Karihwatehkwen* (opening address), and to the Three Sisters story where the three sisters are Corn, Beans and Squash.

In my interview with Sonia, I asked her about what her goal was on implementing these legends and stories. She replied by saying, "Each legend, depending on which legend you're reading, has a lesson, right! There's something behind each story/legend; there are teachings; that's why you use them; they're not just making them up; there's a reason why we use them" (Interview, April, 22, 2013).

Sky Woman's Fall

> Oral recitations of the Creation Story, in other words, not only describe the origins of the world but also perpetuate the moment of Creation in the present. (Parmentar, 2010, p. xxxv, xxxvi)

On May 28, 2013 I walked into Stephanie's class (Classroom 2) for observation number two. The children were all seated and the assistants were preparing to sit alongside the children at circle. The floor was crowded with little tiny people and a couple of big people. These children's ages ranged from 18 months to three years old. In a prior conversation, Stephanie mentioned that the children who are three, or who will be turning three, move up to the next classes, for instance to Sonia's class.

I situated myself behind the circle of children, placing my recorder on a small shelf in front of me. I was so amazed at how the children were all ready and waiting to begin. The class began with *Ohèn:ton Karihwatéhkwen*, the opening address. They used a small booklet of pictures that identified with each passage. This booklet is a miniature version of the large picture cards drawn by a local artist. Each child took a turn to hold up the small picture as the others recited the passage that identifies each picture: "*Teiehtinonhwerá:ton ne kahnekarónnion*" (We offer our thanksgiving to all the waters).

Stephanie told the Creation Story orally to the children. There was no big book or colorful, store-bought storybook to show the children. Instead there was a large box on the floor that was painted a turquoise blue with imitation grass glued to the top and what looked like a handmade tree decorated with colorful objects. I gathered from my own knowledge of the story that the objects represented the fruit and foods available from the tree of life in the story. Inside the box there was a dark blue paper glued to the surface that created an ocean-like representation. As she began the story she asked the children if they knew who the characters were (the stuffed dolls).

She answered her own question by saying, "It's Sky woman," then asked, "What did she have in her belly?"

One child answered, "A baby."

"Yes, a baby," Stephanie answered back. As she moved along she explained that Sky woman became very hungry and wanted strange foods to eat and she asked her husband to get her some bark from the tree of life. He refused her request and she became even more persistent. Finally, he helped her to the tree and she began to dig beneath it.

Stephanie used the characters (stuffed dolls) to demonstrate Sky woman digging beneath the tree and she held the husband (other stuffed doll) next to her as he told her not to dig so deep.

She said to the children "Guess what? She lost her balance and she started to…"

Two of the children answered, "Fall" in a loud and prolonged tone.

Stephanie demonstrated Sky woman (doll) falling to the water (the bottom of the box). As she (the doll) was falling, Stephanie pretended to be Sky woman and hollered out "Ahhh" as Sky woman fell through the hole in the sky.

She continued to describe Sky woman's fall and then asked, "Remember where she landed?"

In unison, two children answered, "Turtle's back."

Sky woman was now on the turtle's back and Stephanie told the children that she was scared and that she missed her husband. She said that Sky woman told the animals, "I have nothing to eat; what am I supposed to do? I have roots and seeds from the tree of life but nowhere to plant them. I need some dirt, *o'ken:ra*, then I can plant my roots and seeds." Stephanie used some Kanien'keha (Mohawk) words in the story, such as *O'kèn:ra*-dirt, *Ken'niiohontéhsa*-strawberry. She continued on, telling the children that the animals offered to swim down to the bottom of the ocean to get Sky woman some dirt.

She told the children that the otter was the first to try and he was not successful, then the muskrat tried and he was not successful, and then beaver tried, and she said, "Beaver came up from the bottom of the ocean and had some dirt in his paw and said to Sky woman, 'here you go.'" She then explained that Sky woman took the dirt and began to pour it over the turtle's back and then she began to dance and sing some songs she remembered. She reminded the children that when Sky woman fell she grabbed onto some plants, roots, and seeds such as Indian tobacco, strawberry, and the Three Sisters.

She told the children that the land began to grow and eventually that it became Mother Earth. She reminded them that they just finished giving thanks to her (Mother Earth) today, and said, "*Isten'a tsi iohontsa:te*-our mother the earth."

This version of the Creation Story is adapted and as in many stories, teachers and storytellers will adapt a story to the appropriate level of their students and listeners. Adaptation is one of the traits in oral legends and storytelling. The narrator could create many twists and turns throughout the story in order to appease the audience.

A Portrait Discussion

The action of storytelling is in itself a teaching tool; it helps teach listening skills, and deepen one's thoughts about community, identity, respect, and spirituality (Archibald, 2001). Maxine Greene says, "We identify ourselves by means of memory" and memory helps us to "compare the stories of our lives" (as cited in Strong-Wilson, 2007, p. 116).

Through examination of my research data it became apparent that legends and storytelling played a significant role at the Step-by-Step Early Childhood and Family Center and are believed to be a cultural component needed for the revival and reconnection to a Kanien'kehá:ka identity. The legends told here have definitely been told before. As I observed the children listening to the stories, I witnessed eagerness and amazement projecting through their faces. I also heard memories and knowledge voiced by the children on story parts and story characters.

Gail (administrator of Step-by-Step) is a former early childhood educator with many years experience and has been a significant part of the cultural development at the center. She expressed similar thoughts about the importance of teaching the Creation Story, the Great Law of Peace and the *Ohèn:ton Karihwatéhkwen* (opening address), saying, "The culture, language and stories are related to who we are, it explains our culture and what it means to us and it should all have a place in our education system."

These portraits helped me see that the art of storytelling remains a powerful and necessary tool in early childhood education. It helps teach the children about life and nature, and morals and values that not only resonate with Kanien'kehá:ka identity, but also project themselves in every aspect of living as a human being on Mother Earth, instructing care for the earth, waters, animals, plants, foods we eat, and medicines. They teach about the stars and the moon, the clan system, the relations between spirit and humans; they teach respect for the universe as a whole.

These stories are meant to penetrate the soul's knowledge, and as one grows and ages the memories and teachings reflect outward back into the world around, creating a physical, emotional, and spiritual connection that supports life's journey. Each child who raised his or her hand and shouted out answers or names of characters and animals demonstrated and reflected their own memories of stories told to them through oral transference and in some instances, a big book. I saw that the books were not so much part of the story. They were props or visuals for the children. The teachers themselves told the stories through their own memories and knowledge, demonstrating the highs and lows, the suspense and wonder, the flying, the falling, the calling out for help, and the emotions portrayed by the characters.

Each portrait demonstrates its own story within, a story of teacher as cultural advocate and learner and the children as cultural learners and knowledge holders. Every story told can generate new images and reinforce the old ones. King (2003) writes in just about every chapter of his book: "The truth about stories is that that's all we are" (p. 2).

At some point in our lives we will all look back at our own stories and the stories told to us by tracing a semi-circle. The semi-circle will soon become a full circle and here is where we will finally understand that we are all but a vessel filled with stories that make up our lives, identities, languages, and beliefs.

Culture as Curriculum

My classroom observations showed that storytelling is alive and well in the classrooms at Step-by-Step and that storytelling comprises a significant part of daily school culture, which in turn pours out into the daily culture of the children. The children's physical and verbal interactions gathered during classroom observations provide evidence that stories live through the people. Storytelling brings their imaginations to life—to real life—this was gleaned in interviews with community members: the parents and grandparents of the children.

In each interview I asked the participants if they felt or believed that legends and storytelling are an important part of Kanien'kehá:ka culture and identity. All the participants answered yes to the question, stating various reasons why they feel and believe it is important.

Two parents also commented on the Creation Story and what they remembered from their own schooling: Tina (parent) talked about the Creation Story: "I only remember bits and pieces but what I do remember is that it teaches our history, our culture and where we come from." Tekaronhiahkhwa (parent) also remembered learning the Creation Story in school. She explained that the creation story is so long that it's too long and too much for young children; it always needs to be modified for the age level. They don't teach it in high school but she believes they should because in high school they can make more sense of it.

Throughout the interviews there were mixed emotions from all the participants. What was profoundly moving to me was that all of these women, including the teachers, shared the same emotional strength and deep feelings around the important role of cultural stories and legends.

In my interview with Tekaronhiahkhwa (parent) she explained why she felt so strong about a curriculum based on cultural stories and practices. She said,

> We need to get back to our teachings and learn how to be thankful; if we don't remember to be grateful, we're going to lose that aspect of our culture (she began to cry) and I don't want my children to have to go through what I went through: that feeling of disconnectedness and not knowing where you belong.

Conclusion and Recommendations

I will conclude with some thoughts and ideas on how legends and storytelling can act as a guiding tool for a reevaluation of education in Kahnawa:ke. I recommend that we begin from the ground up, just as we recite *Ohèn:ton Karihwatéhkwen* (opening address) and as the Creation Story continues to teach, beginning with the earth, the grass, the bugs, to the water, the trees, the animals, the birds, the thunder, the stars, the sun, the moon, and the Creator.

> *Takwanonhwerá:ton, Iethi'nisténha ohóntsa, ohente'shón:'a, otsi'nonwa'shón:'a, ohneka'shón:a', okwire'shón:'a, kontírio, otsi'ten'okón:'a, ratiwé:ras, iotsistohkwa'shón:'a, tiohkehnéhkwa karáhkwa, ahsonthenhnéhkha karáhkwa tánon Tetia'tison*.

At the very start we should offer teachers adequate cultural training (knowledge), free of judgment, and language courses in and out of the workplace. (Band council employees are offered free language courses during their lunch hour.) The focus of these teachings should come

from our stories and legends with further development linked to Kanien'kehá:ka spirituality and incorporated into classroom activities and community and school culture. This training/learning should be extended system wide, meaning the whole system, including secretaries, maintenance workers, substitute staff, resource people, and all administration should also participate. Scheduled appropriately, non-Native teachers should take part in this training as well. They are part of the system and a significant part of our children's daily lives.

I recommend curriculum development through collaboration of elders and cultural knowledge holders through smaller group sessions and periodical feedback from parents and elders. I also recommend that there be political support, not as a guiding force but as an advocate in relation with INAC. Of course this person (or these persons) would also be involved in all cultural training and language courses. Some core ideas for curriculum development could stem elder's collaboration and parent feedback.

Through my findings, I also conclude that the desire for a culture-based education may be a key component for retrieving the connection once felt through knowing the true meaning of legends and stories. The two young mothers interviewed both shared that they wanted to learn more but did not have an avenue open to them at this time. This reveals that there should be more open classes for young mothers and scheduled at their convenience. Maybe a variety of time slots and days of the week could also be offered for community members, young mothers, and also young adults.

My final recommendation is that we as Indigenous scholars continue working toward recognition and validity of our culture as ways of knowing, teaching and learning. It is my dream to have an all-Indigenous curriculum course designed for all educators, using stories and legends as the foundation of development. It is my hope that this research will in some way contribute to a new beginning through a reevaluation of the Kahnawa:ke education system and, therefore, bring that shining pride back to our children's faces and hearts.

Nià:wen tánon tho kati naiohton nonkwa'nikón:ra—Thank you and now our minds are as one.

References

Alfred, T. (1999). *Peace power righteousness*. *An Indigenous manifesto*. Don Mills, ON: Oxford University Press.

Alfred, T. (2010, May, 13). From noble savage to righteous warrior: *Regenerating and reinscribing Indigenous presence.* Retrieved from https://youtube/8ZfGAqdlJmE

Antone, E., & Córdoba, T. (2005, fall). A wholistic approach to re-storying Aboriginal literacy: *Literacies and Community. #6* , 9 - 11. Retrieved from http://casae-aceea.ca/~casae/sites/casae/archives.cnf2005/2005onlieProceedingsCAS2005Pro-Antone.pdf

Archibald, J. (2001). Editorial: Sharing Aboriginal knowledge and Aboriginal ways of knowing. *Canadian Journal of Native Education, 25*(1), 1 - 5.

Armstrong, J.C. (1987). Traditional Indigenous education: A natural process. *Canadian Journal of Native Education, 14*(3), 14 - 19.

Ball, J. (2004). Early childhood care and development programs as hook and hub: *Promising practices in First Nations communities.* Victoria, BC.

Brenner, E. M. (2006). Interviewing in educational research. *The handbook of complementary methods in education research* (AERA) (pp. 357 - 370). Santa Barbara CA: University of California.

Creswell, J. W. (2009). Research design. *Qualitative, quantitative, and mixed methods approaches.* Thousand Oaks, CA: Sage.

Chapman, T. K. (2005). Expressions of "voice" in portraiture. *Qualitative Inquiry, 11*(1), 27 - 51. doi:10.1177/1077800404270840

Duryea, LeBaron. M. & Potts, J. (1993). Story and legend: Powerful tools for conflict resolution. *Mediation Quarterly, 10*(4), 387 - 395. doi:10.1002/crq.3900100407

Faries, E. J. (2004). Research paper on Aboriginal curriculum in Ontario. Chiefs of Ontario. Retrieved from: http://www.chiefs-of-ontario.org/sites/default/files/files/A%20Research%20Paper%20on%20Aboriginal%20Curriculum%20in%20Ontario.pdf

Friesen, J. W., & Friesen, V. L. (2007a. March 15 - 17*). Storytelling makes a comeback*: *Aboriginal contributions to the teaching/learning process.* A Paper presented at the Eighth Annual Conference of the Indigenous Woman's Conference. Trent University, Peterborough, ON. Retrieved from http://tmkdj.com/static.drsfriesen.com/1resources/2007_03_story_tellling.pdf

Friesen, J. W., & Friesen, V. L. (2007b, February). Inculcating Indigenous knowledge and spirituality: A Siksika (Blackfoot) theory of learning. Electronic Journal. Retrieved from http://tmkdj.com/static/drsfriesen.com/1/resources/2007_02_inculcating.pdf

Greenwood, M. (2006). Children are a gift to us: Aboriginal-specific early childhood programs and services in Canada. *Canadian Journal of Native Education, 29*(1), 12 - 28.

Greenwood, M., de Leeuw, S., & Fraser, T. N. (2007). Aboriginal children and early childhood development and education in Canada: Linking the past and the present to the future. *Canadian Journal of Native Education, 30*(1), 5 - 18.

Grove, W. R. (1988). An analysis of the constant comparative method. *Qualitative Studies in Education, 1*(3), 273 - 279. doi:10.1080/0951839900030105a

Gunn-Allan, P. (1992). The sacred hoop. Recovering the feminine in American Indian traditions. *Something sacred going on out there: Myth and vision in American Indian literature* (pp.102 - 117). Boston, MA: Beacon Press.

Haig-Brown, C. (1988). *Resistance and renewal. Surviving the Indian residential school*. Vancouver, BC. Arsenal Pulp Press.

Hill, J. C. K. (2002). Editorial-Indigenous education: Ways of knowing, thinking, and doing. *McGill Journal of Education; 37*(3). 281 - 291.

Ho'omanawanui, K. (2010). Mana Wahine, education and nation-building: Lesson from the epic of Pele and Hi'iaka for Kanaka Maoli today. *Multicultural Perspectives*, *12*(4), 206 - 212.

Joseph, P. B. (2011). Understanding curriculum as culture. (2nd. ed.) In P. B. Joseph (Ed.), *Cultures of curriculum* (2nd ed., pp.23 - 35). New York, NY: Routledge.

Kanu, Y. (2006). Reappropriating traditions in the postcolonial curricular imagination. In Kanu, Y. (Ed), *Curriculum as cultural practice: Postcolonial imaginations* (pp. 203 - 222). Toronto, ON: University of Toronto Press.

King, T. (2003). *The truth about stories*. *A Native narrative.* Dead Dog Café Productions and the Canadian Broadcasting Corporation.

Kirkness, V. J. (1995). Aboriginal peoples and tertiary education in Canada: Institutional responses. *The London Journal of Canadian Studies, 11,* 28 - 40.

Kovach, M. (2005). Emerging from the margins: Indigenous methodologies. In L. Brown & S. Strega (Eds.), *Research as resistance: Critical Indigenous, and anti-oppressive approaches*. Toronto, ON: Canadian Scholars Press/Woman's Press.

Lutz, H., & Moritz-Arndt, E. (1995). First Nations literature in Canada and the voice of survival. *The London Journal of Canadian Studies, 11,* 60 - 76.

McKeough, A., Bird, S., Tourigny, E., Romaine, A., Graham, S., Ottmann, J., & Jeary, J. (2008). Storytelling as a foundation to literacy development for Aboriginal children: Culturally and developmentally appropriate practices. *Canadian Psychology/Psychologie canadienne, 49*(2), 148–154. Doi10.1037/0708-5591.49.2.148

Ouellette, R. F. (2011). Evaluating Aboriginal curricula using a Cree-Métis perspective with a regard towards Indigenous knowledge. (Master's Thesis). University of Laval. http://www.theses.ulaval.ca/2011/27621/27621.pdf

Parmenter, J. (2010). *The edge of the woods. Iroquoia, 1534 - 1701.* East Lansing: MI: Michigan State University Press.

Pence, A., Rodriquez de France, C., Greenwood, M., & Pacini-Ketchabaw, V. (2007).Indigenous approaches to early childhood are and education Introduction. *The Canadian Journal of Native Education, 30*(1), 1 - 4.

Rains, F. V., Archibald, J., & Deyhle, D. (2000): Introduction: Through our eyes and in our own words. *International Journal of Qualitative Studies in Education, 13*(4), 337 - 342

Smith, L.T. (1999). *Decolonizing methodologies: Research and Indigenous peoples.* Londodon,UK: Zed Books. Copyright 2012 by Author.

Strong-Wilson, T. (2007). Moving horizons: Exploring the role of stories in decolonizing the literacy education of White teachers. *International Education, 37*(1), 114 - 131.

Wallace, P. (1994). *White roots of peace. The Iroquois book of life.* Santa Fe, NM: Clear Light.

Wilson, S. (2001). What is an Indigenous research methodology? *Canadian Journal of Native Education,25*(2), 175 - 179.

Wilson, S., & Wilson, P. (2002). Editorial: First Nations education in mainstream systems. *Canadian Journal of Native Education, 26*(2), 67 - 68.

Fostering Remembrance and Reconciliation Through an Arts-Based Response

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Abstract

This paper presents the results of study about an urban high school in Ontario that performed a stage play that portrayed the legacy of the Indian residential schools in Canada. We wanted to know the impact this arts-based response had on teachers and students. From the data that we obtained from focus groups, we identify four learning outcomes of the legacy project: reflection on knowledge and identity; fact-finding through the processes of respecting memory; using the arts to remember; and broadening perspectives: remembrance (memory), reconciliation, and memorialization. Our research can assist educators and researchers to implement an arts-based model that honours and respects residential school survivors and their families.

*Keywords***:** residential schools; reconciliation; drama education; arts education; genocide studies

Fostering Remembrance and Reconciliation Through an Arts-Based Response

> "We offer this [play] as…an act of remembrance, an act of continuing being able to talk and heal."
>
> –Teacher in the study

In 2013, an urban public school in Ontario performed a stage play that portrayed the legacy of the Indian residential schools in Canada. High school teachers and students worked together to identify authentic, accurate, and culturally appropriate resources, to listen to survivor stories, to research historical documents, and to visit a former residential school. The information gathered was used to generate an arts-based response, a collectively written play, to engage and educate schools, families, and community members about remembrance and reconciliation of the history and effects of Indian residential schools.

According to Ontario's First Nation, Métis and Inuit Education Policy Framework (Ontario Ministry of Education, 2007) there still exists "a lack of understanding within schools and school boards of First Nation, Métis, and Inuit cultures, histories, and perspectives," (p. 6) including a limited understanding of the "First Nations perspective on the school system, which has been strongly affected by residential school experiences and has resulted in intergenerational mistrust of the education system" (p. 6). Since the introduction of the policy framework in 2007, limited research has been conducted in Ontario that investigates the topic of reconciliation for the past and present effects of Indian residential schools. According to the Truth and Reconciliation Commission of Canada (2015a):

> Reconciliation is about establishing and maintaining a mutually respectful relationship between Aboriginal and non-Aboriginal peoples in this country. In order for that to happen, there has to be awareness of the past, acknowledgement of the harm that has been inflicted, atonement for the causes, and action to change behaviour. (n.p)

Remembrance and memory are thus important concepts related to reconciliation. As Regan (2010) states:

> For survivors remembering residential school experiences gives rise to a host of negative emotions involving multiple losses—of self, family, community, language, and culture, along with the devastating intergenerational effects of abuse. At the same time, such remembering can also invoke healing memories of courage, strength, and cultural resilience in the face of extreme adversity and its aftermath. (p. 176)

Not only are these memories significant for survivors, but for all Canadians. Regan (2010) reminds us that while "Canadians might agree in principle that, as a country, we must learn from our past so that history does not repeat itself, most of us 'fail to connect the dots' between this problematic past and current attitudes and policies" (p. 178).

We concur with the TRC (2015a), that in order to reconcile, we must remember. Therefore, in this paper, we explore using the arts, drama specifically, as a form of remembrance and as an act of reconciliation for the history and effects of Indian residential schools in Canada.

Purpose of the Research

We feel that remembrance has the potential to play a powerful role in reconciliation. We wanted to add to the scant literature exploring the teaching and learning in schools about the remembrance and reconciliation of Canadian Indian residential schools. Our research focuses on a 2013 production of an Ontario high school stage play about the legacy of Indian residential schools in Canada. The research question guiding our study is: What are the significant learning outcomes for students and teachers of an arts-based reconciliation project about Canadian Indian Residential Schools?

The Legacy Project

The purpose of the Legacy Project was for staff and students to learn together about the legacy of the Indian residential school system. Theatre was chosen as a medium for the project because it allowed the students to take time to learn about the history and then later use that information to demonstrate their understanding by writing a play. The secondary school is located in a large urban centre in Ontario and its student population consists of Indigenous and non-Indigenous students. The project was supported by a grant received from the Ministry of Education, Aboriginal Education Office to align with the Ontario First Nation, Métis, and Inuit Education Policy Framework (Ontario Ministry of Education, 2007). Indigenous and non-Indigenous students from Grades 9 - 12 who registered were eligible to receive credits for their participation in the project. Students who were involved in the writing of the play were eligible to receive the dual credits, Drama, Grade 11/12, University/College Preparation (ADA3M/3U) and Writer's Craft, Grade 12, University Preparation (EWC4U). Senior level music composition students (AMC4M) received credit for composing original music. For the play, teachers were assigned to the courses based on their subject specialization. The project manager, a teaching coordinator, was assigned to teach two of the courses and manage the organization of the project at the school level. In total three teachers and approximately 53 students participated in project.

The Play

The final product was a play that was approximately one hour in length. The play was a form of ethnodrama (Saldaña, 2005). According to Saldaña (2005), an ethnodrama is a play that is composed of "dramatized, significant selections of narrative collected through interviews, participant observation, field notes, journal entries, and/or print and media artifacts such as diaries, television broadcasts, newspaper articles, and court proceedings" (p. 2). For the legacy project, teachers and students worked to identify historically accurate and culturally respectful resources, listen to survivor stories, research historical documents, and visit one of Canada's last standing former residential schools.

The students created a live theatre performance with the characters in the play portraying both Indigenous students and non-Indigenous staff members (i.e. teachers, nuns, priests, etc.). Students enrolled in the Drama and Writer's Craft dual-credits course wrote the script. There was no speaking in the play. Instead, the audience used the visual images and music to create meaning. Original music was composed and performed by students to match the mood and action of the play. Music took the place of a script (the words) to communicate the general loss of rich and diverse Indigenous languages and knowledge. Strong imagery and symbolism were used throughout, including a massive tree, a red hooded sweater, and handprints. The symbols selected were intended to be respectful to the survivors and their families. The intention was to

avoid potential triggers by not focusing too much on the abuse or other triggering events that might have taken place at residential school. For instance, a large, overpowering tree was the focal point of the stage. The tree symbolized the basic concepts of time, roots, growth, and stability. The tree itself was inspired by one of the teacher's first visit to a former residential school:

> Long before the idea of the play, I walked out back, was drawn to the tree (dying) and when I touched it I was struck by how the place and stories and experiences and truth could not be left to die. That the years in that tree's life likely began before a school was there and ended after it was closed…and the truth could not be left to die.

Coloured sweaters were used as metaphors; for example, one of the female students wore a red hooded sweater, which symbolized Indigenous identity, language, and culture. The red sweatshirt was symbolically taken from a young girl when she arrived at the school. The other children later returned it to her—an indication of restoration and revitalization of culture. Several others forms of imagery were used including handprints scattered throughout one of the scenes to represent abuse. In one instance, when a boy comes to help a girl, he also has handprints on him, symbolizing that the children were abused. To further demonstrate this, when the students at the end of the play left the stage, the stories of the survivors, were displayed through a series of archival photographs of residential school students and schools streamed across a large backdrop.

Perspectives on Reconciliation

From 1892 to 1996 there were approximately 130 government and church run Indian residential schools in Canada (Chansonneuve, 2005). There were over 150,000 First Nations, Métis, and Inuit children who were removed from their home communities and forced to attend government-run schools (Miller, 1996). The intent was to assimilate all Indigenous children into mainstream Canadian society by not allowing them to speak their native language or practice their traditions (Chansonneuve, 2005). As the Truth and Reconciliation Commission of Canada (TRC, 2012) includes on the cover page of their book, *They Came for the Children*, this was a purposeful attempt by the Canadian government to assimilate Indigenous peoples. Hector Langevin, the Public Works Minister of Canada said in 1883, "In order to educate the children properly we must separate them from their families. Some people may say that this is hard but if we want to civilize them we must do that" (as cited in TRC, 2012, cover page). Children in residential schools often faced severe forms of punishment and/or abuse (TRC, 2012). Instead of traditional language and culture, Indigenous children were forced to adopt either the English or French language in addition to Christianity and Canadian customs (TRC, 2012).

Finding a clear direction on how reconciliation can be realized is a struggle since there is limited scholarly literature available on the topic (Burridge, 2006). At the same time, in moving forward, it is essential that First Nation, Métis, and Inuit students not only feel engaged, but also that they see themselves and their cultures reflected in the curriculum and the school community (Ontario Ministry of Education, 2007). The notion of reconciliation is one of the most significant challenges in the world today (Ahluwalia et al., 2012).

In moving forward towards reconciliation, the Council of Ministers of Education (CMEC) has endorsed a national Indigenous education strategy that encourages school districts

to integrate new curriculum that focuses on the history of the residential school system that will allow all students to gain an understanding of how it affected the country (CMEC, n.d.). The Honourable Eva Aariak, Premier and Ministry of Education for Nunavut acknowledged, "It is no longer acceptable for Canadians to complete their formal education unaware of this dark change in our country's history" (CMEC, 2013, n.p.). In their *Calls to Action*, the TRC (2015b) includes the following:

> 62. We call upon the federal, provincial, and territorial governments, in consultation and collaboration with Survivors, Aboriginal peoples, and educators, to:
>
> > i. Make age-appropriate curriculum on residential schools, Treaties, and Aboriginal peoples' historical and contemporary contributions to Canada a mandatory education requirement for Kindergarten to Grade Twelve students.
> >
> > ii. Provide the necessary funding to post-secondary institutions to educate teachers on how to integrate Indigenous knowledge and teaching methods into classrooms.
> >
> > iii. Provide the necessary funding to Aboriginal schools to utilize Indigenous knowledge and teaching methods in classrooms.
> >
> > iv. Establish senior-level positions in government at the assistant deputy minister level or higher dedicated to Aboriginal content in education.
>
> 63. We call upon the Council of Ministers of Education, Canada to maintain an annual commitment to Aboriginal education issues, including:
>
> > i. Developing and implementing Kindergarten to Grade Twelve curriculum and learning resources on Aboriginal peoples in Canadian history, and the history and legacy of residential schools.
> >
> > ii. Sharing information and best practices on teaching curriculum related to residential schools and Aboriginal history.
> >
> > iii. Building student capacity for intercultural understanding, empathy, and mutual respect.
> >
> > iv. Identifying teacher-training needs relating to the above. (p. 7)

Learning about the history and legacy of residential schools is a vital step towards reconciliation. As Bell (1997) states, "Knowledge of history helps us to trace the patterns that constitute oppression over time and enable[s] us to see the longstanding grievances of different groups in our society" and "it offers hope as well as the evidence that oppressive circumstances can change through the efforts of human actors" (p. 6).

Remembrance and reconciliation are linked because "learning about the history of the residential schools can contribute to the collective healing process and strengthen the fabric of communities across the country" (CMEC, 2013, n. p.). It is through continued research in the field that additional knowledge will help to advance programming about Indigenous issues for all.

The Arts and Reconciliation

Arts-based research provides perspectives, rather than universals truths. According to Taylor (2006), "by embracing the artistic medium as a way of re-envisioning the data, researchers acknowledge that qualitative research is a human-situated act, and that no one grand narrative should hold priority" (p. 12). Like art itself, arts-based research is interpreted by the individual and "in heightening the reader or audience member's ability to construct their own interpretation of the data, there is promotion of the individual's capacity for freedom" (Taylor, 2006, p. 12). In a project dealing with such an important and sensitive topic as Indian residential schools, drama also provides an opportunity for reflexivity in performance, which can provoke a critical consciousness in the audience (Neelands, 2006). Drama can be a catalyst for critical thinking and reflection for the audience and its participants.

While there is a body of research that explores using drama as means of remembrance for other histories like the Holocaust (e.g. Rosler, 2008; Schumacher, 1998; Zatzman, 1999, 2005), there is limited research available about arts-based projects that merge the act of remembrance and reconciliation for the history and effects of Indian residential schools. In terms of using theatre, after an extensive literature review, we found only the work completed by England (2002, 2004), which explores drama as a mode of response to residential schools. Drama is a useful medium to explore topics such as history and memories because it "facilitates transformational experiences for students and teachers alike, ones that bring new understandings of the world and our ability to express ourselves in relation to it and each other" (England, 2002, p. 18). England (2002) outlines the pedagogical process to make learning meaningful for students learning about the richness of the memories of the Indigenous peoples and the residential school system. In so doing, England describes a unit plan that merges drama and historical discourses. Students in England's research were given the opportunity to engage with survivor testimonies, journal, and create drama performances. England's (2004) Master's thesis demonstrates that using drama as a mode of response appears to increase a sense of critical awareness among students, and students were able to express themselves about issues of those in marginalized communities, including survivors of residential schools. While exploring sensitive topics in the classroom can be difficult, England (2004) believes that teaching for memory and social change are crucial. Despite feelings of discomfort or unease, "We as educators must be willing to delve into murky, contested territories, knowing that the work might be difficult and knowing too that it might generate more questions than answers" (England, 2004, pp. 120 - 121).

Theoretical Framework: Social Constructivism and Drama

To ground this study, we use the theories of constructivism and social constructivism to describe the learning processes. Constructivism is based on the tenant that students construct their own knowledge and that "each individual constructs his or her own understanding of his or her unique world" (Gibson, 2009, p. 25). As Maxim (2014) states, "when we talk about constructivism, we refer not only to *what* the children know but to *how* they acquire and organize information in their minds" (p. 131).

Constructivist theorist Jean Piaget (1972/1973) proposes that students have anchoring concepts or schemas—this is the student's background knowledge. Any new material learned is then integrated into a student's existing schema (assimilation), or if the knowledge is in conflict

with the existing schema, cognitive constructs must be rearranged or new constructs created (accommodation) (Piaget, 1972/1973).

Vygotsky (1978) presents another form of constructivism, social constructivism, whereby interaction with others is key to advancing learning. By working with an adult or "more capable peer," students learn by completing tasks that are too difficult for them to do on their own (Vygotsky, 1978, p. 86). The social component of learning is crucial for Vygostsky (1978); he writes, "Human learning presupposes a specific social nature and a process by which children grow into the intellectual life of those around them" (p. 89).

Based on a constructivist approach, learning is then "a process that involves the interaction of past experience, personal intentions, and new experience" (Gibson, 2009, p. 25). Knowledge and learning is, therefore, not taught but rather constructed by and in the unique individual. Learning should not be a passive activity; learning should be active and meaningful as students create their own knowledge with the assistance of an adult or more capable peer.

Gibson (2009) summarizes the literature and identifies five key principles of social constructivism for learning:

- Recognizing importance of social context,
- Actively engaging learners,
- Incorporating prior learning,
- Supporting individual knowledge construction, and
- Reflecting on learning. (p. 31)

The first four principles are clearly related to the work of Piaget (1972/1973) and Vygotsky (1978). But for the last principle, reflecting on learning, Gibson (2009) draws on the importance of reflection. Dewey (1933) writes that reflective thinking is when a person looks back on an experience, and considers it sequence and its consequence. Gibson argues that this reflective thinking is key to social constructivist learning because "it gives students opportunities to talk and write about their learning means to them, how they care about it, and how it is connected to their lives and the knowledge that they have" (p. 36). Reflection, then, allows students to think about their constructed knowledge and to make learning intrapersonal (Gibson, 2009).

Because of the active and participatory nature of the arts, there is a natural link between constructivist learning theory and the arts. Learning is not passive in the arts; students learn and construct their own knowledge as they create, experience, and express. Wright (2007) argues that drama is solidly grounded in social constructivism:

> Drama is an experience in which individuals create and respond to a network of relationships … Associated with these networks are understandings, energies and experiences that participants bring to, meet within and take away from encounters with drama. (p. 45)

Drama fits the principles of social constructivism outlined by Gibson (2009): drama is a creative, social, and an active process wherein students use their prior knowledge to create their own unique understandings. As Wright (2007) says, "[drama] identifies the student as the constructor of meaning as a consequence of her participation in a sensual embodied experience" (p. 47). The social aspect in constructing knowledge is important in drama: "The drama community (or group

or cast or class) as a collection of individual constructors of meaning requires, by circumstance, to negotiate their feelings and rationality—their embodiment" (Wright, 2007, p. 47). Like Gibson (2009), Wright argues that reflection is a key part of social constructivism in drama. He writes that the experience of drama goes beyond the performance and the dramatic experience "demands reflection" (p. 48) because so much can be taken away as learning in a dramatic experience.

Methodology

As previously mentioned, the purpose of this study is to explore the significant learning outcomes for students and teachers from an arts-based reconciliation project about Canadian Indian residential schools. It is important to note that our study was conducted after the play was performed and the project was completed. Jenny, the first author of the paper, acted as a consultant for the legacy project. Kristen, the second author, had no involvement in creation or performance of the legacy project. Our methods are explained below.

Participants

The participants in our study were non-Indigenous teachers and non-Indigenous and Indigenous students who were actively involved in the creation of the legacy project in a school district in Ontario, Canada in 2013. The project leaders were three teachers of non-Indigenous descent who had specialized training in the areas of drama, theatre, and music. In the original project, there were three Indigenous students and 50 non-Indigenous students who participated. Two of the three Indigenous students discussed having family members who attended residential schools. Three teachers and nine students (one of whom was Indigenous) participated in the focus groups, the data collection for this study.

Data Collection

We decided to use qualitative research instead of quantitative research because qualitative research seeks "to better understand human behaviour and experience" (Bogdan & Biklen, 1998, p. 38). We used focus groups to gain valuable insights into the perceptions, attitudes and values of the students and teachers who participated in the project (Morgan, 1998). Focus groups are a useful tool for research, as the group dynamics create a synergy and allow for interaction and responses among participants (Krueger & Casey, 2009). We also felt that the group setting of a focus group provides a less intimidating and more comfortable setting for high school students than interviews. The first author, Jenny, conducted two focus groups: one group for the students and one for the teachers. For the teacher focus group, three teachers agreed to participate. For the student focus group, nine students agreed to participate. Several of the students had graduated or relocated schools by the time of the data collection, spring 2014. During each focus group, Jenny asked nine questions regarding the project and their experiences and perspectives on reconciliation (see Appendix A). Each focus group lasted approximately appropriately two hours. The same questions were used for both the student and teacher focus group. Focus groups were audio recorded and transcribed by Jenny. The transcripts were shared with the teachers and students to ensure trustworthiness of the data.

Data Analysis

We conducted the analysis inductively based on themes that emerged from the data. We began by sorting the data from focus group transcripts by interview question. We then

individually read the data sorted by interview questions and independently identified themes and patterns that emerged (Bogden & Biklen, 1998). We then discussed and compared our patterns and themes and agreed on five overall learning outcomes. Having multiple researchers explore the data and come to a consensus helps to increase the reliability of the data analysis (Patton, 1990). We then grouped the data together by learning outcome using Microsoft Word.

Results and Discussion

We identified four key themes that stood out as significant learning outcomes about how an arts-based school and community reconciliation project about Canadian Indian residential schools impacted teachers and students:

- Reflection on knowledge and identity,
- fact-finding through the processes of respecting memory,
- using the arts to remember, and
- broadening perspectives: remembrance (memory), reconciliation, and memorialization.

Reflection on Knowledge and Identity

When the teachers started working on the on the project, they felt that their content knowledge about Indigenous peoples was limited to non-existent. During the focus group, teachers stated that it was through this project that they learned about the legacy of Canada's residential school system. Although the teachers in the project had studied other genocides, mass atrocities, and human rights violations from other parts of the world, at no time did they learn about what happened in their own country. At the outset of the project, teachers felt that they would have a steep learning curve without a certain level of expertise in the field of Indigenous studies fused with Indigenous community-based knowledge. The teachers stated that they had a responsibility to themselves (as learners) to take the time to understand what they did not know and ensure that everyone who participated was fully supported in their learning. The teachers believed that their goal was to raise awareness about the legacy of the residential school system even though they felt that introducing a new, sensitive topic to the students (and later the community) could potentially be overwhelming, emotionally daunting, and potentially damaging for all. One of the teachers explained:

> The responsibility piece is probably the most daunting and the greatest. It's a feeling, a responsibility as a teacher to students in introducing a topic in a way that recognizes that there is going to be a great deal of despair. Where do you find the hope when you are studying something like this? …How do we then take this very disparaging topic and present it in a way that doesn't add damage to what's been done.

The teachers realized that they needed to work slowly and respectfully in partnership with the students and the local Indigenous community while being prepared to frequently ask questions, educate themselves, and connect with local experts (e.g. residential school survivors and their families and the former residential school). As one teacher said:

> In starting with understanding the truths and the history and the stories, we had an opportunity to speak with survivors and spend time at the residential school in the

> library and to walk the ground to tour the building to see many places that many people do not get to see. It was always a constant reminder. As we were going through the project, one of the teachers was there leading us by being our moral compass, making sure that we were staying true to what this was.

Students, like their teachers, did not have much background knowledge about residential schools. Several students expressed that they knew nothing about the history of residential schools, and if they did, they knew very little about what actually happened behind the walls. According to one student, "I knew a tiny bit about it because we touched on it in previous history classes. I knew about residential schools. I didn't know what happened inside of them. I thought they were just normal schools." Another student said, "It took a little bit before it clicked in that what happened in residential schools was genocide itself. It just fascinated me that Canada would do something like this." For another student, the story of the residential school system was slightly familiar:

> My mom had a friend; she was a family friend for a long time. She didn't tell me this herself, but my mom told me that she went to a residential school and [she and] her sister were sent away and were split up. One went to residential school and the other was taken by CAS and sent away to the States and adopted.

Working through the emotions that came with this new learning about Canada's past was a challenge for most students. As one student explained, it "hits you like a ton of bricks, like why do you have these feelings? It's [residential schooling] not right and learning about it is going to get all emotional." Another student reflected, "I had no clue what had gone on in these schools and I was definitely shocked of what happened. So you have to be prepared for that; it is very emotional. You have to be emotionally prepared for anything." This new knowledge that Indigenous people's culture was taken away and almost destroyed through processes of assimilation is what appeared to motivate most of the students to want to do something about it. "We are living in Canada and it is something we should find out about … I should know about the past and what happened," stressed one of the students. Another student explained that despite the heavy emotions, "we want to show healing."

For some students, this new knowledge of what happened at residential schools coupled with being involved in the project was challenging as they struggled with their own identity and felt conflicted when dealing with emotions of guilt and what had taken place. One student said:

> I almost backed out. I tried several times to talk to the teachers about getting out of the course just because I didn't feel….It was my background that had done these things to these people. I didn't feel like I had a right to be a part of the healing process…It took me a long time to feel like I was in the right place to add what I had to say to the project.

Consequently, some students felt conflicted, questioning if they were the ones who should be telling the story: "I thought it was not my responsibility, not being Aboriginal in any way…I felt like I didn't have anything to say, or anything to do with it since it didn't happen to me."

The students who identified as being of non-Indigenous ancestry generally struggled with managing their own emotions once they started to think about what their ancestors must have known. Many of the non-Indigenous students felt like they wanted to apologize for what their

ancestors had done; the students wanted to make things right again. As one student said, "I felt it was my responsibility" to let people know what happened in residential schools. There was only one student in the group who self-identified as having Indigenous ancestry, and he discussed how his prior experiences participating in Indigenous ceremonies made him feel inspired to participate in the project: "I related it to the fact that I was distantly related to some of the people that could have gone through this… that kind of hit home for me."

Some students stated that they were somewhat concerned about the sensitivity of the topic and the possibility that Indigenous people were perhaps still "angry." But the students stated during the focus group that they agreed as a collective that they would seek to learn the truth about the history of the residential schools and meet Indigenous people where they were at: "I had personal challenges trying to address the sensitivity and the emotional responsibility … it was to accept that Aboriginal peoples might still be angry and you have to accept that," stated one of the students. Working together as a team helped to overcome the emotion and identity conflicts that the students and teachers experienced. As one student said, "We worked as a group of people who overcame it [the emotion] by working together and telling the story."

Fact-Finding Through the Process of Respecting Memory

The teachers and students explained during the focus groups that they made great efforts to follow a learning process that was respectful to the history by engaging with the local Indigenous community's lived experiences. In so doing, the teachers turned to members of the Indigenous community (e.g. residential school survivors, the school board's Indigenous liaison, and individuals who offered educational tours at a former residential school) to explain their ideas, seek their approval, and ask for guidance and ongoing support. One of teachers stated, "when the reception [from the Indigenous community] kept being yes, and yes, and yes, we felt welcomed. That is really a huge step because it could get messy and uncomfortable and we could make mistakes." The teachers felt it was essential to have the community's approval and support since they felt they were of—Indigenous ancestry and it was "not their story to tell." It was important for them to find a way to ensure that Indigenous community voices be heard and conversations take place. They didn't want to add more damage or cause upset. One of the teachers explained,

> Making sure that community voices can be heard and how do we then take this very disparaging topic and present it in a way that doesn't add damage to what's been done? How do you find a way that moves things forward or for the first time opens up conversations between people that have not had conversation before—making it safe for students to do so and find a vocabulary, to find a language, to find a way to ask questions and how do you then shape that and present it in a way that will extend those conversations and open it up more to questions and more dialogues happening in our communities and throughout our students lives.

The learning process was important for teachers, just as much as the finished drama piece. As one teacher explained, "I think one of the most important ways that truth was honoured [was that] legacy was honoured through the process." They listened to the Prime Minister's address and apology, read Indigenous-rich literature, reviewed historical images, and engaged with a network of individuals who were committed to support them in staying true to retelling the history.

In talking about and creating the play, teachers frequently used the phrase, "honouring the truth." Teachers were cognizant that these were peoples lived stories and lives. One teacher recommended that teachers teaching about residential schools need to "be truthful, drop your agenda." Another said that teachers need to "remain honest and truthful, honour those stories that you are finding, honour the people of the stories that they belong to." Respect for Indigenous peoples and the survivors of residential schools was key for teachers when learning about residential schools and creating the play.

The students felt honouring the truth and respecting the survivors was paramount. One student explained, when learning about residential schools, "you have to open yourself up and be ready to learn and be sensitive" and another said, "Try to learn about it from the [the survivors] but respect them as well." The students also noted that they did not want to offend anyone by pretending to be someone they were not. They simply wanted to tell the story well:

> We had to take into consideration that we were not them and we did not go through what they went through. We had to tell the story the best way we could to actually let people know that this happened.

Another student pointed out that they had to consider "not making it about us and making it about them." It was not their story, so they felt that respect had to be shown at all times. It was the visit to the former residential school that struck them most. It gave them an opportunity to see for themselves how Indigenous children were separated from their home communities, to hear the stories from a survivor's point of view, to see where the residential school students had lived, and to look at the bricks on the back of the building that were scrawled with messages. During the focus group session, it was evident that student learning of the history of residential schools was deep and inspired introspection. As one student reflected:

> I kind of felt bad as a human because I got to live a childhood and got to live free and their childhood was stripped away, their identity, and it was really just harsh and emotional and they didn't get the freedom that we do and it was horrible.

Using the Arts to Remember

During the focus group session, teachers pointed out that works of art (e.g., theatre, music, etc.) can be acts of reconciliation because they encourage the audience to talk and share stories so that they can all heal. The teachers believed that the arts have a "didactic quality." They wanted the audience to recognize and remember what happened. The arts provided a medium to share the truths they had learned about residential school. As one teacher noted:

> It was amazing to see that the audience members and the actors on stage just disappeared and people were so engaged with the show that they felt that they were just experiencing these things for themselves. And that is what [art] does; it draws us in and makes us experience things so that we can learn from them.

Making connections through the arts facilitated a way to honour the survivors and work towards reconciliation. As one teacher said:

> The way the story was presented, it opened it up with the idea that we can reconcile through our local community. Although it was challenging to convey the story

> through the arts, it clearly demonstrated that music, symbolism, and imagery combined together can be truly a universal language.

The absence of words in the play was a very powerful experience for students and teachers. As one student explained, "rather than speaking, we used our bodies and facial expression….It sent a better message…a lot of people understood even without a single word spoken." Another student said, "It pushed us to see what happened in silence and pushed us to explore and experience what happened without words or what happens without speaking." And another student pointed out: "By people acting on stage it just makes it easier to understand by seeing what some of these kids might have gone through [rather] than hear them; they get to physically see it." She continued:

> A lot of us are not good at English or other subjects, and we are not good at writing, but when we act with our bodies we can express so much more and we can put so much more emotion behind it [rather] than just reading something out loud. It made a bigger impact for everybody.

Silence can be powerful. As one teacher stated:

> We often lose those amazing moments in our lives because we want noise to happen and instead it pushed us to see what happened in silence and pushed us to explore and experience what happened without words or what happens without speaking. For the audience—the students did not have a voice that made things even stronger.

Original music composition and visual imagery were used in place of spoken words (vocals) to express main themes, places, and key moments. One teacher reflected:

> I think the idea of the imagery and music that we used made it relevant to any generation because we weren't caught up in the words or other things, and it tied into the idea of the loss of the voice in the culture and it was replaced with the idea we could read and hear what they were doing through the music and actions.

Music was composed in such a way that students and teachers were able to move past the symbolism alone and to strive to convey emotions. As one student explained:

> We stuck to some major themes in the music that we played. The absence of words/vocals imparted emotional responses to the listener to show key themes of the narrative story through the introduction of contrasting styles of music like religious hymns, military-esque marches, and Aboriginal drum styles. We had one thing for the Taker [a large, mysterious figure who represented the church]; we had some things for the red sweater, the good moments, [and] the bad moments.

By integrating Western Christian hymns with Indigenous drumming, the theme of reconciliation was enhanced. One teacher stated that music was also used to convey places and key moments: "Hymns [were used] to help feel like it was in the church…and the different drumming styles to help bring back and reconcile what happened to help enrich the performance."

Removing the words also allowed the audience, who may have been from any linguistic background, to interpret the story. One teacher explained:

> I think also it was a choice of not having the words. It opens it up to a lot more people that they didn't have to speak English. It was the way the story was presented it opened it up with the idea that we can reconcile through our local community but it came to be a larger more global form of reconciliation and because there is nothing [no words]. We are removing another barrier from people experiencing the story and experiencing the history.

One student reflected that having no words allowed for audience interpretation and reflection about Canada's history of residential schools:

> I think by using the art-based method, and not having any words, we just gave the people the knowledge they needed… here's what we have done, and we have asked them to take the knowledge and interpret it on their own.

Broadening Perspectives: Remembrance (Memory), Reconciliation, and Memorialization

At the outset of the project, the teachers and students needed to determine where they stood in terms of reconciliation. This proved a challenge for some, as one teacher said:

> The reconciliation part of that was a greater challenge because for me, and I think for each student, [because] they had to figure out where they fit in with reconciliation. What matters most is that you need to understand why you are doing something; otherwise, there is really no point in doing it.

The teachers and students were concerned that many people would continue to not believe the story. According to one student, it was a challenge "that people wouldn't believe what we were saying. It [residential schools] did happen." There was also concern that the true impact of residential schools would not be recognized. Another student explained:

> For me, I have a lot of interest in genocide, especially concerning the Holocaust, and to think those people get recognized so much. Not saying it is not important. In Canada, we recognize them so much, what they went through, but people do not realize that here people went through the same thing and it just bothers me in a way because you are blaming the Germans and Hitler for what they have done but in your own country, your government had done the same thing.

But the teachers and students involved in the Legacy Project wanted to stand up and say that "it did happen." According to one teacher, "We need to do our part to reconcile with the fact that we did this, that we are a part of this, and that our country was a part of this, and it's a piece of our history that is very hidden."

For students, the theme of humanity was important, and that as humans, we are all related. As one student said, "Just knowing how close to home it hits….We are all just families; we are all people. The idea of segregating is wrong." Another student explained, "I felt bad as a human because I got to live a childhood and got to live freely and their childhood stripped away their identity… they didn't get the freedom that we did and it was horrible." "We need to send the message out because issues like this are happening all over the world; we need to remember that we are all humans," said another student.

Some teachers also felt that the project was an opportunity to be a part of reconciliation and to do something about the injustices of Canada's residential schools. As one teacher explained:

> The reconciliation part was what motivated me… down deep the gut instinct was this this was utterly wrong and we hid this and we need to do our part to reconcile with the fact that we did this. That we were a part of this, and that our country was a part of this, and it's a piece of our history that is very hidden.

The message of the play reached beyond the school and community and into the global community via social media outlets (i.e. YouTube, Twitter, etc.) all the way to Europe. It reached a broader audience than what was initially expected. One student stated, "When our teacher told us that a college student in England heard about our project that blew my mind because that means that our work is getting out there and people are going to learn about it."

At the end of the project, the students and staff were recognized and honoured with braids of sweetgrass by a consultant and an eagle feather by a community member. It was recognition by the greater community that they had done a good job in learning about and sharing the story of the survivors. The teachers and students who participated in the legacy project noted that they will continue to explore ways to learn more about the world around them with a particular focus on Indigenous peoples—their culture, history, and hardships. The arts also proved to be a powerful catalyst for this desire to learn more. "As we came to the end of the project, it became apparent that we still had a lot left to learn," stated one teacher. This teacher explained:

> We came full circle and were able to transform ourselves and our perceptions [our stereotypes]…we were able to transform throughout the process. And we were able to end the project knowing that we have many things we still need to learn and there is still many things that we need to continue to reflect on, but that reflection piece is a big piece of drama—specifically in the arts.

Limitations

Qualitative research studies can be limited by the number of participants and research sites (Marshall & Rossman, 1999). This is limited in the number of participants, so we are unable to produce broad-based scientific generalizations. Our study only looked at the responses of the teachers and students who participated in the development of one live theatre performance from a particular area of Ontario. Focus groups have many benefits (Krueger & Casey, 2009; Morgan, 1998) but some participants may have felt more comfortable speaking to the researchers in an interview setting. Participants may withhold thoughts and ideas in a focus group because they may be concerned about how their comments are perceived by others in the group. Finally, our study is limited in that the data collection was a one-time focus group session, rather than a longitudinal study. Following an art-based project over time could explore a number of themes in an in-depth fashion, including examining learning and attitudinal changes over time.

Suggestions for Future Research

Despite the study's limitations, the information from our study can offer practical insights for other educators who are seeking out ways to address the topic of reconciliation at the school and community levels. Our study is also a significant contribution to the scant literature about using the arts to explore residential schools, remembrance, and reconciliation. Because there is a recent

movement (CMEC, n.d.; TRC, 2015b) to integrate the legacy of Canadian residential schools along with aspects of reconciliation into the K - 12 curriculum, it is highly recommended that research continue so that rich data can be gathered to help tell a greater story of what Canada's education systems are doing at the present time to remember, reconcile, and memorialize the accounts. We encourage practitioners and researchers to continue to explore remembrance and reconciliation using the arts. We see the Canada Council for the Arts'(2015) recent call for "{Re}conciliation: Articulations Through Artistic Expression of Conciliation and Reconciliation" as an encouraging step and look forward to the explorations of using the arts as a response for reconciliation. We hope there are further support from governments, agencies, universities, colleges, and school boards to support in-class and school projects as well.

Conclusion

The path towards reconciliation is not easy; however, Indigenous and non-Indigenous people have a vital role to play. In this study, telling the truth was a first step. The teachers and students were prepared to tell the truth—to accept full responsibility, including the challenges that come along with truth telling about a sensitive and traumatic topic. Throughout human history, it is evident errors are often repeated and feelings of mistrust and disappointment grow. Stepping forward and identifying a way to share the legacy of Indian residential schools with the greater community can help to promote the concept of remembrance while building understanding and healing. For the teachers and students in our study, they had mainly a gut instinct that they had to accept the responsibility to tell the truth about a long period of history that was hidden and not talked about for so many years.

As England (2004) also reported, our study finds that the process of using an arts-based response to Canada's residential schools is not an easy task for teachers or students. Some of the challenges our participants struggled with were as follows:

- Recognizing and accepting that it was not their story to tell,
- dealing with finding answers related to copyright (who owns the story?),
- trying to figure out where they fit in,
- dealing with emotions of guilt,
- recognizing the challenges of knowing who to talk to and how to be politically correct,
- understanding how students self-identify and see themselves,
- understanding the role of the survivors and their story,
- understanding Indigenous culture, and
- understanding how to move throughout in a way that connects with the Indigenous community.

Additionally, it was a huge responsibility for staff and students to put together a live theatre performance while being faced with so many challenges. In their minds, there was a sense of urgency to construct a remembrance piece that could be shared with the school and greater community. The teachers realized that the topic of residential schools was still sensitive and challenging, so they were mindful that they needed to give the students adequate time to investigate and explore the areas they were interested in while honouring the truth. Despite these challenges, the deep learning that occurred from this arts-based project was well worth the struggles. In creating a remembrance project, the students also created their own memories. As one student said, "Be prepared because when you start to learn about this stuff, you get it, and it

will stick to you forever." Reconciliation is a complex concept; as one teacher in our study said, "Each student had to figure out where they fit in with reconciliation."

Our work also shows that the drama was an opportunity for social constructivist learning (Gibson, 2009; Wright, 2007). In creating a performance about residential schools, teachers and students also created a supportive social network as each participant constructed their individual understanding and learning about the history and impact of residential schools and the concept of reconciliation. As each teacher and student had different background experiences and schemas, the dramatic experience provided an opportunity for each person to learn about and grow as a result of their participation in the drama in individual ways. Participating in both the drama and our research study allowed students and teachers to reflect on their new learning, understandings, and attitudes. As the results section indicates, the learning was introspective and a personal journey for each participant.

Based on our study, we identify five considerations for educators and students who would like to address remembrance and reconciliation through the arts:

- Encourage all students to explore what sparks their curiosity.
- Determine ways to find hope in dealing with a sensitive topic without adding to the existing damage by making certain that it is being explored in a respectful and responsible way.
- Take time to identify local community resources (e.g. talk/partner with Indigenous community members; identify local spaces/places, etc.).
- Honour the truth by regularly going back to the resources and checking the facts.
- Recognize it is not your story to tell. Ask yourself, "How you will respect Indigenous community voices? How will the project give back to the greater community?"

Like the TRC's (2015b) *Calls to Action*, we encourage schools and school systems to integrate remembrance and reconciliation for Canada's Indian residential schools. We advise that remembrance and reconciliation must be approached through a multi-layered process that requires taking the time to understand past histories, acknowledging truths and learning to do the right thing.

References

Ahluwalia, P., Atkinson, S., Bishop, P., Christie, P., Hattam, R. , & Matthews, J. (2012). *Reconciliation and pedagogy: Postcolonial politics*. New York, NY: Routledge.

Bell, L. A. (1997). Theoretical foundation for social justice education. In M. Adams, L. A. Bell, & P. Griffin (Eds.), *Teaching for diversity and social justice: A sourcebook* (2nd ed., pp.1 - 14). New York, NY: Routledge.

Bogdan, R. C., & Biklen, S. K. (1998). *Qualitative research for education: An introduction to theory and methods* (3rd ed.). Boston, MA: Allyn and Bacon.

Burridge, N. (2006). Meanings of reconciliation in the school context. *Australian Journal of Indigenous Education*, *35*, 68 - 77. doi:10.1017/S132601110000418X

Canada Council for the Arts. (2015). {Re}conciliation: Articulations through artistic expression of conciliation and reconciliation. Retrieved from http://canadacouncil.ca/~/media/files/misc/reconciliation-call-for-proposals-05-15.pdf

Chansonneuve, D. (2005). *Reclaiming connections: Understanding residential school trauma among Aboriginal people*. Ottawa, ON: Aboriginal Healing Foundation.

Council of Ministers of Education, Canada (CMEC). (2013, July). First CMEC meeting in Nunavut tackles legacy of residential schools. Retrieved from http://www.cmec.ca/278/Press-Releases/Ministers-Call-for-More-Innovation-and-Expanded-Opportunities-as-Education-Systems-Look-to-the-Future.html?id_article=626

Council of Ministers of Education, Canada (CMEC). (n.d.). CMEC Aboriginal Education Plan 2015-2017. Retrieved from http://cmec.ca/532/Programs-and-Initiatives/Aboriginal-Education/CMEC-Aboriginal-Education-Plan-2015–2017/index.html

Dewey, J. (1933). *How we think*. Chicago, IL: Henry Regnery.

England, J. (2002). Understanding and representing memory through drama: A lesson plan in three acts. *Stage of the Art*, *14*(4), 18 - 22.

England, J. (2004). *Histories of forgetting, geographies of remembering: Exploring processes of witnesses and performing in senior secondary humanities classrooms* (Unpublished master's thesis). University of British Columbia, Canada. Retrieved from https://circle.ubc.ca/bitstream/handle/2429/15234/ubc_2004-0208.pdf?sequence=1

Gibson, S. E. (2009). *Teaching social studies in elementary schools: A social constructivist approach*. Toronto, ON: Nelson.

Krueger, R. A., & Casey, M. A. (2009). *Focus groups: A practical guide for applied research* (4th ed.). Thousand Oaks, CA: Sage.

Marshall, C., & Rossman, G. B. (1990). *Designing qualitative research* (3rd ed.). Thousand Oaks, CA: Sage.

Maxim, G. W. (2014). *Dynamic social studies for constructivist classrooms* (10th ed.). Upper Saddle River, NJ: Pearson.

Miller, J. R. (1996). *Shingwauk's vision: A history of the residential school system*. Toronto, ON: University of Toronto Press.

Morgan, D. L. (1998). *Focus groups as qualitative research*. Thousand Oaks, CA: Sage.

Neelands, J. (2006). Re-imagining the reflective practitioner: Towards a philosophy of critical praxis. In J. Ackroyd (Ed.), *Research methodologies for drama education* (pp. 1 - 12). Stoke on Trenk, UK: Trentham Books.

Ontario Ministry of Education. (2007). *Ontario First Nation, Métis, and Inuit education policy framework*. Retrieved from http://www.edu.gov.on.ca/eng/aboriginal/fnmiFramework.pdf

Patton, M. Q. (1990). *Qualitative evaluation and research methods* (2nd ed.). Newbury Park, CA: Sage.

Piaget, J. (1973). *The child and reality: Problems of genetic psychology.* (A. Rosin, Trans.). New York, NY: Grossman. (Original work published in 1972)

Regan, P. (2010). *Unsettling the settler within: Indian residential schools, truth telling, and reconciliation in Canada*. Vancouver, BC: UBC Press.

Rosler, B. (2008). Process drama in one fifth-grade social studies class. *The Social Studies, 99*(6), 265 - 272.

Saldaña, J. (2005). *Ethnodrama: An anthology of reality theatre*. Walnut Creek, CA: AltaMira Press.

Schumacher, C. (1998). *Staging the Holocaust: The Shoah in drama and performance*. Cambridge, UK: Cambridge University Press.

Taylor, P. (2006). Power and privilege: Re-envisioning the qualitative research lens. In J. Ackroyd (Ed.), *Research methodologies for drama education* (pp. 1 - 12). Stoke on Trenk, UK: Trentham Books.

Truth and Reconciliation Commission of Canada. (2012). *They came for the children: Canada, Aboriginal peoples, and residential schools*. Winnipeg, MB: Author.

Truth and Reconciliation Commission of Canada. (2015a). *Honouring the truth, reconciling the future—Summary of the final report of the Truth and Reconciliation of Canada*. Retrieved from http: http://www.trc.ca/websites/trcinstitution/File/2015/Findings/Exec_Summary_2015_05_31_web_o.pdf

Truth and Reconciliation Commission of Canada. (2015b). *Truth and Reconciliation Commission of Canada: Calls to action*. Winnipeg, MB: Author. Retrieved from http://www.trc.ca/websites/trcinstitution/File/2015/Findings/Calls_to_Action_English2.pdf

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes* (M. Cole, V. John-Steiner, S. Scribner, & E. Souberman, Eds.). Cambridge, MA: Harvard University Press.

Wright, D. (2007). Constructivist inquiry and learning in drama. *NJ: Drama Australia Journal*, *31*(1), 45 - 54.

Zatzman, B. (1999). Traces of the past: Practice and research as shifting structures in drama and Holocaust education. In C. Miller & J. Saxon, *Drama and theatre in education: International conversations*, (pp. 142 - 154). American Educational Research Association: Arts and Learning Special Interest Group and the International Drama in Education Research Institute.

Zatzman, B. (2005). Staging history: Aesthetics and the performance of memory. *The Journal of Aesthetic Education, 39*(4), 95 - 103.

Appendix A

Questions for Focus Groups

1. a) Describe your prior knowledge or expertise that related to the development and delivery of the project?

1. b) How did you initially perceive the responsibility that you had to the school and community in the delivery of the project?

2. What inspired you to learn about the history of the Indian residential school systems?

3. What motivated you to support the concept of reconciliation of Indigenous peoples in Canada?

4. How was the topic of remembrance and reconciliation used to enhance the existing art-based course offerings while teaching the school and community about the truth of the residential school system?

5. How did using the arts as a medium strengthen the message of the project?

6. What considerations did you make throughout the development and delivery of the project so that it honoured the truths and legacy of the residential school system and its survivors?

7. a) What challenges did you encounter while addressing the sensitivity of the legacy of the residential system?

7. b) How did you overcome the challenges that you encountered?

8. Based on your experiences, what advice would you give to others who are interested in supporting situations involving remembrance and reconciliation of Indigenous peoples in Canada, or other diverse groups?

9. Is there anything else concerning your involvement in the project that I have not yet asked that you would like to provide additional information on?

Kina'muanej Knjanjiji'naq mut ntakotmnew tli'lnu'ltik (In the Foreign Language, Let us Teach our Children not to be Ashamed of Being Mi'kmaq)

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Abstract

Colonialism has assimilated and suppressed Indigenous languages across Turtle Island (North America). A resurgence of language is needed for First Nation learners and educators and this resurgence is required if Indigenous people are going to revitalize, recover and reclaim Indigenous languages. The existing actions occurring within Indigenous communities contributing to language resurgence include immersion schools. Eskasoni First Nation opened its doors in September 2015 to a full immersion school separate from the English speaking educational centers. This move follows the introduction of Mi'kmaq immersion over ten years earlier within the English speaking school in the community. The Mi'kmaw immersion school includes the Ta'n L'nuey Etl-mawlukwatmumk Mi'kmaw Curriculum Development Centre that assists educators in translating educational curriculum from the dominant English language to Mi'kmaq. In this paper, stories are shared about the Eskasoni immersion program's actions towards language resurgence through a desire-based lens, based on rich narratives from three Mi'kmaw immersion educators.

Keywords: Mi'kmaq language immersion; immersion schools; language resurgence

Kina'muanej Knjanjiji'naq mut ntakotmnew tli'lnu'ltik (In the Foreign Language, *Let us Teach our Children not to be Ashamed of Being Mi'kmaq*)

Language is the soul of the people;
Wsitunn na wjijaqmijual wskwijinu'k
Language is the mind of the people;
Wsitunn na ta'n telte'tmi'tij wskwijinu'k
Language is the spirit of the people
Wsitunn na mlki—ktlamsutimuow wskwijinu'k

In identifying the importance of language resurgence in the face of settler colonialism, First Nations have turned to their own communities for the survival, retention, revitalization, and reclaiming of Indigenous languages. This paper is a study of the Mi'kmaq immersion school in Eskasoni First Nation in Una'maki (Cape Breton, N.S.).

In 1996, St. Thomas University in Fredericton, New Brunswick offered a certificate course on immersion pedagogy. Mi'kmaq immersion educators immediately took interest in this course because the Eskasoni School Board members saw a need to teach Mi'kmaq children in their first language. It was an era when Indigenous nations would take control of education through a policy called Indian Control of Indian Education (Assembly of First Nations, 2010). During that time, the Eskasoni School Board director sent three immersion educators to take the St. Thomas' Immersion Pedagogy course with plans to initiate a program in Eskasoni.

In 1999, the Eskasoni School Board started a pilot project to have students taught in Mi'kmaq. The immersion pilot program was initiated to accommodate a small number of students from Kindergarten to Grade 3. Once Eskasoni parents discovered that an immersion program was being offered, many parents wanted their children to enroll. The immersion program was first offered in the same building as the English-language school in the community. However, in September 2015, the immersion program opened its doors in its own separate building, teaching Kindergarten to Grade 4 in Mi'kmaq with 128 students. The students stay for lunch and are immersed in Mi'kmaq all day. The Eskasoni immersion school is supported by the school board and the community. Mi'kmaq Kina'matnewey (MK) has also been a huge support to the immersion school, providing access to ideas and materials that immersion educators can use instead of English materials.

Eskasoni educators see their own immersion program as becoming more successful because of being separate from the influence of the dominant English language. These educators visualize the immersion program moving up to higher grades in the near future. The Eskasoni principal has had this dream of having an immersion program even before she started teaching, but she never imagined that they would ever have their own building. Her only regret is her own children did not have the chance to experience this immersion school; still, she is grateful that she taught them to speak Mi'kmaq right from birth, within her home. Through establishing Indigenous (Mi'kmaq)[1]immersion schools, language programs, and language applications, both native and non-Native are reminded of the importance of Indigenous,[2] First Nations, Aboriginal, Native, and Indian language survival.This paper is important because it addresses the existing actions occurring within Mi'kmaw territory that contribute towards developing sustainable tools in language resurgence for the future generations. In this research, we use Indigenous auto-ethnographic narratives (Whitinui, 2014) explicit to Indigenous ways of knowing. The

conversations with the Eskasoni immersion school educators were conducted in an ethical and culturally appropriate manner, drawing on knowledge of protocol and cultural understanding of community.

Context and Background

A review of the literature supporting language resurgence in Mi'kmaq immersion programs and schools identified five theoretical areas: (a) cultural and language survival, (b) pedagogy of the land, (c) community involvement and supportive actions, (d) importance of immersion schools and Indigenous educators, and (e) finding a balance using technology. The literature supports actions within Indigenous communities contributing to Indigenous language resurgence. Research provides support for the Mi'kmaq immersion schools that support Mi'kmaq language resurgence in the 21st century.

Cultural and Language Survival

There is a spiritual and cultural presence in the survival of language that Indigenous and Mi'kmaq people feel and understand. These feelings include the sacred respect denoted within the language, and within creation stories, existence and ways of knowing. Indigenous languages have a relationship with the land, spirits, and the environment that exists within these feelings, today. An interconnected holistic energy flows through Indigenous languages, providing instruction for spiritual survival and connection to ancestors and the land (Battiste, 1998; George, 2015; Metallic, 2008; Simpson 2008).

In the 21st century, the fluent Mi'kmaw speakers in Mi'kmaq communities are primarily Elders here in the Atlantic provinces, and only a small number of those categorized as the seventh generation have gained fluency (From interviews conducted in October 2014). Language survival, in the face of linguicide, is confronted when Indigenous communities adopt aggressive programs to teach, revive, reclaim, and speak their Indigenous languages (Bear Nicholas, 2008; Perley, 2011; Simpson, 2008). Language recovery becomes the most significant factor in the restoration, regeneration, and survival of Indigenous knowledges that are the most in danger of extinction today (Battiste, 2010; Perley 2011). Perley (2011) shares staggering statistics that frame linguistic imperialism in Canada:

> That of the 53 distinct Native Languages in Canada, only three (3) have a chance of surviving the next ten years, eight (8) are facing extinction, twenty-nine (29) are deteriorating very rapidly, and thirteen (13) are moderately endangered. (p. 39)

Language survival represents the responsibility of the current generation and for allies to educate Indigenous children in their first language; thus, ensuring the survival of Indigenous way of life and culture.

Pedagogy of the land. For language resurgence to be successful within Mi'kmaq territory, the language of the land must become desirable through intergenerational learning about living off, and learning from, the land. The land becomes a respectable resource for young and new language learners to reclaim, rebuild, and learn Mi'kmaq. Here on Mi'kma'ki (within the Atlantic provinces, Quebec, and Maine) the Mi'kmaq language remains vital because of the relationship with the land. The land, (Mother Earth or Turtle Island), and the specifically the lands of North America are the vehicles for Indigenous language survival. As we take seriously

our responsibility within land pedagogy, we are reminded that as long as we take care of the land, the land will take care of us and the next seven generations to come. Indigenous ways of knowing respects that the land is a gift given to us from the Creator, Niskam (Battiste, 2013; Metallic, 2008; Simpson, 2008).

Community involvement and supportive actions. The process of community and elder involvement brings together the language speaker and the learner, involving children, elders and families within a home to restore language and creating language nests within communities (Pitawanakwat, 2008; Simpson, 2008). A language nest is one way intergenerations transfer and restore Indigenous languages.

A thriving First Nation community uses its' language as a source of nationhood (Alfred, 1999; Grande, 2004). In Mi'kma'ki (Mi'kmaq territory), we believe that Mi'kmaw should be made the official language within each community and one of the official languages in the provincial legislature. This would make teaching, learning, and speaking the Mi'kmaq language a priority.

Importance of immersion schools and Indigenous educators. Mi'kmaw immersion schools began in 1997 with the support of Mi'kmaw Kina'matnewey (MK). MK represents and advocates for the educational interest of the Mi'kmaw communities across most of Nova Scotia. MK protects the educational and Mi'kmaw language rights of the Mi'kmaq people through Mi'kmaq language resurgence. Both Battiste (2013) and Simpson (2014) assert the fostering of a strong generation of Elders, by having Indigenous languages taught for decades (not just weeks at a time) in schools or universities. Rather, more than 700 plus hours of immersion at a minimum is needed for students to become fluent. Indigenous immersion schools from Kindergarten to Grade 3 provide fundamental prerequisites for Indigenous education and language resurgence. Creating successful immersion schools requires community involvement at the grass roots level, language efforts, planning, organization, and Indigenous frameworks and resources.

However, Indigenous educators speak and write about the importance of Indigenous language resurgence, only then to go on and speak and write entirely in English (Battiste, 2008; Grande, 2004; Wilson, 2008). Identifying this form of cognitive imperialism in the field of education reminds us, as Indigenous educators, of the importance of teaching and speaking in Indigenous languages. Grande (2004) says we need to turn to our own people, our own educators in our communities, to recognize the value of indigenous knowledge and ways of knowing. Aboriginal languages are irreplaceable resources in any educational reforms.

Finding a balance using technology. Technology is becoming a widely used device within classrooms in the 21st century. The Eskasoni immersion school is pioneering the use of a number of technological resources in Mi'kmaq. It is common to see the use of iPads and smart phones rather than books, although schools today have not stopped using books totally, but few of these are in languages other than English in English speaking provinces. Using technology within Mi'kmaq immersion schools creates a virtual language nest for sharing digital resources, language materials, and for utilizing interactive talking dictionaries and language applications across Mi'kma'ki.

Recent research on distance education provided through technology in a Mi'kmaq community in Elsipogtog, N.B. highlighted the importance of finding a balance of the right kind

of technologies to meet the community needs (Simon, Burton, Lockhart, & O'Donnell, 2014). The Indigenous educators in the immersion school are committed to finding a balance in using technology. Finding ways to transmit the Mi'kmaq language into digital resources ensures that the future generations will have access to Mi'kmaq, the culture, and identity, and ensures the interconnection with Elders' oral stories and teachings. Modern technology can give members of First Nations communities the opportunity to hear their languages in their homes (Perley, 2011) through the access of television, phones, iPads, social media, and internet and this is worth pursuing if it leads to a strengthening of language use and understanding.

However, Simpson (2008) warns about how modern technology continues to be toxic to mother earth and the environment. Indigenous knowledge and language production requires increasingly larger amounts of resources, computers, high-tech equipment, and digital libraries that make them accessible outside the communities. Digital technologies are also a requirement for research projects and necessary for the growth of capitalism. Further, modern technology and Information and Communication Technologies (ICT) can hinder and disembody Indigenous languages (Bear Nicholas, 2008). Therefore, we need to be reflective in how we use technology to support language resurgence.

Summarizing the five theoretical areas. A large number of Indigenous children in Canada are still effectively learning only the dominant English language in school. English is the language mandated by force of law in most regions of this country and the government policy of having children learn only the official languages of Canada creates road blocks as Indigenous people attempt to fight against language genocide. Having Mi'kmaq immersion schools supported by communities and policies is helping the Mi'kmaw Nation rebuild and revive Indigenous ways of knowing, language, and cultural identity. Today, Indigenous immersion schools are contributing towards language resurgence and community-shared resources of food, traditional medicines, clothing, supplies, teachings, and experiences.

The Study

This study explored the five theoretical areas (described above) through research in the Mi'kmaw community of Eskasoni First Nation. We incorporated Indigenous methodologies congruent with Indigenous paradigms, including linguistic elements such as storytelling and oral traditions captured in documented transcripts from audio-recorded conversations. Indigenous methodologies are guided by Indigenous ways of knowing and epistemologies that release this dependency on Western research traditions (Kovach, 2009; Whitinui, 2014; Wilson, 2008). According to Kovach (2009) and Simpson (2008), Indigenous knowledge is already embedded in the language and all everyone needs to do, is learn the language. If the knowledge to better understand one's Elders is released through learning one's Indigenous language, then Indigenous ways of knowing require one to learn the language.

We conducted this study as part of the Atlantic research of the First Nations Innovation (FNI) initiative based at the University of New Brunswick. The research framework involved a review by Mi'kmaw Ethics Watch, contacting the Eskasoni immersion school principal, the Eskasoni Education Director, Eskasoni Chief, and the Director of Mi'kmaw Kina'matnewey (the Mi'kmaw School Board) for approval of the visit and research.

Tuck (2009) illustrates how pain or loss are often documented within First Nations communities and offers one alternative to a damage-centered approach to research: to craft

research in a way that captures desire instead of damage. By having community and educator involvement in this paper, we acknowledge and celebrate the work of the Eskasoni First Nation in supporting Mi'kmaq language resurgence.

For this research, we use Indigenous autoethnographic narratives. Whitinui (2014) refers to Indigenous autoethnography as a culturally informed research practice and method of inquiry that is explicit in Indigenous ways of knowing. This portion of the paper depicts analysis of the transcripts of conversations with three Mi'kmaw immersion educators: the principal, the Grade 2 teacher, and the Ta'n L'nuey Etl-mawlukwatmumk Mi'kmaw Curriculum Development Centre Educator (TLE). To ensure a culturally preferred means of communication, the interviews were held face-to-face to interact with Indigenous educators on their terms.

We discuss the diversity of Mi'kmaq language speakers, and the benefits and challenges of having an immersion school, what the future looks like for Mi'kmaq immersion, and how technology is utilized in the schools and classrooms. From the recorded conversations, it is evident that Mi'kmaq immersion schools are required to support Mi'kmaq language resurgence in the 21st century. The findings from the three conversations with immersion educators support the five selected themes.

Learning From the Conversations

Learning With the Land

The importance of nurturing mother earth, Turtle Island, the homelands here on Mi'kma'ki, will help ensure the survival of its languages. The survival of Mi'kmaw language is scripted in the movement and flow of mother earth. The ideas of the *pedagogy of the land* and *land is pedagogy* teach that land provides and demands respect. The educators interviewed suggested that for many of the younger generation, relationships with the land are almost nonexistent. When the immersion educators were at the English school in the community, they were told to stay in the school, and had few opportunities for field trips. Now that they are in their own school, they want to take the students outside onto the land more. Outdoor education is needed; the educators agree that the purpose of learning the language is because it is useful in saying the words describing mother earth. One of the Eskasoni educators said, "At my age, I am forgetting a lot of Mi'kmaq words; there is no purpose anymore."[3] She continued,

> If I went to go pick berries, I knew every plant and berry, the name of every part of the tree, I grew up with that. Lots has changed; at the other school, there is a little bush there with blackberries and I'd tell the kids to pick them…times have changed…apple trees are full of apples because no one is picking them anymore, all these little traditions are no longer practiced.

This example describes how simple steps like outdoor classrooms can educate children through the pedagogy of the land and advance the survival of Mi'kmaw and Indigenous languages. The results of colonialism have left Indigenous people understanding and feeling the urgency and necessity for restorative education programs and immersion schools.

The educators within the Eskasoni immersion school believe this is the first time in the past 15 years that there is so much content being delivered in the Mi'kmaq language. The immersion school continues to invite community members to come in as guest speakers, showing students survival skills for hunting and living on the land, all taught in the Mi'kmaq language.

The TLE educators contend that these teachings on the land instill respect in the students without them recognizing that they are being respectful to mother earth through tobacco offerings. They learn it implicitly. To date, the teachers are teaching the Mi'kmaq way of life within their classrooms through the language and noticed that they have not seen any major discipline problems. The TLE educators confirm, "Everyone is working well together and the students as well."

Eskasoni Involvement and Community Action Within

Supportive actions are required in discourses of decolonized education (Battiste, 2013). Decolonized education confronts hidden racism, colonialism, and cognitive, cultural, and linguistic imperialism in modern curriculum. Decolonization reconciles contemporary education with Indigenous pedagogy without imposing Eurocentrism on Indigenous peoples and Indigenous ways of knowing. Decolonization allows for both Indigenous and non-Indigenous students to understand theory and research from an Indigenous perspective. Decolonizing actions demonstrate that academia can no longer deny Indigenous peoples' knowledge of their languages and cultural practices within education and institutions.

Having a Mi'kmaq educational system characterized by community members and Elder involvement is a powerful example of language resurgence in Eskasoni. Community members are providing resources for how languages should be used, recovered, and taught within immersion schools. As the Eskasoni principal said,

> Since the school opened its doors, the immersion school has done what we could not do at our previous school. We can focus on community people and bring in speakers. Elders want to come see the school and speak to the students.

The Grade 2 teacher described how "we've had our own veteran services and *Nitap* (friend) Day, and we've celebrated with Mi'kmaw dancers and drummers." As the TLE educator said, "The education at the immersion school is becoming more meaningful and spiritual for students, teachers, and community members."

The educators of the Eskasoni immersion school are moving toward including a stronger input from the community. The Grade 2 educator noted, "Parents who bring their children to immersion, and who are fluent themselves, continue to speak to their children in English rather than Mi'kmaq. This needs to change." Educators who have fluent speaking children have to be constantly reminded: *l'nu'isit*, (speak in Mi'kmaq). The Eskasoni principal questioned:

> Why can't parents get a kick out of hearing their own kids or grandkids speaking Mi'kmaq. That's the reality right now." The principal believes if the community and band council decided to have an emergency meeting to let the people know the state of the language, maybe then, there would be a difference in community action.

Supportive action comes from within and outside the school. From the outside, some non-Natives living in Eskasoni take an interest in the culture and language and speak better than the people who are Mi'kmaq. The principal says, "Supportive actions within the community are depicted in the street signs saying *naqa'si* (stop), so that's one step." Another action in Eskasoni included translating the street signs into Mi'kmaq, but that generated complaints by the

ambulance services who indicated that they could not find people because the signs are not readable or in English.

Outside of the immersion school, Mi'kmaq Kina'matnewey (MK) is doing a great deal of work in language resurgence. MK is initiating a master apprentice program where a fluent speaker collaborates with a learning speaker, and the speaker and learner spend a set number of hours per week learning the language. The intention is that the apprentices will use their certificates to teach the language.

Importance of the Eskasoni Immersion School

The benefits of having a Mi'kmaw immersion school is that it is providing a safe place for Mi'kmaq speakers, where all day long students are exposed to Mi'kmaq language: in the hallways, in the classrooms, and outside for between five and six hours per day. Students converse in Mi'kmaq from the time they come into the school doors until they leave. The TLE educator, who has been teaching for 30 years, said,

> Thirty years ago, you never heard English in the hallways, you never heard it anywhere, just in the classroom, now it's switched. You can hear the students speaking English even though they are in the immersion school, but as soon as the students are told *l'nu'isi* (speak Mi'kmaq), the students begin speaking in Mi'kmaq.

TLE educator continues, "As Mi'kmaq educators, it is necessary at times to remind the immersion students how important it is to speak in Mi'kmaq. Having this new immersion school is an enriching activity and enriching experiences for the students."

When the immersion school was a part of the English speaking school, the school announcements were in English. The staff, both Native and non-Native, spoke English. The immersion teachers felt that their language was not important because English was always the main language being spoken. As soon as students leave the immersion program, they begin speaking English again when they enter the English speaking school. This is discouraging for immersion teachers and community members who would like to see immersion go to Grade 12.

At the immersion school, in the Ta'n L'nuey Etl-mawlukwatmumk Mi'kmaw curriculum development unit, the Mi'kmaw educators have teachers requesting that they to produce and translate material in Mi'kmaq. Regarding these teachers, the TLE curriculum developer said,

> I admire the teachers in the immersion program because they are a cohesive staff. Our teachers do a great deal of work outside the classroom; they support each other in developing their materials and ensure material[s] and classrooms look professional versus hand written. Our teachers are meeting the needs of emergent speakers, but also identifying that they need extra support.

The TLE educators help translate spelling books; for example, a primary English spelling book would translate into a Grade 3 or 4 Mi'kmaq spelling book with the vocabulary and content. In Mi'kmaq, there are only a handful of words with only a few letters, and the rest are words with multiple letters, for example red is "*mekwe'k*," and green is "*stoqnamu'k*." The language itself is sophisticated and complex. Mi'kmaq is a verb-oriented language; the words themselves might include a verb, a pronoun, and the object all embedded into one word, such as

"*nemi'atl*" (he or she sees him or her); the word is all in one. You don't need "*nin*" (me) or "*nkem*" (him or her); it's all in that verb. Both the immersion school teachers and TLE educators must do a great deal to promote the Mi'kmaq language in all its complexities, and really have to work on the spoken language in particular in order to ensure it continues into the next generation.

The challenge within the new immersion school is access to materials, curriculum documents, subjects, worksheets, and lesson plans in Mi'kmaq. The immersion teachers cannot simply access the provincial schoolbook bureau to order these books. With the help of TLE, teachers are producing materials, translating, and finding innovative ways to teach Mi'kmaq. Math is a tricky subject; it is a huge undertaking to translate and transcribe a math book, and expect the teachers to do this and teach as well. Currently in the math program, students learn a great deal of Mi'kmaq vocabulary but need to keep the English vocabulary for words that don't exist in Mi'kmaq; for example, the English words for equal, odd, even, estimate, and balance are used.

Finding a Balance Using Technology

Since Eskasoni opened their new school, the educators say they are in need of additional technology, such as smart boards, iPads, and laptops. Both teachers and students feel they would benefit by having access to websites such as First Nations helpdesk and MK to view their online apps, songs, dictionaries, and books in Mi'kmaq. The students are building their language vocabulary with digital media. There are still a couple of immersion teachers using older technology like the language master, a device that has a card that is inserted with a sentence in Mi'kmaq that the students repeat as the device reads the card. The Eskasoni immersion school has a graphic artist in TLE who is able to produce digitized artwork to go with published books.

The challenges with relying on technology to learn Mi'kmaq for new learners is that it is not as effective as having a resource or fluent teachers present with students who can respond to a variety of questions as compared to new learners simply repeating words using technology. One of the Eskasoni educators often finds the online Mi'kmaq dictionaries are missing words, or the words are not accurate because they are in a different dialect. It would be beneficial if one could access the different dialects on the online Mi'kmaq dictionaries, making it more accessible for all Mi'kma'ki.

Finding a balance in using technology involves locating and identifying the enrichment available, such as video recordings. Since the Eskasoni immersion school began, they have been recording events, drumming and dancing, kojua dancing, and arts and crafts such as basket weaving. The Grade 2 teacher described the value of these resources: "Videos are valuable in the classrooms as students can be revisited them, and for younger students, they will see their family, their cousins, or themselves in them. Videos help enrich and inform and educate the community as well."

In Eskasoni, they have a community television channel where videos can be shared for parents and community members to watch classes of immersion students speaking Mi'kmaq, learning to Ko'jua, or singing and chanting the honour song in Mi'kmaq. The Ko'jua is a traditional dance to the Mi'kmaq and the Ko'jua songs were sung using a *ji'kmaqn* (split ash splints bound together at one end).

To ensure that the immersion teachers are up to date with technology, MK has helped teachers with professional development courses on how to turn digitized recordings into online books for Mi'kmaq material development. "These ways of using technology are successful when teachers record Elders in the community sharing old stories and traditions in Mi'kmaq that can be accessed later by the students as digital online books," the TLE educator explained.

Cultural and Language Survival in Mi'kmaq Communities

Indigenous languages are the most important component to the survival of Indigenous knowledges, ways of knowing, cultural practices, land-based pedagogies, and for connection to the spirit world. According to Battiste (2013), it is through the sharing and survival of Indigenous languages that one creates an Indigenous cognitive experience, understanding, and legacy of Aboriginal life.

Language is the central source of spiritual and cultural survival. Sacred prophecies are sacred predictions that foretold that the seventh generation of Indigenous peoples, the generation that is now educators in the 21st century hold the responsibilities of language resurgence, and the eighth generation will continue language survival for the next seven generations to come (Simpson, 2008). As the Grade 2 teacher said,

> We need to keep in mind that in the generations before us, language educators were referred to as pioneer teachers, the hard knock teachers, and these teachers were really enthused about using the language and getting the children to speak the language.

The principal said, "Teachers today in the immersion school are young speakers, the young generation; they are still learning the language and must be reminded to be persistent in getting the kids to speak the Mi'kmaq language."

Strong culture and language in education embeds pride in students and builds confidence in their speaking and motor skills. Teaching the language within immersion schools makes both students and teachers more culturally aware. As the TLE educator stated,

> The students are learning the language, learning the culture, values, customs and traditions that students are not getting in a regular English curriculum. Mi'kmaq students studying in a Nova Scotia Social Studies course only receive minimal information on their history and culture, whereas in an immersion school, students are not only getting a language but also learning their way of life, their history; they are getting a well- rounded Mi'kmaw education and students are learning about themselves.

The English language has become the predominantly used language in Mi'kmaq communities over the last two or more generations. Immersion programming is one effective method that has proven successful for language retention, revitalization, and resurgence, and for creating fluent language speakers. The Eskasoni immersion school is now the language nest for Eskasoni and its early childhood fluent speakers.

In Mi'kma'ki, the Mi'kmaq language has distinct dialects across the seven districts: one is that of Smith Francis and another is that of the Pacifique way, created by Elder Milliea who was in charge of teaching the writing system. The principal noted:

> This distinction has added confusion when we share material across the districts within immersion schools. The Mi'kmaq language spoken three to five generations ago can now be heard as old Mi'kmaq. Although there is a distinction between the writing systems and dialects, teachers do not see anything wrong with that because, now, the important part is ensuring the students are speaking the Mi'kmaq language.

Discussion and Conclusion

This study with the Eskasoni immersion school helps develop new understandings of the five theoretical themes for framing language resurgence. These themes help further enrich this understanding of what language resurgence means. Through the Eskasoni immersion school, teachers are educating in the Mi'kmaq language, and through the language, children are learning not to be ashamed of being Mi'kmaq. The language teaches cultural pride, values, customs, and respect for Mi'kmaq history, and it builds towards the future of the next seven generations to come. It is relevant for Mi'kmaq communities to celebrate the success of the Eskasoni First Nation as they pave the way for future Mi'kmaq immersion schools, Mi'kmaq curriculum, and the development of content and material. The Eskasoni immersion school is contributing to the larger Mi'kmaq territory by ensuring there are Mi'kmaq speakers in the 21st century.

For the Mi'kmaq Nation, their Mi'kmaq language may be facing extinction among other Indigenous language across Turtle Island (North America). The dominant English language is everywhere and immersion schools within Mi'kmaq communities provide one step to ensuring the survival of the Mi'kmaq Nation. This study intends to encourage all Indigenous peoples who are striving to save their language by building language nests and taking action through initiating immersion schools.

References

Alfred, T. (1999). *Peace, power, righteousness: An Indigenous manifesto.* Oxford, UK: Oxford University Press.

Assembly of First Nations. (2010). First Nations control of First Nation education: It's our vision, it's our time. Retrieved from http://www.afn.ca/uploads/files/education/3._2010_july_afn_first_nations_control_of_first_nations_education_final_eng.pdf

Battiste, M. (1998). Enabling the autumn seed: Toward a cecolonized approach to Aboriginal knowledge, language, and education. *Canadian Journal of Native Education, 22*(1), 16-27.

Battiste, M. (2008). Research ethics for protecting Indigenous knowledge and heritage: institutional and researcher responsibilities. In N. K. Denzin, Y. S. Lincoln, & L. T. Smith (Eds.), *Handbook of critical and Indigenous methodologies* (pp. 497-509). Los Angeles, CA: Sage.

Battiste, M. (2010). Nourishing the learning spirit: Living our way to new thinking. *Education Canada*, *50*(1), 14-18.

Battiste, M. (2013). *Decolonizing education: Nourishing the learning spirit.* Saskatoon, SK: Purich.

Bear Nicholas, A. (2008, December 2,). *Education policy for First Nations in New Brunswick: Continuing linguistic genocide and educational failure or positive linguistic rights and educational success?* Retrieve from http://www.educatorsforimmersion.org/LI_pdf/Genocide_in_Educational_Policy.pdf

Grande, S. (2004). *Red pedagogy*: *Native American social and political thought*. Lanham, MD: Rowman & Littlefield.

George, C. (2015, June) *Nikma'jtut Apoqnmatultinej: Reclaiming indigeneity via ancestral wisdom and new ways of thinking*. Paper presented at the Canadian Sociological Association, University of Ottawa, Ottawa, ON.

Kovach, M. (2009). *Indigenous methodologies: Characteristics, conversations, and contexts*. Toronto, ON: University of Toronto Press .

Metallic, F. (2008). Strengthening our relations in Gespe'gewa'gi, the seventh fistrict of Mi'gma'gi. In L. Simpson (Ed.), *Lighting the eighth fire: The liberation, resurgence, and protection of Indigenous nations* (pp. 59-71). Winnipeg, MB: Arbeiter Ring.

Perley, B. C. (2011). *Defying Maliseet language death*: *Emergent vitalities of language, culture, & identity in Eastern Canada.* Lincoln, NB: University of Nebraska Press.

Pitawanakwat, B. (2008). *Bimaadziwin oodenaang*: A pathway to urban Nishnaabe resurgence. In L. Simpson (Ed.), *Lighting the eighth fire: The liberation, resurgence, and protection of Indigenous Nations* (pp. 161-173). Winnipeg, MB: Arbeiter Ring.

Simon, J., Burton, K., Lockhart, E., & O'Donnell, S. (2014). Post-secondary distance education in a contemporary colonial context: Experiences of students in a rural first nation in Canada. *The International Review of Research on Open and Distance Learning, 1*(15), 1-19.

Simpson, L. (2008). *Lighting the eighth rire: The liberation, resurgence, and protection of Indigenous nations.* Winnipeg, MB: Arbeiter Ring.

Simpson, L. (2014). Land as pedagogy: Nishnaabeg intelligence and rebellious transformation. *Decolonization: Indigeneity, Education & Society*, *3*(3), 1-25.

Tuck, E. (2009). Suspending damage: A letter to communities. *Harvard Education Review, 79*(3), 409-427. Retrieve from http://pages.ucsd.edu/~rfrank/class_web/ES-114A/Week%204/TuckHEdR79-3.pdf

Whitinui, P. (2014). Indigenous autoethnography: Exploring, engaging, and experiencing "self" as a Native method of inquiry. *Journal of Contemporary Ethnography, 43*(4), 456-487.

Wilson, S. (2008). *Research is ceremony, Indigenous research methods*. Winnipeg, MB: Fenwood.

Endnotes

[1] Mi'kmaq refers to singular, and Mi'kmaw refers to the nation or people.

[2] There are many terms that identify First Nation peoples of Canada today in academia and government legislation. In this paper, I will use the term Mi'kmaq and Indigenous interchangeably and they refer to Aboriginal, First Nations, Native, and Indian in context.

[3] Interviews with Grandmother conducted by Ashley Julian in October 2014. All interviews with the Eskasoni immersion educators were conducted by Ashley Julian in November 2015.

Aboriginal Ways of Knowing and Learning, 21st Century Learners, and STEM Success

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Abstract

Aboriginal people are alarmingly under-represented in science, technology, engineering, and mathematics (STEM)-related careers. This under-representation is a direct result of the lack of academic success in science and mathematics, an issue that begins early in elementary and middle school and often escalates in secondary school with the majority consequently doing poorly, not completing these courses and often dropping out. This makes them ineligible to pursue STEM-related paths at the post-secondary level. The greatest challenges to success in these courses are the lack of relevancy for Aboriginal learners and, as importantly, how they are taught; impediments that are also paramount to the increasing lack of success for many non-Aboriginal students in STEM-related courses. This paper explores how Aboriginal ways of knowing and learning and those of the 21st century learners of today very closely parallel each other and illustrates how the creative multidisciplinary approach of a liberal education might be the way to enable early academic engagement, success and retention of Aboriginal learners in the sciences and mathematics.

Keywords: Aboriginal; Aboriginal ways of knowing and learning; Aboriginal culture; bridging cultures; 21st century learning; mathematics; science; STEM; Two-Eyed Seeing

Aboriginal Ways of Knowing and Learning, 21st Century Learners, and STEM Success

Such a language would be…one that grows in the middle. (Ted Aoki, 1993)

There is an adage that "Natives can't do science or mathematics" (Leroy Little Bear, personal communication, 2009), which parallels the same philosophy historically of women in science (Harding, 1987, 1991; Etzkowitz, Kemelgor, Neuschatz, Uzzi, & Alonzo, 1994), but at an even deeper level. I disagree. I believe the issue is how we teach science and mathematics. For many Aboriginal[1] learners whose ways of learning and coming to know are grounded in practical, hands-on, learning-by-doing first, the current Eurocentric model of theory before practice results in a paradigm clash (Aikenhead, 1997, 2002; Aikenhead & Michell, 2011; Cajete, 1999). As a result, the majority of Aboriginal students do poorly in science and mathematics-related courses as they progress through school, resulting in high attrition rates from such courses and often, consequently, from school (CCL, 2006a, 2006b, 2007; Statistics Canada, 2005, 2008, 2012). Without success in these courses, Aboriginal students are excluded from pursuing science, technology, engineering and mathematics (STEM)-related degrees at the post-secondary (PS) level. The consequence of this impediment is that Aboriginal people are critically under-represented in STEM-related professions at all levels within medicine, education, research, and policy to name a few. As well, without STEM-related degrees, Aboriginal people do not have the opportunity to work within their own community as professionals to build community capacity and self-efficacy, or to have an equitable voice and representation in policies, governmental or otherwise, that affect Aboriginal peoples and their communities. In order to participate and have voice in current and future opportunities in STEM professions, academic success in science and mathematics has to occur early and be sustained through all grade levels (K-12) so that Aboriginal students are not streamed away from such courses, as they most often are, and can continue on STEM-related academic paths at the PS level.

The Roadblocks

As an oral culture, Aboriginal knowledge is not written down, contained in textbooks, or stored on shelves for reference or posterity. All things are considered living and spiritual, related and interrelated, and critical to life and living (Cajete, 2000). Cultural experts such as elders hold knowledge in the traditional stories, in the ceremonies, and in the practices; teaching is by mentoring and learning is by doing and application. The laboratory for Aboriginal peoples is the *real* and *applied* world. Learning is not a linear process but rather continuous with multiple opportunities to cycle around; with each cycle one learns more at a deeper level. Failure is not built into the paradigm but rather learning is a life-long and continual process (Cajete, 1999, 2000). It is the clash or juxtaposition in ways of knowing and coming to learn between Aboriginal and Western paradigms that I believe presents the key challenges for Aboriginal learners in the Western system.

So here is my question: What if, as educators, we put away the crutch—the textbook—the traditional Western methodologies of teaching, think outside the cliché box, and begin in a different way, in a hands-on practical, learning-by-doing approach first, to build a foundation of context and bring in the theory later? Without context one does not have a frame of reference. Just as in learning to ride a bicycle, one first has to know what a bicycle is, how to obtain one and, then learn how to ride one by doing it. There is no amount of reading or having someone tell you how to do it, that will substitute for seeing a bike, actually getting on the bike, and trying to

ride it, and if you are as unfortunate as I was, going at break-neck speed downhill into the barn door. I doubt that cautions not to use that particular methodology would have been in any book of the instructions should I have had access to one anyway. And nowhere in the instructions, I am sure, would it have talked about scraped knees, a bloody nose, a black eye and the effect of unsuccessfully riding a male-framed bicycle on female anatomy. Certainly, there would be no cautionary phrases about downhill starts with no brakes, or barn doors as impediments to riding, albeit they are a highly effective, alternative means to braking. Context and practical experience made all those things very clear to me.

But importantly, in learning to ride a bicycle, I have been able to expand my experience and knowledge to road races in triathlons and bike trip holidays; activities that would not have been possible without that initial learning experience. So then, how can we expect students, particularly those who have no context for what we are teaching, to know, to learn such complicated subjects as chemistry, biology, physics, mathematics, or any of the other subjects that begin most often in the abstract and that are not taught in an interrelated fashion in the way they truly exist. More specifically, how can we expect students to learn a subject for which there is no "formal" context or vocabulary in their own culture? Talk about putting barn doors in their path to stop them…Ouch!!

In this Western system, we, as educators, expect Aboriginal students to jump over these large chasms between the two paradigms without any bridges and to learn in the Western way we have been taught without ever showing them how to do this, which has not and still is not, working. As someone of Métis heritage, I have lived between my urban life and my rural roots but have grown up essentially Western-educated. By this I mean I went to an urban school where the curriculum was standardized and taught using the colonial model (Cherubini, 2014; Friesen & Lyons Friesen, 2002; Tuhiwai Smith, 2012). Unlike my siblings and most of my family who did not complete high school, I did well, but I was lucky to have been mentored along the way by two key teachers who believed in me and patiently guided me in developing a bridging context that has enabled my learning and relative success at it. For many Aboriginal learners this is not the case and certainly not in the sciences and mathematics. Social and economic issues aside, the lack of Aboriginal ways of knowing and learning (AWKL), of relevant bridging context, and of mentorship, I believe, are the key roadblocks to Aboriginal success in PS education (PSE) and particularly in STEM education.

Removing Roadblocks

Western education has historically failed and continues to fail Aboriginal peoples. We hear so often the negative education statistics for Aboriginal people: the lack of attendance, high dropout rates, lack of success, and the statistical difference between on- and off-reserve graduation rates (CAP, 2010; CCL, 2006a, 2006b, 2007, 2009) to name just a few. While there are many social, economic, and political considerations at hand for Aboriginal peoples, I would venture to say that the Western education system in its entrenched methodology is increasingly failing non-Aboriginal students as well. In fact, the 2015 summer edition of *Education Canada*,[2] published by the Canadian Education Association, focused on exploring alternative retention methodologies to address the increasingly high secondary school dropout rate of youth in general. Something is not working for Aboriginal learners.

In wearing my many hats as educator, researcher, coordinator, and mother of three daughters, I increasingly hear from students in general: What does this all mean in the big picture? How does that fit with my life or me? Who cares? Will I ever use this? Why bother? And a myriad of other statements that attest to the lack of context and relevancy for students. Interestingly, these very closely mirror the statements of many of my Aboriginal students. In his address to the Building Reconciliation Conference at the University of Saskatchewan (November 20, 2015), Justice Murray Sinclair relayed that most Aboriginal students who leave school before completion have made the decision to leave by the age of 12 because it does not work for them and is frustrating, and they will leave at the first opportunity they see. If they leave, they rarely return and become yet another statistic. Therefore, the key is retention, which of course requires initial and continued engagement. However, if Aboriginal people do not see themselves in the curriculum, and as importantly, if teaching does not attend to their ways of knowing and learning, how can we expect them to even engage, let alone stay?

We hear much about indigenizing the curriculum; putting Aboriginal history and culture into the curriculum so Aboriginal people are correctly represented in the texts and materials we use for teaching. A prevailing philosophy is that if Aboriginal people see themselves in the texts, they will be able to associate with the concepts we are teaching and this will make learning easier (Battiste, 2013; Friesen & Lyons Friesen, 2002). I agree to a certain degree, but I believe indigenizing the curriculum has to be done by and with Aboriginal people to get it right this time, and this is going to take time. As well, there are more than six hundred Aboriginal groups in Canada alone and each has its own unique culture. So it is not equitable, nor ethical, in my opinion, to teach about one specific culture as if it were a pan-Aboriginal culture, and we do not want "tokenism," misrepresentation or *mis-presentation* as has happened in the curriculum history (Truth and Reconciliation Commission of Canada, 2015). There are many educators now, especially new graduates, still largely non-Aboriginal, who do want to be inclusive and who do want to enable Aboriginal success in the best way. However, they are nervous to venture into the realm of Aboriginal education because they have very little knowledge of Aboriginal culture and are afraid of making mistakes or offending. Therefore, we need a different methodological approach, one that attends to AWKL and bridges cultures in a Two-Eyed Seeing way (Bartlett, Marshall, & Marshall, 2012).

Building Bridges

A new generation of Aboriginal learners is poised to enter the education system and, now that change is on the horizon, we have the opportunity to engage students in science and mathematics in a different way, one that attends to AWKL. The majority of 21st century learners, the students of today are hands-on, practical learners. They want to "do stuff," are resourceful, and approach learning about nearly any topic through a myriad of resources made accessible through the Internet and social media. Gone are the days of textbooks, pen-and-paper, and all the "archaic" (as my daughters tell me) methodologies of my era. Students are not interested in learning a compartmentalized set of subjects that are not interrelated and connected for them. They see issues and want to know how to address them; they want to see how it "all" fits together and how it applies to them. Recently, I very reluctantly retired my iPhone 3 in favour of the iPhone 6 even though it was still working, not because my kids teased me incessantly that I was a Luddite, but for the reality that it could not keep pace with the new changes and I was being left behind. As educators and curriculum developers, if we do not engage differently with our young learners, Aboriginal or not, we too, and education as it is, will be left behind.

I argue that AWKL and the 21st century learners of today very closely parallel each other. While some might suggest AWKL is a subset of 21st century learning, I would disagree and suggest they are mutually exclusive because culture is a critically important component of AWKL and suggesting it is a subset of 21st century learning is assimilative and not a history we want to repeat. That being said, both are hands-on, practical learners who learn best by doing. They want to learn in environments that have context to their lives, that engage them, that allow them freedom to explore, to have their thoughts and voices heard and acknowledged. They also want it to be relevant, applicable, and have meaning for them. We could use the adages I often hear: "These kids of today…or, In my day…or, I had to do (such and such) so should they" or, alternatively as educators we could explore different methodological approaches to teaching, learning, and developing curriculum in ways that engage all students (and educators too) and enable their success.

In order to do this though, as educators and curriculum developers, we need to step outside our cliché box and explore different methodologies that attend to the learning styles and desires of students today, Aboriginal and non-Aboriginal alike. As Trilling & Fadel (2012) suggest, curriculum and teaching should be developed around domains of 21st century interest and need, such as health, the environment, the economy, and technology to name a few. Learning about the domain should be approached through multiple lenses (science, mathematics, art, narrative, literature, music, history, language, economics, et cetera) in an interrelated fashion so that there is a big-picture understanding and application. This philosophy not only mirrors the new movement towards Inquiry-based Learning[3] in education, but also it parallels AWKL and the philosophy of PS Liberal Education institutions such as the University of Lethbridge (U of L).[4]

Possibly the gap is not so far apart between Aboriginal and 21st century learners as statistics and all governmental documents (CCL, 2006a, 2006b, 2007) tell us if we consider how both learn and what is relevant to them. Perhaps we need a different, updated measuring tool, one that accurately reflects ways of learning and coming to know of all 21st century learners inclusive of culture and new ways of learning.

Meeting in the Middle

So where do AWKL and the 21st century learner meet? I believe liberal education could be a weaving thread. AWKL are about coming to understand the whole in an interrelated and integrated cyclical way. Liberal education means exploring one's area of interest using a myriad of lenses to provide students with a breadth of knowledge upon which to draw, such that they are enabled to make connections in an interrelated fashion and integrate the knowledge learned into a coherent whole. Such an approach also enables students to develop good critical-thinking and reasoning skills that allow for independence and self-efficacy in the future. Importantly, they develop tolerance and acceptance for differences of opinion, approaches to ways of coming to know and ways of being in a global society. It fosters good thinkers and citizens who can mobilize their thoughts and passions into action in their life and work (Jones, 2016; AACU, 2016). Interestingly, the principles of liberal education are the very foundational principles of the ways of learning, coming to know, and being in the Aboriginal paradigm. Outcomes of both prepare individuals to deal with complexity, diversity, and change, and create "global citizens" who are responsible and contribute to the good of their collective at all levels.

Mi'kmaq Elder Albert Marshall[4] and Dr. Cheryl Bartlett,[5] professor emeritus Cape Breton University, coined the phrase "Two-Eyed Seeing" as a guiding principle more than two decades ago, and it is now being picked up across Canada by organizations and individuals in transcultural collaboration, many of whom are asking to hear more. Two-Eyed Seeing refers to the traditional Mi'kmaq understanding about the gift of multiple perspectives—a gift treasured by many Indigenous peoples. How then, do we best understand and share the message of Two-Eyed Seeing to educators and 21st century learners in the dominant system (Hogue & Bartlett, 2014)?

For our current time, Elder Albert explains that Two-Eyed Seeing refers to the learning to see from one eye with the strengths of, or the best in, Indigenous knowledge and ways of knowing, and from the other eye with the strengths of, or best in, Western ways of knowing, but most importantly, learning to use both eyes together for the benefit of all. Two-Eyed Seeing implies responsibilities toward reciprocity, mutual accountability, and co-learning and is foundational to the First Nations' lifelong learning philosophy. Inclusivity and true relational understanding can only come from continual and cyclical commitment to Two-Eyed Seeing. The recent Truth and Reconciliation Commission Report (TRC, 2015) calls the governments, all educators, and Canadians to action to redefine success in terms of AWKL, encompassing the key attributes of Aboriginal learning including language and spirituality, and to develop tools and means of assessment that address the lifelong learning model of Aboriginal peoples. Such a redefinition is critical for the engagement, retention, and success of all 21st century learners, Aboriginal and non-Aboriginal alike. In Elder Albert's words, "Seeds germinate when the environment is right" (personal communication, 2015).

> In the Aboriginal community, the philosophy that education is the way forward is relatively recent and still being accepted. You will often hear the phrase "Education is the new buffalo" (Stonechild, 2006), but the legacy of enforced education for Aboriginal people has left many scars that are only now beginning to heal. While many do believe this new philosophy, it is education in its current methodological approach that is still exclusionary to Aboriginal peoples, with the sciences and mathematics, as traditionally taught from the Western paradigm, being the greatest roadblocks for Aboriginal learners.

So…How do we Enable Aboriginal Academic Success?

Some time ago, the principal of Kainai High School on the Blood Reserve, a former U of L chemistry student of mine) and I began having conversations about the issues we saw as paramount to the struggles, lack of engagement and the high attrition rate for our Aboriginal youth in science and mathematics. We wondered: What if we moved away from the traditional Western way of teaching science and mathematics and invited the students into the science conversation using more culturally relevant methodologies such as performance, narrative, story, hands-on-first, learning-by-doing and learning as a community; could we engage them and keep them engaged? We put the textbook away, moved out of the classroom and began to explore teaching science and mathematics through theatre, cultural stories and relevant to them project-based learning to create bridges between Aboriginal and Western science and mathematics. A number of successfully funded projects, Chemistry Through Theatre and Bridging Paradigms: Teaching Aboriginal Science Through Performative Inquiry (Hogue, 2013; Hogue & BruisedHead, 2013, 2015) and a two-year Aboriginal after school club where we explored science and mathematics through hands-on projects such as robotics (Hogue & BruisedHead,

2015), confirmed our philosophy that if we can engage Aboriginal students in a *different* and *creative* way, make science and mathematics fun and relevant (culturally and at all levels) to their lives, then they are more likely to engage and stay engaged (Aikenhead, et al., 2014; Belczewski, 2009; Hogue & Bartlett, 2014; Hogue & BruisedHead, 2013, 2015). In the many conversations and evaluations we had with the students they all said the creative methods, the hands-on projects and community learning enabled them to relate their hands-on learning to understand science and mathematics in the classroom in a better way. My own work (Hogue, 2014) teaching introductory chemistry in the First Nations Transition Program (FNTP) at the U of L, from a hands-on-first culturally relevant methodological approach, for the past five years has proven to be very successful in enabling Aboriginal learners to succeed in chemistry. Where I before had high failure and attrition rates, I now see great engagement and success. Students constantly say in their evaluations of the course that learning science by doing it first and making it relevant to them, enabled them to bridge it to the theory and understand it easier. They wished they had been taught in this way much earlier because they might have pursued the sciences rather than avoiding them (Hogue, 2014).

Outcomes of the projects and their evaluations were foundational to the development of a pilot summer camp designed for younger Aboriginal youth who were academically or socially struggling. In early summer, the principal of Kainai High School and I, along with the support of members of the Faculty of Arts & Science and Destination Exploration, piloted a summer camp entitled, Bridging Cultures: Mapping your Destination with Science, Mathematics & Technology (SMT) at the U of L. The five-day camp brought middle school Blackfoot students in direct contact with university professors and instructors to experience hands-on-learning-by-doing in a variety of academic fields related to SMT. The goal was to create bridges to science and mathematics culturally through a liberal education, multidisciplinary approach. The theme of a circle was chosen as the circle is a foundational symbol in the Aboriginal paradigm and metaphorically illustrates continuity and possibility. In hosting the camp at the U of L, the goal was to create bridges and plant the seed of PSE in a non-intimidating way.

On Day 1, the students worked with a geography professor to build binomial distribution curves using the professor's homemade binomial simulator. By putting the balls into the simulator and watching how they rolled and settled, they came to understand statistical concepts such as average, mean, median, and distribution in ways that made more sense to them, they said, than trying to understand the formulas and graphs in the book first. Later in the afternoon, they mapped the landscape of the coulees using the Geographical Positioning System (GPS) and related this process to how their ancestors were able to navigate the land by the various positions of animals, plants, the skies, landscapes, and so forth in the natural environment. On the morning of Day 2, an academic instructor from the Department of Physics posed five puzzling phenomena to explore using hands-on activities to answer the question: Why is the tipi such an amazing design and structure? The students learned the brilliant science and mathematics of the tipis created by their ancestors and the instructor learned about tipi protocol from the students. In the afternoon, an instructor from the Department of Mathematics engaged the students in the mathematics of bubbles. Students created different mathematical bubble shapes such as circles, ovals, squares, and cubes and tried to create the largest bubbles without popping them. The most challenging bubbles were the cubes within the cubes. Day 3 saw the students taking the puzzle out of mathematical puzzles in fun and creative ways when they worked with a mathematics professor from Liberal Education to solve intriguing puzzles. They were soon hooked and did

not want to stop even when it was lunchtime. In the afternoon they learned that their arm-span could be used as a measurement to determine the circumference of a hoop that would fit their body. Using the hoops they made, they were able to relate the physics of motion learned earlier when they tried hoop dancing, and were able see how the circular hoops could be interconnected to make beautiful images. Creating secret codes and computer programming was the theme of the morning of Day 4. They learned how the repeating loop in coding was critical to the movement of the video characters they created. The students thought coding was similar to the smoke signals and signs many Aboriginal peoples historically used to send messages and, importantly, that the repeating loop was like the repeating philosophy of the medicine wheel: many chances allowed for moving forward (female student participant, personal communication). In the afternoon, they expanded their computer skills to create noisy and illuminating electric circuits, and related these to the "natural" land circuits Aboriginal peoples used as a means of communication and connection and to travel on the land. One student suggested circuits, too, were like the medicine wheel, and that you could "change things" at different points, as long as you "completed" the circuit [circle] (male student, personal communication). On Day 5 the students learned "chemistry is the glue of all things" when they explored chemical reactions and the effects of changing concentrations on the bounce, stretchiness and texture of the colorful rainbow slime balls they made. They learned chemistry reactions could be viewed as metaphors for all reactions and interactions of life

A final collective student project was an art reflection puzzle where each student decorated a puzzle piece illustrating what he or she learned and liked and what SMT meant to her or him now. The group created a collage of the interlocking puzzle pieces to illustrate the interrelatedness of their experience. A video of the week was produced (See https://vimeo.com/137716472 for video) as a visual journal. In the final evaluations, the students thought SMT were not scary but fun and exciting. "Now I get it," said one young female participant; "I wish we could have this in all our classes," said another participant, "because I could really get into this."

Final Reflections

Through my research outcomes and teaching experiences, I have come to believe we need to target younger Aboriginal students in elementary and middle school and engage them in SMT in ways that attend to AWKL to enable success early. Importantly, we have to continue to work with them through to high school completion so that they graduate having succeeded in science and mathematics courses, and so they are then eligible to pursue STEM-related paths should they wish to. The expected surge in jobs in the STEM field in the next decade as the baby boomers retire and world changes with globalization has been foundational to the push for science and mathematics success through the integrated, hands-on approach of STEM, which is designed to develop the variety of skills essential to success in such a changing climate: critical thinking and problem solving, creativity and innovation, and communication and collaboration (Bybee, 2013; Weaver Burgess, Childress, & Slakey, 2015) to name just a few—skills that are the very foundation of AWKL. The difference and the part missing in STEM for Aboriginal learners is the cultural lens through which they view their world and approach learning. As a historically oral culture, this cultural lens includes learning through narrative, story, music, ceremony, mentorship, traditional practice, and learning from the land—ways that have historically been given significantly lesser merit as "the arts" in the Western system than science and mathematics, yet are critical for a holistic understanding of nearly any topic (Trilling & Fadel,

2009). Culture and the arts, in my opinion, are crucial missing pieces and the bridge to Aboriginal engagement and success in the current education system. In my research it is this piece that is the natural linker for explaining and sense-making, that actually bridges cultures and enables understanding. Interestingly, recent studies on the effectiveness of STEM have shown that many non-Aboriginal students who initially engage in STEM leave after some time (Cox, 2016; Maeda, 2012). Thus, something must still be missing. In light of the recent Truth and Reconciliation Commission's Calls to Action (TRC-CTA), which call for culturally relevant education for Aboriginal learners (TRC, 2015), I believe the "newly" emerging field of STEAM (science, technology, engineering, arts, and mathematics) (Cox, 2016; Maeda, 2012; STEM to STEAM, 2016) is a more culturally and holistically relevant way to invite, engage, and enable learners, Aboriginal and non-Aboriginal, in the sciences and mathematics. My own work engaging Aboriginal youth in science through narrative and theatre as well as my teaching practice (hands-on-learning-by doing) unknowingly has naturally been that of the "newly emerging" field of STEAM. Liberal education could be, I believe, the forum for moving STEAM forward.

We, as a society, are in a current global environmental and economic crisis, and we have arrived here through the explosion in the advances of science and technology without due care and attention to what we are doing, and now we have to fix this situation. The retiring baby boomer population, who themselves had fewer children, will be off enjoying the fruits of their successes. This projected deficit provides a critical opening for the fastest growing population, the Aboriginal population. In fact, in the next five to 10 years we are going to see a very significant increase in Aboriginal students in the education system at all levels (Statistics Canada, 2012). As educators and curriculum developers we need to prepare for this. It is a critical time of building bridges and creating paths to enable equitable Aboriginal academic success at all levels, and as Justice Murray Sinclair and National Chief Perry Bellegarde say, "This is a national issue and we need to be in this together" (Address, U of S, November 20, 2015).

In closing, most non-Aboriginal educators support Bellegard's statement and do want to be involved but are nervous and do not know where or how to begin. This valid concern is echoed by many of my own colleagues and is the foundation of many of the discussions at all levels among educators and policy makers across the nation. Coming to understand a different culture and a different way of knowing, especially in light of the negative history, is not easy and can be a deterrent for many who are already nervous about where to begin. It requires a willingness to engage, to listen and to learn on the part of both. "We can't just talk about it any longer," as my elder-friend said, "we have to help each other and show each other how to do it" (Marshall, personal communication, 2015). Indigenizing the curriculum is going to take time if we are to get it right this time, but having a willingness to engage and participate, to think creatively and outside one's comfort zone of academic expertise, is a step in engaging in the conversation and changing our teaching practice in ways that attend to AWKL. It is this type of openness to change that will open doors of access and, as importantly, create bridges for Aboriginal and non-Aboriginal peoples to learn from each other. The educators invited into this project were not familiar with the Aboriginal paradigm but had a willingness to take up the challenge and engage in the conversation…. such willingness allows the conversation to "grow in the middle" (Aoki, 1993) as we, as educators, move forward together in this time of globalization.

References

Aikenhead, G. S. (1997). Toward a First Nations cross-cultural science and technology curriculum. *Science Education*, *81*(2), 217 - 238.

Aikenhead, G. S. (2001). Students' ease in crossing cultural borders into school science. *Science Education*, *85*(2), 180 - 188.

Aikenhead, G. S. (2002). Cross-cultural science teaching: Rekindling traditions for Aboriginal students. *Canadian Journal of Science, Mathematics and Technology Education, 2*(1), 49 - 57.

Aikenhead, G., Brokofsky, J., Bodnar, T., Clark, C., Foley, C., Hingley, J., & Strange, G. (2014). *Enhancing school science with Indigenous knowledge: What we know from teachers and research*. Saskatoon, SK: Saskatoon Public Schools with Amazon. ca. Retrieved from http://www. amazon. ca/Enhancing-School-Science-Indigenous-Knowledge/dp

Aikenhead, G., & Michell, H. (2011). *Bridging cultures: Indigenous and scientific ways of knowing nature.* Toronto, ON: Pearson.

American Association of Colleges and Universities (AACU). (2016). What is a 21st century liberal education? *LEAP*. Retrieved from https://www.aacu.org/leap/what-is-a-liberal-education

Aoki, T. T. (1993). Legitimating lived curriculum: Towards a curricular landscape of multiplicity. *Journal of Curriculum and Supervision*, *8*(3), 255-268.

Aoki, T. T. (1999). Rethinking curriculum and pedagogy: Interview with T. Aoki. *Kappa, Delta Phi Record, 35*(4), 180 - 181. doi: 10.1080/00228958.1999.10518454

Bartlett, C., Marshall, M., & Marshall, A. (2012). Two-Eyed Seeing and others lessons learned within a co-learning journey of bringing together indigenous and mainstream knowledges and ways of knowing. *Journal of Environmental Studies and Science*, *2(4*), 331 - 340.

Battiste, M. (2013). *Decolonizing education: Nourishing the learning spirit.* Saskatoon, SK: Purlich.

Belczewski, A. (2009). Decolonizing science education and the science teacher: A White teacher's perspective. *Canadian Journal of Science, Mathematics and Technology Education*, *9*(3), 191 - 202.

Bybee, R. (2013). *The case for STEM education: Challenges and opportunities*. USA: National Science Teachers Association.

Cajete, G. (1999). *Igniting the sparkle: An Indigenous science education model.* Skyland, NC: Kivaki Press.

Cajete, G. (2000). *Native science: Natural laws of interdependence.* Santa Fe, NM: Clear Light.

Canadian Council on Learning (CCL). (2006a). *What are the factors that facilitate and impede post-secondary access and participation of Aboriginal students?* Ottawa, ON: Government of Canada. Retrieved from

http://www.aved.gov.bc.ca/ccl_question_scans/documents/5-Aboriginal_Access_and_Participation.pdf

Canadian Council on Learning (CCL). (2006b). *What factors facilitate Aboriginal post-secondary success?* Ottawa, ON: Government of Canada. Retrieved from http://www.aved.gov.bc.ca/ccl_question_scans/documents/6-Aboriginal_Post-Secondary_Success.pdf

Canadian Council on Learning (CCL). (2007). *The cultural divide in science education for Aboriginal learners.* Ottawa, ON: Government of Canada. Retrieved from http://www.ccl-cca.ca/pdfs/LessonsInLearning/Feb-01-07-The-cultural-divide-in-science.pdf

Canadian Council on Learning (CCL). (2009). *The state of Aboriginal learning in Canada: A holistic approach to measuring success.* Ottawa, ON. Retrieved fromhttp://www.ccl-cca.ca/pdfs/StateAboriginalLearning/SAL- FINALReport_EN.PDF

Cherubini, L. (2014). *Aboriginal student engagement and achievement: Educational practices and cultural sustainability.* Vancouver, BC: UBC Press.

Congress of Aboriginal Peoples (CAP). (2010). *Human Resources and Skills Development Canada (HRSDC)*. Retrieved from http://www.abo-peoples.org/wp-content/uploads/2012/10/Stay-In-School-RL.pdf

Cox, J. (2016). STEM vs STEAM: What's better? *TeachHub.com: K-12 News, Lessons & Shared Resources*. Retrieved from http://www.teachhub.com/stem-vs-steam-what-is-better?

Etzkowitz, H., Kemelgor, C., Neuschatz, M., Uzzi, B., & Alonzo, J. (1994). The paradox of the critical mass for women in science. *Science*, New Series, *266*(5182), 51 - 54. Retrieve from http://www.kellogg.northwestern.edu/faculty/uzzi/ftp/paradox.pdf

Friesen, J., & Lyons Friesen, V. (2002). *Aboriginal education in Canada: A plea for integration*. Calgary, AB: Detselig.

Harding, S. (Ed.). (1987). *Feminism & methodology*. Bloomington, IN: Indiana University Press.

Harding, S. (1991). *Whose science? Whose knowledge?: Thinking from women's lives*. Ithica, NY: Cornell University Press.

Hogue, M. (2013). Building bridges: Teaching science through theatre. *Education Canada, 53*(4), 1 - 3.

Hogue, M. (2014). Let's do it first and talk about it later: Rethinking post-secondary science teaching for Aboriginal learners. *in education*, *19*(3), 138 - 151.

Hogue, M., & Bartlett, C. (2014). Two-Eyed Seeing: Creating a new liminal space in education. *Education Canada, 54*(2), 25 - 27.

Hogue, M., & BruisedHead, A. (2013). Napi and the rock & a little chemistry too! https://www.youtube.com/watch?v=N00sQi6dIKU&NR=1&feature=endscreen https://www.youtube.com/watch?v=lrEQYc8VvJI

https://www.youtube.com/watch?v=RlgHW3VUmMk

Hogue, M., & BruisedHead, A. (2015, October 13). *Culturally relevant methodologies to enabling Aboriginal success in science, mathematics & technology*. Paper presented at the Treaty 7 Education Conference, Calgary, AB.

Jones, N. (2016). The continuous death and resurrection of the liberal arts. *Liberal Education: Association of American Colleges and Universities,* 101/102, (4/1). Retrieved from https://www.aacu.org/liberaleducation/2015-2016.

Maeda, J. (2012, October 2). *STEM to STEAM: Art in K-12 is key to building a strong economy*. Retrieved from edutopia (http://www.edutopia.org).

Statistics Canada. (2005). *National tables: Aboriginal data*. Retrieved from http://www.statcan.ca.

Statistics Canada. (2008). *Aboriginal peoples in Canada in 2006: Inuit, Métis and First Nations,* 2006 Census. Vol. 8. Ottawa, ON: Government of Canada.

Statistics Canada. (2012). *High level indicators: Aboriginal peoples survey 2012*. Retrieved from www.statcan.gc.ca

STEM to STEAM (2016). Retrieved from www.stemtosteam.org

Stonechild, B. (2006). *The new buffalo: The struggle of Aboriginal post-secondary education in Canada.* Winnipeg, MB: University of Manitoba Press.

Trilling, B., & Fadel, C. (2012). *21st century skills: Learning for life in our times*. New York, NY: Jossey-Bass.

Truth and Reconciliation Commission of Canada (TRC). (2015). *Final report of the truth and reconciliation commission of Canada, Vol. 1: Summary: Honoring the truth, reconciling the future*. Ottawa, ON: Truth and Reconciliation Commission Canada.

Tuhiwai Smith, L. (2012). *Decolonizing methodologies: Research and indigenous peoples* (2nd ed.). London: Zed Books.

Weaver, G., Burgess, W., Childress, A., & Slakey, L. (2015). *Transforming institutions: Undergraduate STEM education for the 21st century*. West Lafayette, IN: Purdue University Press.

Endnotes

[1]Much political conflict exists around the correct terminology in reference to First Nations, Métis and Inuit peoples. For the purposes of this paper, Aboriginal and Indigenous will be used interchangeable to be inclusive of all.
[2] Canadian Education Association. (2015). Towards fewer dropouts. *Education Canada*, Summer Edition.
[3] Alberta Education. https://education.alberta.ca/teachers/aisi/themes/inquiry.aspx
[4] University of Lethbridge. Faculty of Arts & Science: Liberal Education. http://www.uleth.ca/artsci/liberal-education
[5] Eskasoni First Nation in Unama'ki (Cape Breton, NS).
[6] www.integrativescience.ca