

WORKING WITH NĒHIYÁW KNOWLEDGE KEEPERS TO DECOLONIZE ASSESSMENT  
PRACTICES USED IN GIFTED EDUCATION: A MIXED METHODS STUDY

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By

Michelle Brigitte Cosette Heiser

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College of Graduate and Postdoctoral Studies  
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## **Abstract**

My research was driven by a conversation with two First Nations students who informed me that the gifted programs at our school were not for them. This conversation led me to seek evidence for the meta-lesson delivered by their lack of representation, as the effect was marginalization for these students. I needed to define this problem of practice with evidence for the underrepresentation of this population within gifted programs. Thus, the first step of my research was to use quantitative data from one school division, which demonstrated that First Nations children are seriously underrepresented.

I also needed to turn to the community to seek input and guidance in ways educational practice could be altered to more effectively identify and nurture the gifts of First Nations students. As the conception of giftedness seemed to be influenced by culture and language, and with guidance from the people within the First Nations community that I already had a relationship with, I focused my research within the Nêhiyâw [Cree] community. Another factor that led to my decision to work specifically with this group included an understanding that I was working with a construct that is impacted by language and culture so focusing on one cultural was important.

The method I used was mixed methods which allowed me to collect and correlate both quantitative and qualitative data. The quantitative data were used to frame the problem of practice and to help inform changes in practice. These data included gifted population representation rates and survey data from five gifted education teachers. The quantitative data were linked with the narratives provided by two Knowledge Keepers to provide insight for a working definition for giftedness and to infer possible changes for gifted educational practices. My findings showed that there are noteworthy differences in how giftedness is traditionally

defined and nurtured by the Nêhiyaw. Using these new understandings I was able to create a working definition for giftedness as well as suggest some potential changes in practice for the identification and nurturing of Nêhiyaw gifted students.

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## **Dedication**

This dissertation is dedicated to my family who encouraged me and on many occasions put aside their own wishes so I could achieve this accomplishment. Scott, thank you for your love, encouragement, and support. To Zach, thank you for your understanding and patience as mom was sometimes too busy to play. Also to my parents, Jack and Maxine Heiser, who have often stepped in to make sure Zach was never left wanting. I could not have completed this work without all of your support.

## Table of Contents

Permission to Use .....	i
Abstract .....	ii
Acknowledgements.....	iv
Table of Contents .....	vi
List of Tables .....	x
List of Figures .....	xi
List of Abbreviations .....	xii
Glossary .....	xiii
Chapter One .....	1
1. Introduction.....	1
1.1 Experiences in Gifted Education .....	1
1.2 Indigenous Voices in Gifted Programming .....	3
1.3 Historical and Cultural Perspectives on Giftedness.....	5
1.4 Barriers to Gifted Education .....	6
1.5 Western Perspectives in Defining Giftedness.....	9
1.6 Indigenous Conceptualizations of Giftedness.....	12
1.7 Current State of Gifted Programming.....	15
1.8 Seeking Insight into Indigenous Giftedness: A Nêhiyaw Perspective.....	17

1.9 Research Question .....	18
Chapter Two.....	20
2. Literature Review.....	20
2.1 Seeking a Contemporary Definition for Giftedness.....	20
2.1.1 Reasons for a definition. ....	20
2.1.2 Brain physiology.....	21
2.1.3 Renzulli’s three-ring conception.....	23
2.1.4 Above average abilities.....	24
2.1.5 Assessment of above average abilities.....	25
2.1.6 Task commitment.....	26
2.1.6 Creativity.....	27
2.2 The Need for an Inclusive Definition for Giftedness.....	27
2.2.1 Basic premise. ....	27
2.2.2 Impact of worldview. ....	29
2.2.3 A current definition for giftedness. ....	30
2.3 Implications for an Inclusive Definition of Giftedness.....	31
2.4 Gifted Pedagogy.....	32
2.4.1 Beyond the zone.....	32
2.4.2 Teaching strategies for gifted students. ....	33
2.4.3 Intervention. ....	34



2.4.4 Reasons behind underrepresentation.....	35
2.4.5 Definition and Identification.....	36
2.5 Improving Screening and Assessment in Response to Underrepresentation.....	37
2.6 Supporting Teachers .....	39
Chapter Three.....	41
3. Methodology and Methods .....	41
3.1 Theoretical and Ideological Perspective .....	41
3.2 The Problem.....	45
3.3 Research Questions.....	46
3.4 Conceptual Design: Research Methods .....	47
3.4.1 Research design. ....	49
3.4.2 Intent of transformative mixed methods.....	51
3.4.3 Implementation of the mixed method design.....	52
3.4.4 Sample.....	53
3.5 Data Collection and Analysis.....	54
3.5.1 Quantitative data. ....	54
3.5.2 Qualitative data. ....	55
3.6 Ethical Considerations .....	60
Chapter Four .....	62
4. Data Analysis .....	62

4.1 Data Presentation .....	62
4.1.1 Response rate. ....	62
4.1.2 Quantitative data: Gifted education teachers. ....	63
4.1.3 Qualitative data: Nêhiyáw perspectives. ....	75
4.1.4 Learning from informant 1.....	78
4.1.5 Learning from informant 2.....	82
4.1.6 Common themes and understandings from Informants 1 and 2. ....	86
Chapter Five.....	93
Conclusion .....	93
5.1 The Assessment .....	93
5.2 The Environment .....	94
5.3 The Instruction .....	96
References.....	100
Appendix A.....	110
Appendix B.....	111

## List of Tables

Table Number	Page Number
4-1 What gifted education teachers perceive as the most common method for identifying giftedness within their division with 1 representing the most dominant through 5 representing the least dominant.	64
4-2 What gifted education teachers consider as the most valuable methods for identifying giftedness within their school division with 1 representing the most dominant through 5 representing the least dominant.	67
4-3 Gifted teacher responses on personal experiences in gifted education programing with 1 representing strongly disagree, 2 disagree, 3 neutral, 4 agree, and 5 strongly agree.	69

## List of Figures

Figure Number	Page Number
2-1 The Three-Ring Conception	23
2-2 Graphic conceptualization of the definition of Giftedness	30
3-1 Graphic Illustration of Mixed Methods Design	52

## List of Abbreviations

Reference list for acronyms - listed as they appear.

Acronym	Meaning
IQ	Intelligence Quotient
AP	Advanced Placement
IB	International Baccalaureate
EAL	English as an Additional Language Learner
DSM-5	Diagnostic and Statistical Manual of Mental Disorders 5th ed.
APA	American Psychiatric Association
eIIP	electronic Inclusion and Intervention Plan
LAT	Learning Assistance Teacher
TL	Teacher Librarian
RtI	Response to Intervention
EA	Educational Assistant
SLM	Student Learning Model
QUAL	Qualitative
QUAN	Quantitative

## Glossary

Term/Phrase	Meaning
Pull out program	Delivery removes identified students from their mixed ability classroom for short portions of the school day in order to work with teachers that have been trained the field of gifted education, and like ability peers.
Push In/Inclusion	Push in [inclusion] models have gifted students remain in their regular mixed ability classroom.
Cluster Grouping	Five to seven students within the classroom environment who work together through differentiated classroom instruction, content enrichment, and higher-order thinking tasks.
Full Time Grouping	Pulls gifted and talented students out of the heterogeneous classroom and places them in schools or classrooms with like ability peers full time.
Special Classes	Classes offered include: Advanced placement (AP), International Baccalaureate (IB), enriched subject options, and specialized programs run outside of the school such as art or language programs.
Standardized Test	A test that has been developed empirically, having specific norms and instructions for administration. Usually produced by a company that also provides evidence of reliability and validity.
Academic Performance	Performance scores based on IQ format tests
IQ	Intelligence quotient – a measure of a person’s level of intelligence as measured by a standardized testing tool.

## Chapter One

### 1. Introduction

#### 1.1 Experiences in Gifted Education

I grew up in a mid-sized city on Canada's prairies. From three to ten years old, my family lived on the west side—the area of the city with a reputation of having a lower socio-economic status. In a candid conversation with my mother she remarked “one of the reasons for your father and I deciding to move to the east side was because we were concerned you girls (I have a younger sister) were not getting the opportunities in school that we felt you should be.” She told me, as a parent volunteer, “I spent time teaching in the classroom while your teachers were in the hallways testing the latest new student that had arrived.” The transient nature of the population and the number of students with high needs, made it difficult for classroom teachers, in her observation, to focus on students who had fewer conspicuous needs. My parents felt that by moving to a higher socio-economic area of the city, their daughters would have more opportunities to succeed. They might have been correct, or it could have just been circumstance, but I was identified as gifted once at the new school and as a result I was able to access specialized gifted programming. This programming utilized a push in model of enrichment activities in elementary school, and full time grouping in secondary school.<sup>1</sup> It is impossible to say whether the same identification would have been made at my previous school; however, I can say that it was not made while I was there.

My education journey continued onto university where I pursued a degree in biology followed by a degree in education. I have taught in a rural school with a K-12 population of

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<sup>1</sup> See Glossary on page xiv for definition of push in model.

approximately 100, which due to its size and staffing offered limited gifted programming options. From there I moved to a small city high school that offered specialty classes, which students registered in by choice. I now teach for a school division in a mid-sized city on the Canadian prairies. I have had the opportunity to lead pull out mentorship groups and special classes for gifted students, as well as serving as a teacher librarian in supporting classroom teachers in developing and delivering differentiated inquiry units of study within a push in model. This city experiences a similar economic divide where one side is considered home to middle and upper class families, and the other is considered to be comprised of predominantly lower socio-economic status families. As an educator in this city, I have worked at schools predominantly located within the lower socio-economic communities. As I reflect on our practices and our students, I connect back to my story as I look at our gifted student numbers and see, that as I write this, some of our schools have few to no gifted students. I have taught students who, upon reflection, and a more extensive understanding of talent and giftedness, warranted consideration for gifted program support, yet for various reasons, failed to be identified for gifted programming. In some cases, these students either missed the testing events, failed to engage in the testing process, or were not yet proficient with the English language in order to test at their true ability levels. Other students expressed their giftedness in ways that the testing and programming did not accommodate for; there simply was no place for their voice. Attempts to utilize new assessment tools designed to address some of these concerns have been made. Although the modern standardized testing tools provide for the assessment of a broader range of giftedness, the assessment tool remains grounded in a Western philosophical approach, as it is a standardized assessment tool, inherently contains cultural bias. This leaves those that do



not approach learning from this Western worldview underrepresented in gifted educational programming.

## **1.2 Indigenous Voices in Gifted Programming**

Identification of gifted students has proved problematic for many educational systems regardless of culture, however the testing and identification of Indigenous students has proven even more problematic (Garvis, 2006). This is likely due to a variety of issues including non-culturally responsive curriculum, underachievement and underperformance due to a variety of factors including: loss of traditional culture and language, lack of community access, and challenging socio-economic conditions. Due to these factors, relying on ability testing can also prove problematic, as superior performance within the school setting is not always expressed by the gifted individual. Therefore, academic performance cannot be the lone tool used in gifted identification. Recognizing these factors, it is not surprising that these students remain underrepresented as academic performance on group administered, standardized IQ and ability tests remains the primary indicator of giftedness for classroom educators (Clark, 2013). This reliance on academic performance as an indicator of giftedness is problematic for all students, but particularly for Indigenous students attending schools where they represent a cultural minority group (Garvis, 2006). The issue of underrepresentation and underachievement of gifted Indigenous populations is ubiquitous across colonized populations (Clark, 2013). Traditional strategies in addressing the issue have often only added to the problem. Strategies, such as proportional representation, that have placed students who were not able to succeed within the gifted programs, simply to meet quotas, have failed both the students and teachers within the program, as well as gifted programming in general (Clark, 2013). Research on the reasons for the underrepresentation of cultural minority groups in gifted education is abundant and

representative of numerous Indigenous groups worldwide, however research addressing the issue is limited and in many cases culturally specific. Understanding that giftedness and talent development is inherently impacted by culture and language, building connections, relationship and seeking understanding from local Elders and Knowledge Keepers from the represented Indigenous cultural groups is essential for educators in beginning to address the issue.

The most prevalent literature on Indigenous giftedness looks at the issue from the perspective of the Indigenous populations within Australia. Research is also available from the Na Pua No`eau, the Center for Gifted and Talented Native Hawaiian Children (Gibson & Puniwai, 2006). Research specific to Indigenous peoples within the United States of America as well as cultural minorities including African American and Hispanic cultures is also part of the milieu; however, once again the focus remains primarily on the issue of underrepresentation rather than strategies or approaches for addressing the issue. Canadian Indigenous voices are not well represented within the research literature on giftedness. Seeking to glean wisdom and understanding from the Nêhiyâw voice is guiding me in my research. As an educator, I work within a diverse cultural community. The Indigenous groups of students I work most directly with are of Nêhiyâw, Metis, and Dene ancestry. These students represent a significant population, yet are the minority in comparison to students with European ancestry—the cultural community to which I belong. Responsibilities of treaty and in an effort to move towards reconciliation, Canadian educators have an obligation to provide a more culturally responsive environment for Canadian Indigenous students within the classroom. The difficulty for many non-Indigenous educators is that best practices for serving our Canadian Indigenous students is not in published research; instead held by the individual Indigenous communities—that are steeped in a rich tradition of oral history. The absence of their cultural voice within the literature

leaves me, as a non-Indigenous educator, guessing at best practices. It was at this point in my journey that I knew I needed to focus my research, choosing to turn to the Nêhiyâw community to begin my search for best practice.

### **1.3 Historical and Cultural Perspectives on Giftedness**

The issue of measuring and labeling intelligence has been a ubiquitous concern throughout history and across cultures. Early civilizations, including the Greeks and the Romans, sought means of identifying citizens who possessed superior levels of intelligence (Gallagher, 1994). The use of intelligence testing in China has been dated back to 2200 BC (Fox, 1981). Gifted education in North America does not have the extensive histories of these other societies; however there is evidence of student ability tracking, within western ‘white’ culture, that dates back as far as 1870 in St. Louis, Missouri (Pfeiffer, 2002). The reasons for the identification of individuals have historically been impacted by cultural values and worldviews, rather than by educational pedagogy. South Korea presents an interesting case study on this issue, as its changes in governments, including a time period of Japanese rule, have had major impacts on their education system. There has been a significant struggle as different governments’ worldviews on equality and fairness are juxtaposed.

As an emerging democratic nation, South Korea has struggled to provide equal opportunities to all of its people and is only now considering that some especially capable and accelerated students may not be served by emphasizing the same curriculum and instructional strategies for all students. (Wollam, 1992, p. 212)

Gallagher (1994) speaks to this concern of providing equality within education and what equality looks like; his concerns include a disconnect between society’s competitive approach within education and what Gallagher identifies as an ambivalence, in both the educational setting and in society at large.

We may love the creative products of their mental processes but still feel the sting of envy when we observe some persons doing, with apparent ease, what is so difficult for

others to accomplish. Such conflict between the public interest and personal feelings has been felt in many societies and has been a barrier to the education of gifted and talented students. (Gallagher, 1994. p.84)

This notion of setting others above can be even more difficult when it fails to align with one's own views of equality and fairness, or with the views held by the society within which one identifies. According to Baer, Grabb, and Johnston (1990), Canada values the success of the collective over the success of the individual. In comparison, the United States places significant value on the rights of the individual, which supersede those of the collective. These values are reflected in all areas of society including: justice, healthcare, social programming, and education. As a result, gifted education would be valued in an individualistic society, such that individual children can excel. In collective societies such as Canada, gifted education is almost an embarrassment because more resources go to those already perceived as resourced with intelligence.

#### **1.4 Barriers to Gifted Education**

The implications for gifted education administered within a society that values the collective over the individual are significant. Providing the gifted student with added resources that would support them in achieving an even greater distinction from others would be seen as unfair. The problem with the above belief system is that we already employ numerous added resources for different and select groups of student including students identified with exceptionalities that pose a barrier to success within the education system. Additional funds are provided for resources such as technology and curricular adaptations and modifications, and access to different levels of professionals are blended into program plans designed to meet these students' needs – providing them with the best opportunity to reach their maximum achievement levels. These same opportunities have not always been available for students identified as gifted, which is also classified as an exceptionality, as funding priorities have often placed the needs of

students identified as intellectually gifted below the needs of those identified with other cognitive differences that pose other barriers to success. Clark (2013) identified a number of concerns in failing to prioritize gifted learners including: underachievement, low self-concept, weak motivation, and difficulty fitting in with peers. These concerns are often elevated within underrepresented populations, including cultural minorities and those students from lower socioeconomic families. Recognizing these issues that gifted learners face when their unique learning needs fail to be met—educators need to prioritize appropriate programming for these students. This has been found to be especially important for Indigenous learners where inequality in access to gifted programming is abundant (Chaffey, Halliwell, & McCluskey, 2006). There have been numerous barriers identified within the field of gifted education. These barriers affect both gifted program delivery and access. Identifying and addressing these barriers is essential in beginning to seek solutions.

*Terminology* remains a barrier in identifying underrepresented populations. This not only refers to an understanding of giftedness within the educational community, but also a lack of understanding and relationship between the educational community and the Indigenous cultures within that community.

It also challenges the Eurocentric assumptions that have pushed Aboriginal knowledge and languages to the margins and raises current Aboriginal educational concerns regarding a transformed curriculum that embraces the rich diversity of knowledge and provides the necessary consciousness to enable Aboriginal humanity to be respected and protected. (Battiste, 1998)

The disregard of Indigenous languages and voice within the discourse of gifted educational programming and policy continues to persist in our schools, programs, and policies and as a result fails to connect to Indigenous students.

Despite the constitutional reform in Canadian society, Aboriginal languages and knowledge are not yet flourishing in the education systems. Canadian education systems

have not empowered the enormous creativity of Aboriginal languages, and First Nations schools have not used them widely. Aboriginal languages and knowledge are still excluded in most Canadian educational systems. (Battiste, 1998)

The use of Indigenous languages both in the identification process and the design and delivery of gifted programming may provide some solutions in beginning to address the issue of underrepresentation of gifted Indigenous students.

*Attitudes* about the field of education and the evolution from the traditional necessity for uniformity and equality in educational systems to systems highly motivated by competition [driven primarily by standardized testing scores] also pose barriers for Indigenous students. According to Tonemah (1992) when Indigenous students were initially involved in federal [United States of America] education programs they were influenced not to outperform their peers. Tonemah (1992) alludes to three reasons for their underachievement—first that high achievement was not expected by educators due to stereotypical perceptions, second, the school provided few opportunities for Indigenous students to outperform their peers, and finally, that their peer group did not accept this behavior.

Educators, according to Tonemah (1992), noted that when marginalized students are identified as a problem at school, teachers tend to think of them as being deficient in some way (deficit thinking), and therefore in need of help. Tonemah (1992) describes the effect of deficit thinking as dehumanizing for the group always identified as needing to be helped [the group repeatedly identified within the problem stage]. As a result of this deficit thinking the gifts and talents of students within minority Indigenous groups are often missed and their potential future success potentially hindered.

Chaffey, Halliwell, and McCluskey (2006) stated, “We must reject the assumption that deficiencies motivate proper behaviour, and instead accept the more realistic belief that giving

attention to successful behaviour motivates the attainment of potential” (p. 62). Moving beyond a focus on deficit to instead searching for gifts and talents, particularly within minority populations, remains a struggle, but is important for the future success of our Indigenous student populations. Numerous data reveal that by failing to recognize and appropriately challenge gifted students while in school, these students can experience lifelong negative effects. Those negative outcomes affect both the individual and that individual’s potential community contributions (Clark, 2013; Cooper, 2005; Ford, 2010; & Phillips, 2008). If we are to move beyond these barriers, and address the needs of our gifted Indigenous minority students, we need to look carefully at our language, attitudes, cultural biases, and programming and implement more culturally responsive pedagogies. In addressing the issue of underrepresentation, the field of giftedness research needs to move beyond identifying the intellectual strengths of Indigenous students exclusively from a Western cultural perspective. Perhaps for Indigenous cultures, there is a different valuing of gifts and talents. Perhaps the individual cultural groups have a concept of giftedness, but it is not the same concept as that of Western culture. If this is the case, listening and learning to the cultural communities served by the educational community, and using learned and new understandings may provide a pathway toward addressing the concerns of underrepresentation of gifted learners from these cultural minority groups.

### **1.5 Western Perspectives in Defining Giftedness**

How different societies view equity in education is not the only barrier to gifted education. The lack of a clear and consistent definition for giftedness presents another barrier in gifted education (Gagne, 2004). There are numerous definitions for giftedness and also discrepancies in the terms used for giftedness, with some research referring to giftedness as simply gifted, while other studies utilize the term talent(s) in the place of gifted, and other studies

combine both terms. Renzulli (2011) presented a system which compared definitions presented on a continuum based on how restrictive the definition was in determining either a person's eligibility for gifted identification and programming or the academic content areas that could be deemed as having gifted representatives. Renzulli (2011) illustrated this through two definitions, each existing on the opposite ends of the continuum. Renzulli (2011) compared Terman's definition which limited the gifted population to one percent of the population to Witty whose definition could include as much as ten to twenty five percent of the population. "Lewis Terman's definition of giftedness, 'the top 1% level in general intellectual ability, as measured by the Stanford-Binet Intelligence Scale or comparable instrument'" (Renzulli, 2011, p. 82) is restrictive in both who is eligible [top 1%] and also in the type of performance as it is based only on IQ test performance. Witty (as cited in Renzulli, 2011, p. 82) gave the following definition:

There are children whose outstanding potentialities in art, in writing, or in social leadership can be recognized largely by their performance. Hence, we have recommended that the definition of giftedness be expanded and that we consider any child gifted whose performance, in a potentially valuable line of human activity, is consistently remarkable.

This definition allows for more individuals to be identified as well as recognizing giftedness in content areas outside of those typically valued through traditional IQ testing such as the Stanford-Binet Intelligence Scales. This definition would present a problem within the historical Western context of education, as little value was historically placed on creativity within the milieu of intelligence. There were also limited methods to assess creativity. Fortunately, the field of education and our understanding of the role of creativity within the context of intelligence has evolved. Pedagogical practices, which were developed from a positivist worldview where the teacher was expert and the students viewed as vessels to be filled with knowledge, have been replaced, in many cases, by philosophies and practices which recognize the value of teacher and student as partners within a collaborative learning



environment. This evolution in thinking has occurred at varying rates, across all disciplines – English, history, math, and science. Cobern (1996) explained “in recent years the positivist influence on both science and science education has waned opening the door for new intellectual discussion” (p. 593). Constructivist theories and a post-modern perspective for education have had “enormous, but by no means clear” implications for curriculum, teaching, and learning (Doll, 1993, p.3). Frederiksen and Collins (1989) described the advantages of subjective assessment when analyzing higher-order thinking, problem solving, and other metacognitive activities. These changes in our values and worldview impact all aspects of education and therefore will shape the definition for giftedness. This connection between pedagogy and worldview becomes clear when looking at the literature on gifted education. Most of the literature published prior to 1957 reflected positivist approaches to gifted education. Repeated within the literature are the following themes for describing giftedness. Early themes include a strong focus on the use of intelligence (IQ) tests as the sole measure of intelligence, with those with an IQ of 140 or above (representing the top 1% of the population) defined as gifted. Another theme is a fixed view of intelligence where intelligence is seen as a genetically determined trait, which fostered what Dweck (2010) described as a fixed mindset in supporting student learning, and a hierarchical view of intelligence and subsequently individuals within society. Post 1957 literature has framed giftedness from a variety of different philosophies: modern, post-modern, constructivist, and postmodern constructs. Ability and giftedness began to be recognized in areas outside of pure IQ measures including physical, social, and artistic abilities, and as a result new measures were implemented that looked at both IQ and authentic task performance in measuring giftedness (Dai, 2010). A new understanding of intelligence and giftedness within a growth mindset (Dweck, 2010) saw the importance of recognizing

intelligence and giftedness as a dynamic state which could be significantly impacted by educational programming and talent development opportunities. As our understanding of intelligence, how intelligence is measured, motivation, engagement, and creativity has grown, so too have our definitions and understandings of giftedness. These new understandings need to be reflected within a definition for giftedness and the resultant pedagogical decisions that are made when planning for gifted programming. Recognizing that certain populations are clearly underrepresented within our identified gifted populations supports the need for a clearer understanding for our teachers of what makes giftedness, and therefore, which students reflect those traits, and as such deserve the opportunity to benefit from targeted programming opportunities delivered by gifted specialists.

To date, many decisions related to gifted programming have been the result of policy driven by economic factors and pushed by the value systems of groups of privilege—typically wealthy and of Caucasian decent (Cooper, 2005). Moving forward efforts need to be made to adopt inclusive practices, which are informed through culturally sensitive research and practices. This can be achieved through the combined efforts of both the Indigenous and Non Indigenous communities working together to make culturally sensitive research based and collaborative decisions. Inclusive practices which recognize the role that culture plays in education can be the catalyst for educational reforms that can have positive impacts for marginalized populations (Tillman, 2003).

### **1.6 Indigenous Conceptualizations of Giftedness**

The term gifted is bound within Western language, educational philosophy, and pedagogy. However, one can look beyond the terminology, and instead to the expressed abilities and behaviours of those identified as gifted and in doing so, make connections to members

within Indigenous groups. According to Herring (1996), Indigenous peoples traditionally honoured and gave respect to some members [in a manner that set them apart from others in the group] as the group relied on their exemplary vision or abilities for the whole of the group's success or survival.

Those respected persons exhibited behaviors that denoted high ability and performance as leaders, peacemakers, Holy men, warriors, orators, planners, logisticians, singers, dancers, and artisans. These outstanding persons rose to prominence and performed needed tasks in response to the needs of the tribe, community and village. (Tonemah, 1991, p. 1)

An understanding that some Indigenous groups set people apart from the rest of the group based on their abilities may provide a starting place for researchers looking to find the Indigenous voice within the context of gifted behaviors. These extraordinary abilities were identified early in an individual's life and were taught and nurtured by others in the community (Tonemah, 1992).

They were taught in an environment in which they learned by example, learned at their own pace, learned by discovery and were taught by grandparents and uncles or aunts who had a symbiotic relationship in which they were of equal stature. Learning occurred with each participant respecting the other and knowledge and skills passed from one to the other in a non-threatening and open environment. Challenges were presented, accomplishments recognized and higher level or in-depth learning progressed until the teacher/mentor passed on. The "student" then became the mentor/teacher to another generation. (Tonemah, 1992, p. 1)

Consideration of how these behaviors are identified and nurtured within Indigenous contexts may provide educators the awareness necessary to better serve their Indigenous student populations.

Many researchers point to the problem of underrepresentation of giftedness within Indigenous groups; however, there exists a scarcity of studies that look to address the issue of underrepresentation of gifted Indigenous students (Ford, 2010; Montgomery, 2001). A report written by Montgomery (2001) of a program called Project LEAP [Learning Excellence Achievement and/or Performance] provides insight into the issue of underrepresentation of

American Indian, Hispanic, and Black students in one area of the United States. The findings have implications for Indigenous populations and possible strategies for addressing the problem. The recommendation from the report was that through community collaboration, partnerships with parents, and culturally relevant identification strategies the issue of underrepresentation of gifted students from cultural minority populations may be addressed. The program sought to provide culturally responsive curriculum to their gifted cultural minority student populations including American Indian, Hispanic, and Black students. Narratives of the participants from the program provided evidence of program successes; however, few reports or research studies like these exist within the larger body of gifted educational research and therefore educators have little research upon which to base their pedagogical decisions. Successes as identified through Project LEAP stem from two key areas. First, collaboration and relationship building between the school and the Indigenous community is crucial in creating the identification processes as well as the curriculum design and delivery. Second, that the programming offered needs to be designed to nurture the gifts and talents of these gifted students while also recognizing their individual culture, language, and community in the process.

The common theme in the limited research on Indigenous giftedness is the importance of building relationship and collaboration with any represented cultural minority groups within the larger education community. Collaboration needs to be the basis for all parts of the gifted program development and delivery. This includes community collaboration on a culturally appropriate definition for giftedness, strategies for identifying gifted individuals, and suggestions on nurturing students' gifts and talents in order to help them thrive within both communities.

## **1.7 Current State of Gifted Programming**

Providing gifted learners with programming instruction at the upper end of their ability levels is just as important as providing instruction for those students with cognitive learning deficits (Clark, 2013). Adapted programs and learning opportunities are needed to support gifted learners in order for them to reach their full potentials. According to Clark (2013) gifted programming development and delivery is one of the most researched areas of the field of gifted education and as a result, one of the most multifaceted, leaving educators with an array of gifted education models from which to choose. Decisions made by educators regarding how gifted programming is delivered varies greatly between schools and school divisions, but falls within one of five different categories: pull out programs, push in or inclusion models, cluster grouping, full time grouping, and special classes (Clark, 2013; VanTassel-Baska, 2006).

Pull out program delivery removes identified students from their mixed ability classroom for short portions of the school day in order to work with teachers that have been trained the field of gifted education, and like ability peers. During the pull out time students engage in enrichment curricular activities. Pull out programming typically occurs for one to two hours per week (Rogers, 2007). The pull out model offers gifted students like ability peer interaction and focused instruction in the area of talent, however these programs are often separate to classroom curricular activities [as opposed to embedded within] and can become seen as extra work by those involved (VanTassel-Baska, 2006).

Push in or inclusion models have gifted students remain in the mixed ability classroom. Classroom teachers deliver programming to meet the gifted learner's needs by incorporating instructional strategies that provide whole classroom differentiation including inquiry and problem based learning (Callahan, Moon, Oh, Azano, & Hailey, 2015). The push in model

benefits the student through focused curriculum delivery and regular classroom interaction; however depending on the classroom makeup, children may limit interactions with like ability peers (VanTassel-Baska, 2006). Lack of training in delivering effective programming for gifted learners may also present a barrier for gifted learners within the push in model.

According to Clark (2013), clustering gifted learners is grouping approximately five to seven students within the classroom environment who work together through differentiated classroom instruction, content enrichment, and higher-order thinking tasks (p. 294). Clustering provides opportunities for gifted learners to work with other gifted peers, assuming multiple gifted students are present in the same classroom and working at the same grade levels. Clustering offers the classroom teacher control over curriculum and assessment as well as flexibility to group and re-group depending on the content areas (VanTassel-Baska, 2006).

Full time grouping pulls gifted and talented students out of the heterogeneous classroom and places them in schools or classrooms with like ability peers full time (Clark, 2013). Research has shown that full time access to peers and focused instruction for gifted students increases their motivation of learning and levels of achievement; however, concerns about these programs as being extreme options, elitist, and detrimental to the heterogeneous classroom environment remain (Rogers, 2002; VanTassel-Baska, 2006).

The last classification is special classes. This type of programming can take many forms including: advanced placement (AP), International Baccalaureate (IB), enriched subject options, and specialized programs beyond the school such as art or language programs. Benefits of these types of programs include their ability to include various curricular areas, the opportunity for individualized uneven ability development, and focused instruction in the area of the students'

strengths; however, they are limited to what subjects are offered and often require the student to work individually (VanTassel-Baska, 2006).

### **1.8 Seeking Insight into Indigenous Giftedness: A Nêhiyaw Perspective**

In order to deal with the concerns of underrepresentation in gifted education, the field of gifted education must first be seen as a priority focus. Years ago, as a student within a full time grouping model, I worked with teachers who provided their learners with compacted curriculum, choice, autonomy, and developed assignments which required collaboration, high level thinking, and problem solving. Students that did not choose this model, yet fit the gifted criteria, choosing instead to remain in the mainstream classroom, had varied and unique experiences. As an educator, my school division has taken an inclusion model approach in order to meet the needs of identified students up until grade four. Gifted pull out programming is then offered to the identified students from grade four or five through grade eight. High school students are then encouraged to take special classes. Screening for the purposes of identification is primarily conducted through a group administered, standardized cognitive ability test. This testing occurs twice during the elementary school years (K through 8). Within this model students are identified such that programming plans can be in place and supported by gifted education teachers, with focused gifted instruction taking place, for most students, by grade five. Researchers including Ford (2010) cited concerns over late identification, particularly for students who live in poverty. My school division is in the process of a paradigm shift in regards to priority setting in gifted education, including a consideration around how and when students are identified. This will hopefully yield positive changes for our students; however, we are currently noting significant underrepresentation of our Indigenous students, those students that are self-identified at registration, ethnic minority groups, and students from lower income

families. Recognizing this and experiencing the effects in our schools and on our students has inspired my research.

### **1.9 Research Question**

My research was driven by a conversation with two First Nations students who informed me that the gifted programs at our school were not for them. This conversation led me to seek evidence for the meta-lesson we were delivering as the effect was the marginalization of some of our students. My multifaceted teaching experiences has helped to inform my research and the development of my research question. The following factors have influenced the development of my research question. First, the heavy reliance on group administered standardized test scores to identify students is a concern when considering underrepresentation in gifted education. Bain, Bliss, Choate, and Brown (2007) discussed great concern about the low level of undergraduate teacher training in gifted exceptionalities. The ability for an untrained classroom teacher to discern the difference between a high achiever and a gifted student prevents some teachers from moving forward with recommendations due to a lack of confidence in their recommendation (Bain, Bliss, Choate, & Brown, 2007). Other students may be twice exceptional where they are concomitantly gifted and possessing a learning disability. In some cases their disability which could be cognitive, behavioural, or both may mask their gifts and talents (Clark, 2013). Other students may be gifted in non-traditional ways of knowing which may be missing due to our definition of giftedness completely.

Classroom teachers represent our first line of student support. Their involvement in the identification process of gifted students is needed to address the issue of underrepresentation of Indigenous students in gifted education programs. Classroom teachers should have a clear understanding of giftedness and gifted behaviours. If we are to begin to address the issue of



underrepresentation of our Indigenous student population in gifted education, we need to look at addressing the barriers to their success. One such barrier is a lack of understanding of Indigenous giftedness perspectives by non-Indigenous educators, and in the case of this research specifically the Nêhiyaw perspective.

My research question is how is giftedness defined, assessed, and nurtured within the Nêhiyaw culture. My research looks to both frame the problem of practice, which is the underrepresentation of Indigenous students in gifted programs, as well as to work towards possible solutions by turning to the Nêhiyaw community. Framing the problem of practice required quantitative data from a school division that serves both non-Indigenous and Nêhiyaw students. Once research approval was received, the school division provided statistical data on representation rates as well as survey data completed by their gifted education teachers. The specific research questions for this section of the research included:

1. What are the current identification rates for giftedness for First Nations students compared with the non-Indigenous rates?
2. What are the current identification practices for giftedness?
3. What is the perceived effectiveness of those identification practices?

In order to begin to understand the Nêhiyaw perspectives on giftedness I have the following qualitative research questions:

1. How is giftedness defined by respected Elders and Knowledge Keepers of Nêhiyaw communities?
2. Based in Nêhiyaw ways of knowing, in what ways might educators adjust practices to identify and deliver culturally responsive programming to gifted Indigenous students?

## Chapter Two

### 2. Literature Review

#### 2.1 Seeking a Contemporary Definition for Giftedness

##### 2.1.1 Reasons for a definition.

Dai (2010) stated “the term gifted, or giftedness, has never been more problematic than it is today” (p.8). The lack of a clear and consistent definition for giftedness has been problematic for researchers, educators, and the gifted themselves. “Many stakeholders from the Left to the Right, scholars and researchers included, have experienced a sense of chaos and attempted to seek some order and clarity” (Dai, 2010. p. 8). For researchers, identifying commonalities between the existing (post 1957) definitions of giftedness, can present essential components for a useful definition for giftedness. One commonality found across current definitions of giftedness is the discussion of both qualitative and quantitative differences in a person’s thinking from the norm. This includes differences in the structures of the gifted brain as well as how the brain acquires information and the ability to process and problem solve using the data acquired (Cho & Ahn, 2003; Clark, 2013; Mrazik & Dombrowski, 2010). Many current definitions recognize the sources of giftedness as a dynamic relationship between both genetics and environment. Understanding that intelligence is not a fixed trait or solely influenced by genetics, development plays an important role in gifted education (Clark 2013; Dai, 2010; Dweck, 2010). Other commonalities between definitions of giftedness see giftedness as the result of the interplay of factors: brain physiology, above average abilities, increased levels of task commitment when presented with a problem, and creativity (Clark, 2013; Dai, 2012; Renzulli, 2011; Sternberg 1999). Understanding these factors and the role they play in the development and expression of giftedness is important, but they are all reflective of a Western philosophy for giftedness. By

turning to the Nêhiyâw community, we can expand our definition of giftedness by including Nêhiyâw ways of knowing, thus better serving our teachers in supporting the community of learners that they work with.

### **2.1.2 Brain physiology.**

One method of understanding intelligence is to look to the primary organ responsible – the brain. The last twenty years has seen a significant increase in the research linking the study of neuroscience and intelligence. Understanding how the brain collects, stores, analyzes, and communicates data is fundamental to the teaching and learning process; understanding how these processes differ between the ‘normal’ and ‘gifted’ brain will support educators in defining giftedness and providing substantive programming for gifted learners.

Mrazik and Dombrowski (2010) indicated that “there is substantive evidence that gifted individuals have atypical brains and atypical brain functioning” (p.230). Jaušovec (2000) used electroencephalography (EEG) to study differences in cognitive processes within the brain. In the Jaušovec (2000) study, fifty individuals were classified based on the following descriptors: gifted, creative, intelligent, and average. The participants were asked to complete both open and closed problem solving tasks. Jaušovec (2000) found that individuals with high IQ levels, both gifted and intelligent, utilized the least mental effort on closed problems such as IQ test questions which focus on isolating skills. In contrast, highly creative individuals, both creative and gifted, solved the open problems with the least effort and were able to access many regions within their brain at one time. The result of this brain study supports the consideration for creativity, along with IQ, to be included within gifted education programs. Creative giftedness contrasts with intellectual giftedness [mastery within a domain] as it extends beyond a single domain allowing the creative gifted learner to find new meaning in the domain (Feldman, as cited in Clark, 2013).

This type of giftedness cannot be tested through traditional IQ testing, but is seen when a product results from learning (Renzulli, 1992). Researchers cite intrinsic motivation, openness, and the development of knowledge domains as essential pieces in nurturing creativity. Failure to nurture creative behaviours in those that are creatively gifted can result in a loss of motivation and engagement and is a deterrent to end product production (Clark, 2013).

Clark (2013) identified a significant number of differences in the anatomy, physiology, and biochemistry of the gifted brain: heightened ability to collect information from the environment, increased number of glial cells [which support the neurons in brain function], increased density of dendrites, accelerated synaptic activity, and increased myelination. This understanding of atypical brain development within the gifted was expressed by the studies done on Einstein's brain. Einstein's brain had a higher percentage of glial cells in the right cerebral cortex as well as the inferior parietal region areas which O'Boyle et al. (2005) later found associated with visuospatial cognition and mathematical reasoning. This atypical development in these regions came at the expense of other areas of his brain, and as a result famous scientist Albert Einstein was unable to speak until the age of three and continued to struggle with his speech until age 10, which caused teachers to doubt his potential (Mrazik & Dombrowski, 2010).

The study of Einstein's brain, as well as research on other gifted learners has helped to shape an understanding of the role that brain physiology plays within the context of giftedness. This does not imply that everyone with a learning disability or delay is gifted, however it does provide some insight into the fact that differences in both brain structure and function need to be a part of the gifted conversation. Also, a recognition that giftedness is not necessarily a simple, singular trait, but may be present alongside learning difficulties is important to consider as one looks for an inclusive working definition of giftedness.

### 2.1.3 Renzulli's three-ring conception.

In response to the dynamic change in culture, and shifting paradigms within the field of education including movement from a positivist worldview to constructivist, Renzulli sought to redefine our conceptualization of intelligence and giftedness:

The Three-Ring Conception Research on creative/productive people has consistently shown that although no single criterion should be used to identify giftedness, persons who have achieved recognition because of their unique accomplishments and creative contributions possess a relatively well-defined set of three interlocking clusters of traits. These clusters consist of above-average though not necessarily superior general ability, task commitment, and creativity (see Figure 2-1.). It is important to point out that no single cluster "makes giftedness." Rather, it is the interaction among the three clusters that research has shown to be the necessary ingredient for creative/productive accomplishment. (Renzulli, 1978. p.182)



Figure 2-1 The Three-Ring Conception. Adapted from "What Makes Giftedness?," by J.S.

Renzulli, 1978, *Phi Delta Kappan*, 60(3), 182. Adapted with permission.

This reconceptualization of how giftedness is not just a factor of IQ, but instead, as the interaction of multiple traits and behaviors, has not only changed the way we understand intelligence, but challenged our definition of intelligence and what it means to be gifted; who is gifted, how we measure giftedness, and how we meet the needs of gifted individuals becomes a new challenge for those within education.

#### **2.1.4 Above average abilities.**

Renzulli (1978; 2011) defined above average ability as the upper range of potential. This vague description can play out in a variety of ways within schools. For example, in Canada, educational policy is framed first by a Provincial Act, and then by the individual school divisions. The school division involved in the research uses the ninety-fifth percentile as a limit for defining giftedness; in comparison, the Nova Scotia Department of Education (2010) noted “the upper range can represent the top fifteen to twenty percent of the student population within any given area of human endeavor” (p.32). Renzulli (1978; 2011) expanded the concept of abilities beyond those that could only be measured through traditional IQ test. Examples of these abilities include: abstract thinking, creative problem solving, ability to see spatial relations, the ability to respond to novel or challenging situations, and rapid information processing (Clark, 2013; Nova Scotia Department of Education, 2010; Renzulli, 1978; 2011). Although IQ testing provides some useful data informing educators of potential candidates who would benefit from gifted programming, Renzulli (1978) remarked “academic test scores at the upper ranges – precisely the score levels that are most often used for selecting persons for entrance into special programs – do not necessarily reflect the potential for creative/productive accomplishment” (p. 182). Gardner’s theory of multiple intelligence also recognized the need to look beyond a single, general measure of intelligence [IQ]. Moran, Kornhaber, and Gardner (2006) acknowledged that by using a narrow definition of what makes intelligence, educators risk labelling students as weak when in fact, the educator has simply missed the student’s talents. This is even more problematic in educational settings or cultures which value high-stakes testing as ‘true’ measures of intelligence. In response to the work of Moran, Kornhaber, and Gardner (2006), Ryan and Cooper (2010) noted:

Teachers of gifted and talented students also see the theory of multiple intelligences as broadening conceptions of who is gifted or talented. The concept of giftedness can embrace dancers, athletes, musicians, artists, or naturalists and programs can be established to help foster these talents. (p.193)

Embracing an expanded definition of giftedness, beyond that of IQ, will support both the diverse gifted learners and their educators. This may be especially true for minorities and those students that have limited proficiency with the English language such as English as an additional Language Learners.

### **2.1.5 Assessment of above average abilities.**

IQ focused assessments currently represent the most frequently utilized screening tools for acceptance into gifted programs (Renzulli, 2012). These tests measure a limited number of dimensions that represent a complex construct—intelligence (Ford, 2010). Standardized tests have also presented reliability and validity concerns when used to measure the abilities of special populations including: minorities, EAL students, and students within lower socio-economic groups (Erwin & Worrell, 2012). The group administered standardized testing that forms the basis of the assessment in gifted education does not best serve our underrepresented population of students. These tests are highly ethnocentric valuing the dominant cultures ways of knowing over other cultures (Kaufman, 2015). Students whose giftedness lies in areas outside of math, reading, and writing, will need to be assessed using tools<sup>3</sup> that focus on performance tasks—asking students to provide real world examples for real world problems (Callahan, 2005). Answers for these activities do not fit on bubble sheets, and the testing process itself becomes an actively engaged learning opportunity. Moving away from one-off paper and pencil tests mitigates the reliance on tools that may be culturally biased or unreliable and prevents students from missing the programming based on having a ‘bad day’ during the testing event.

Exclusive reliance on standardized test scores for gifted identification has drawn increased criticism because of the belief that large numbers of potentially gifted

individuals may be overlooked and thus, excluded from special programs. (Hadaway & Marek-Schroer, 1992, p. 74)

Scoring in the top percentile on an IQ test should not be ignored. These students should be considered further and included in gifted programming; however, using other assessment tools and recommendation strategies will support the inclusion of gifted children from underrepresented groups within our gifted programs.

#### **2.1.6 Task commitment.**

Renzulli (1978; 2011) defined task commitment as the level of [intrinsic] motivation that is brought to a specific task. Although Renzulli fails to explicitly differentiate between intrinsic and extrinsic motivation, the examples of behaviours Renzulli describes as gifted imply a strong level of intrinsic motivation towards a task. Intrinsic motivation according to Ryan and Deci (2000) is the act of participating in an activity for ones' own gratification as opposed to participating in order to receive a reward or avoid a punishment. Actions become driven by an individual's perception of his/her own satisfaction in completing the challenge or task. Intrinsic motivation and self-regulated learning according to Deci, Koestner, and Ryan (2001) are closely linked and therefore the behaviours likely to be demonstrated by a gifted learner will be one or more of the following:

- high levels of interest in tasks outside of the classroom or curriculum
- zealous approaches to certain areas of study or perceived problems
- the ability to sustain effort, even under strong adversity, particularly in tasks that are self-directed or require students to display self-confidence
- a strong sense of fairness
- the ability to identify significant problems within specialized areas
- the ability to discern useful information from opinion about the issue



- ability to maintain an openness to one's own and external criticism. (Clark, 2013; Nova Scotia Department of Education, 2010; Renzulli, 1978).

### **2.1.6 Creativity.**

Guilford (1950) stated that “a creative act is an instance of learning” (p.446). Renzulli (1992) made a connection in giftedness research and literature between acts of creativity and those individuals described as genius or gifted, thus making it a condition of identification of giftedness. Sternberg and Lubart (1993) integrated creativity and giftedness. They described the role that creativity plays in supplementing IQ in identifying giftedness, recognizing the contrasting role of creativity against academic and bodily kinesthetic ways of knowing. Creative individuals are responsible for producing the innovative discoveries, products, tools, and ideas that make significant impacts and changes on society and humankind (Clark, 2013). Creativity contrasts with IQ as high IQ represents the ability to retain, process, and recall information at a very high rate; creativity is divergent thinking, problem finding, and problem solving. The recognition of creativity's role in the development and expression of intelligence, helped to move the study of giftedness beyond that of IQ. As examples of creative abilities are often abstract and difficult to measure, educators need to be aware that it is important to offer students opportunities to respond to novel or challenging situations, and to participate in abstract thinking and creative problem solving activities.

## **2.2 The Need for an Inclusive Definition for Giftedness**

### **2.2.1 Basic premise.**

My premise for this thesis is that the proportion of gifted children identified and supported within gifted programming should represent the diversity found in our schools. A definition for giftedness must be inclusive regardless of race, gender, disability (twice

exceptional), language, geographic origin, ethnicity, or socio-economic status. Students with diverse gifts and talents express or have the potential to express their gifts and talents through a wide range of behaviours, abilities, interests, and personal characteristics (Nova Scotia Department of Education, 2010). Gagne (2004) addressed the issue of gifts and talents in his differentiated model of giftedness and talent (DMGT). Gagne (2004) described giftedness as the “possession and use of untrained and spontaneously expressed natural abilities” whereas talents represent an “outstanding mastery of systematically developed abilities (or skills) and knowledge in at least one field of human activity” (p.119). The constructs of giftedness and talent can be equated to the nature versus nurture debate. The danger in gifted education is shaping one’s understanding of giftedness solely on one of these factors. Successful definitions of giftedness, and subsequently testing and programming, will recognize the unique role that both of these constructs play. According to Dai (2010) there are three main areas of evidence that support a biological [nature] source of giftedness including: biological and structural differences in the brain, accelerated rates of cognitive processes, and atypical rates of growth when compared to one’s peer group. The nurture argument for giftedness focuses primarily on the roles that educational programming and talent development play in forming the gifted person. This distinction, between nature and nurture, is important as it speaks to the importance of nurturing giftedness in order for the individual to reach his/her maximum potential. Instead of taking an approach which places the biological argument against that of talent development, a definition which recognizes the interconnected role that these play in affecting the gifted brain is crucial (see Figure 2-1).

### **2.2.2 Impact of worldview.**

A post-modern worldview within the field of education has had an impact on modern definitions of giftedness. Education is evolving from practices that were subject matter centered, valued facts over the learning process, drew on factors that encouraged extrinsic motivation (rewards and punishments), reinforced exclusionary practices, and directed student performance towards conformity and away from creativity due to a desire for evaluation practices where student performance could be compared. Current theories, philosophies and curricula direct a focus towards practices that encourage students to construct their own understandings, and value intrinsic motivation, inclusion, student creativity, and innovative problem solving. These changes recognize the diversity within our students, but also the need for, and benefits of, inclusivity within educational settings.

The problem with defining and identifying giftedness is that giftedness is a construct not a singular profile, and therefore defining and identifying giftedness relies on the evaluation of sets of traits and abilities that are unique to each learner. The Diagnostic and Statistical Manual of Mental Disorders 5th ed. (*DSM-5*) published by the American Psychiatric Association (APA), recognized the requirement to balance the need to classify unique and individualized traits between people with the need for inclusivity within their taxonomy of clinical disorders. Nigg, Tannock, and Rohde (2010) stated “On one hand, a taxonomy that is too complex is not clinically useful...On the other hand, one that is too simple may violate the data unacceptably and thus mislead...Getting this balance right is the crucial challenge for taxonomists” (p.723). A definition for giftedness therefore must recognize diversity, all forms of giftedness and talents, yet support a philosophy of inclusivity.

### 2.2.3 A current definition for giftedness.

Giftedness is a difference in brain structure and physiology, which results in an individual being able to perform tasks at levels that significantly exceed their peers. These tasks can occur in intellectual, creative, socio-affective, and sensorimotor domains and with targeted development allow the individual to rapidly achieve outcomes unattainable by peers. Figure 2-2 represents the conceptualization of this working definition including the cognitive functions and the coordinated areas of the brain where these abilities originate.

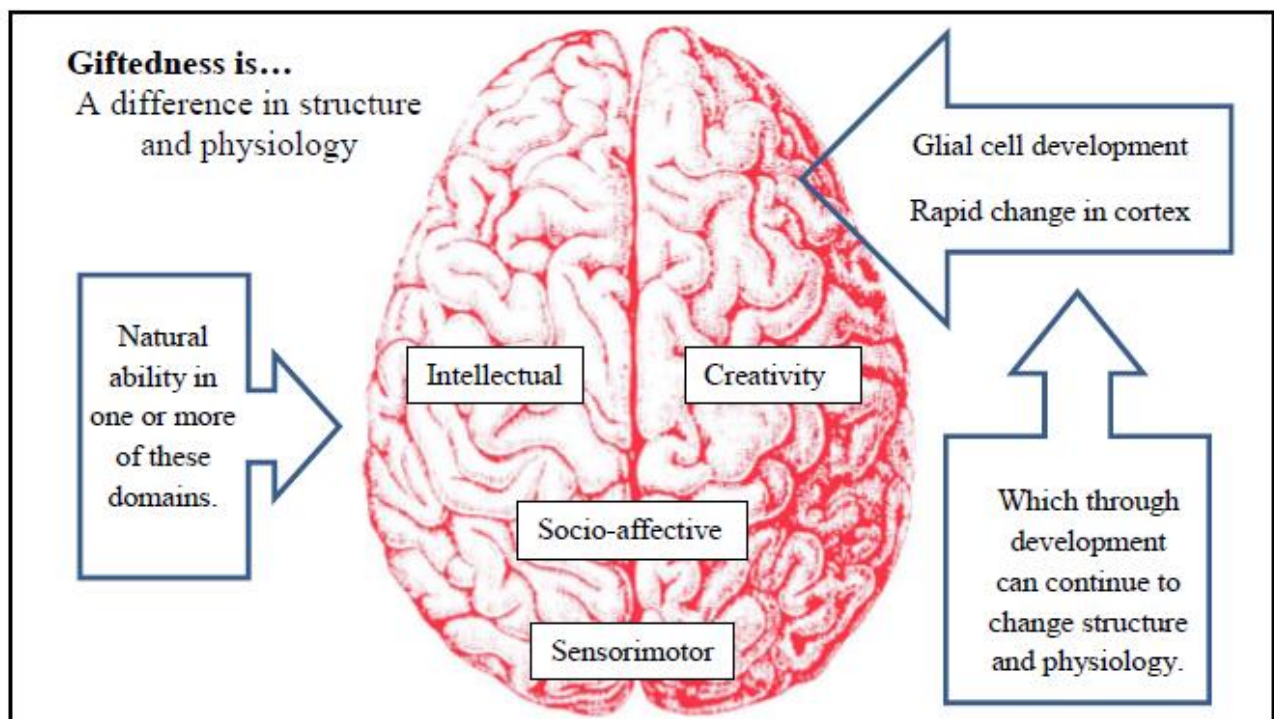


Figure 2-2. Graphic conceptualization of the definition of Giftedness. Adapted with permission.

Intellectual traits include: crystallized knowledge (knowledge and application of that knowledge), fluid intelligence (inductive and deductive reasoning), memory (both short term manipulation of data and long term retrieval), and processing speed (ability to efficiently process data) (Clark, 2013; Dai, 2012; Gagne, 2004). Creative traits include: inventiveness (data retrieval and creative use of data), imagination, and originality (Clark, 2013; Gagne, 2004).

Socio-affective traits include: emotional intelligence (expression of empathy, insight when dealing with others), communication skills (fluid movements between different audiences), influence (leadership skills and the ability to motivate others), intrinsic motivation and task persistence (Clark, 2013; Gagne, 2004). Sensorimotor traits include: visual processing, auditory processing, and bodily kinesthetic skills. Giftedness can present itself in one or more of these areas and therefore, one could be gifted in one or several domains. The challenge for educators and educational psychologists is in identifying and delivering appropriate programming for these students.

### **2.3 Implications for an Inclusive Definition of Giftedness**

Having a definition for giftedness is the first step in delivering effective programming to gifted students – the next step is using that understanding to inform pedagogical decisions for creating and delivering effective gifted programs. Ford (2010) presented one problem of practice in gifted education. As an educator, and former student of gifted education programming, I can identify with her frustration as she stated “I believe that most professionals in gifted education would agree that this field is the stepchild or an afterthought of special education. One obvious indication is the lack of a federal [United States] mandate for gifted education” (p. 31).

Saskatchewan educators have experienced recent gains in the area of gifted education when the current Ministry of Education recognized giftedness within the spectrum of exceptionalities. As a result educators, parents, and students can engage as a collaborative team to plan for, and implement strategies and interventions in order to support the student’s individual learning needs.

## **2.4 Gifted Pedagogy**

### **2.4.1 Beyond the zone.**

Vygotsky (as cited in Allal & Pelgrims Ducrey, 2000) defined the child's zone of proximal development as “the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined under adult guidance or in collaboration with more capable peers” (p. 137-138). By educating students within this zone, new learnings are possible, student’s growth is challenged, and problems associated with underachievement are avoided. Understanding the nature of giftedness, as well as the gifted brain, becomes an essential part in appropriate educational program planning, design, and delivery. Challenging the gifted brain, within an inclusive educational model, can be a challenge in itself; but failing to do so can have devastating consequences. Phillips (2008) cited numerous examples of educations’ failure to meet the needs of our gifted student population including a 2007 study which found that twenty percent of US high school dropouts tested as, or were designated as gifted. Clark (2013) referenced two studies on underachievement of gifted students. In a nationwide (USA) 1993 study, fifteen to forty percent of identified gifted students were identified as significantly underachieving. A study in the year 2000 saw the levels of underachieving gifted students rise to sixty three percent. Gifted students who remain relatively unchallenged within the academic environment can become: disenfranchised from the education system potentially dropping out, non-producers where they simply stop completing all academic tasks, disengaged, or behaviorally challenging (Clark, 2013; Davis & Rimm, 2004).

#### **2.4.2 Teaching strategies for gifted students.**

One strategy to employ to address the needs of gifted learners is the differentiation of instruction and assessment within the inclusive classroom. Although the concept of differentiation is not new, its role within classroom practice has, according to Sousa (2009), remained limited despite the opportunities for teacher professional development on the topic. Tomlinson (2004) discussed the value of differentiation, but also recognized the difficulties for teachers attempting to effectively implement the strategy. For gifted learners exploring curriculum within an inclusive environment, differentiation provides the learner with the opportunity to fluidly move between grade levels, adjust the pace of learning when needed, interact with other gifted peers, and encourages the students to access resources to further support the development of his/her abilities (Sousa, 2009).

The ability of a classroom teacher to create a learning environment that is flexible, supportive, and fosters intrinsic motivation in students, is the goal of many teachers. A supportive learning environment that engages and provides ample choice is important for all learners, but even more so for gifted students (Sousa, 2009). An inquiry leaning environment provides all students opportunities to explore the world from their own perspective, and through their own experiences (Heiser, 2012). The process of inquiry focuses on the development of exciting questions, from the students' perspective, through which students and teachers develop deeper understanding of the curricular outcomes and indicators. Because the learning is student focused and directed, student motivation and engagement for the tasks will provide opportunities for high levels of achievement and to further develop the skills required of a life-long learner (Herman & Gomez, 2009). Doll (1993) stated "we need to be trained in the art of creating and choosing, not just ordering and following" (p.7). How this looks for students will vary, however

gifted students need to be provided with the opportunity to work at higher cognitive levels and at much faster paces than their peers, within their gifted content areas. Inquiry learning supports the inclusive classroom model while providing the gifted learner the opportunity to move within the space with the necessary amount of autonomy to facilitate appropriately leveled and paced learning.

### **2.4.3 Intervention.**

Changes in educational pedagogy, policy, and budgets have placed many students with exceptionalities back into the regular classroom, including those that would be identified as gifted. This places a greater responsibility on the classroom teacher, who may be the first professional to have the opportunity to witness the gifted student's abilities. The classroom teacher serves as the front line, assessing students' cognitive abilities, seeking support staff, such as the Learning Assistance Teachers (LAT), Teacher Librarians (TL), Instructional Leaders, English as an Additional Language Teachers (EAL), and gifted education teachers when regular classroom instruction fails to meet the individual student's needs. This process of moving between classroom instruction and targeted intervention has been referred to as Response to Intervention (RtI). The most common form of RtI is three tiered. Within this framework, each tier provides educational support at differing levels. In schools using an RtI model the primary level focuses on students receiving high quality curriculum instruction. For gifted learners this would include differentiated classroom instruction and independent projects. Secondary level RtI directs resources to students whose needs are not being met through quality core instruction. These interventions can be individual or small group and may access support personnel including Educational Assistants (EA), LAT's, TL's, gifted education teachers, or EAL teachers. For gifted students this consists of interventions implemented from observations gathered during



instruction and interactions at the primary level and includes small group pullouts. Tertiary level RtI is utilized when the first two levels fail to support the student in meeting desired outcomes. This level of intervention is very intensive and typically only accessed by approximately five percent of students (Mellard, McKnight, & Jordan, 2010). For gifted students these strategies could include small group or individual pullouts to work with a LAT, or gifted education teacher. This level of support would also be utilized in cases where the gifted student was deemed twice exceptional meaning they have identified as a gifted learner, but also have a cognitive or behavioral conditions that inhibits a student's ability to access curriculum in one or more areas. The school division that was a part of this research project has adopted a similar framework for delivering instruction and accessing specialized roles in supporting student learning.

#### **2.4.4 Reasons behind underrepresentation.**

Deficit thinking as defined by Ford (2010) is the belief that culturally different students are genetically or culturally inferior to White students. When deficit thinking exists, educators are unable to focus on the strengths and potential of minority students; they are blinded, instead, by low expectations and stereotypes (Heiser, 2012). Ford (2010) argued deficit thinking is a problem of practice that has infused every area of gifted education (p. 32). This includes the choices educators make regarding decisions around which tools will be used to determine program involvement (perhaps the use of standardized assessment that may contain bias), how 'gifted' is defined, policies and procedures (which could result in low teacher referral rates for minorities or those of lower socioeconomic status), and curriculum and instruction (which may contain Eurocentric bias). All of these factors likely interplay resulting in the underrepresentation of these groups in our gifted education programs (Heiser, 2012).

Ford, Moore, and Milner (2005) discussed the role that colour blindness plays in failing our gifted, minority students. By failing to see race and culture in others – arguing instead that everyone is simply the same – neglects other cultures, ways of knowing, and learning. Learning environments should celebrate both sameness and difference and failure to do so results in a learning environment, which solely reflects the views of the dominant culture.

Underrepresentation is also affected by the systemic problem of White privilege. As characterized by McIntosh (1989), White privilege is the unearned advantages that Whites have at the expense and oppression of those who are not White. As educators, we must recognize the invisible role White privilege plays in gifted programming; both in how we test and how we define giftedness. By acknowledging our hegemonic practices, we can begin to envision new ways of looking at student representation within our gifted programming in order to begin addressing the issue of underrepresentation (Heiser, 2012).

#### **2.4.5 Definition and Identification.**

Callahan, Hunsaker, Adams, Moore, and Bland (1995) conducted a large scale study of existing literature on the identification of giftedness and compiled the following recommendations:

Adopt a clearly defined, but broadened conception of giftedness; use multiple criteria, not multiple hurdles in the identification process. Use unique, separate instrumentation for different areas of giftedness. Be sure the specific instruments that are used for identifying different areas of giftedness are valid and reliable for assessing the construct under consideration. Do not use a single cut-off score on an instrument or a matrix for making screening or identification decisions. Base identification and placement on student need not numbers, quotas, or slots; be aware of and capitalize on the fact that giftedness may manifest itself in different ways in different cultural or socio-economic groups. Avoid the use of matrices which sum the scores from several assessment tools to form a single score indicative of “giftedness.” (p.75)

Although these recommendations help to shape policy for justifying and delivering gifted education programming, they do little in terms of supporting a classroom teacher in effectively

and confidently identifying a student for involvement in such programming. Therefore, supporting teachers in the identification process, through definitions, assessment practices and strategies, becomes an imperative part of the RtI process.

Based on current literature, a modern inclusive definition for giftedness is that intelligence is not a product of race, culture, or socioeconomics; rather, intelligence is a factor of brain structure and function, and is expressed through learning experiences (Clark, 2013; Dai, 2012; Gagne, 2004; Renzulli, 2011; and Tonemah, 1992). This definition underpins the importance of both the biology of giftedness as well as the importance of experiences in nurturing giftedness. It also means that early identification and nurturing of gifts and talents is important for the gifted learner.

## **2.5 Improving Screening and Assessment in Response to Underrepresentation**

Recognizing the underrepresentation of Nêhiýaw students in our gifted programs, allows us to focus on finding ways to repair the statistical gap. Progress in addressing the levels of underrepresentation of the Nêhiýaw gifted students may be achieved by the consideration of four factors. First, clearly defining giftedness and the corresponding attributes will support teachers in recognizing and referring students. This definition must be shaped with consultation from the communities and cultures the school is serving. Second, using diverse identification strategies including: checklists, standardized tests, teacher recommendation, and observational data provides use with a more comprehensive identification strategy which provides more opportunities for students to be identified within the screening process by the teachers working more closely with them. Third, using portfolios in identifying giftedness within the creative and performing arts allows for the identification of these students gifted within the creativity realm. Lastly, relying on the use of anecdotal evidence of leadership and communication skills within

the gifted identification process. This evidence can come from the school, home, or community. For these strategies to be effectively accomplished within a school division, classroom teachers need to be supported with clear definitions and assessment tools designed by the school division for teacher use within their unique community of learners. For these resources to be appropriate for identifying Nêhiyaw gifted students, stakeholders, specifically from the Nêhiyaw community, must be involved—they are integral to the process as giftedness is a complex construct informed by cultural practice, language, and ways of knowing.

Within a response to intervention model, school divisions often rely heavily on the assessment data of the classroom teacher to guide the programming that is made available to students. These assessments take the form of standardized assessment tools that are school division driven, as well as teacher assessments that can take many forms: anecdotal records, testing, observational data, interviews, and portfolios among many others. Based on the assessment results gathered through tier one (RtI) at the classroom level, broader instructional decisions are made. If the classroom teacher determines that the student requires support beyond which the classroom can provide, other support professionals would then support the teacher in gathering the necessary data to make these decisions. This teacher referral process is often quite effective for students with exceptionalities that require learning assistance support (LAT), but as teacher training in gifted education is often quite limited, recommendations and supports for gifted learners is often missed (Clark, 2013). Therefore, if a student is unable to perform to their optimal capabilities on a group administered standardized IQ assessment, or misses the test completely, their opportunity for identification is decreased significantly. Bain, Bliss, Choate, and Brown (2007) identified this problem of practice explaining:

Teacher-education programs and programs for related professions rarely offer more than introductory information in the area of needs and educational practices for children who

are gifted. Therefore, the beliefs of future and practicing teachers concerning the educational needs of children who are gifted may be guided by beliefs that are not related to evidence-based practices. (p.451)

Teachers are therefore left ill-equipped to support the gifted learners in their classrooms.

Teachers may also struggle in identifying students with gifted abilities that fall within areas outside of traditional academic realms; those areas which cannot be identified through traditional standardized tests including leadership, creativity, and spiritual gifts. Due to a lack of resources—including research data, educators have very few resources in supporting them in giftedness identification and instructional practice.

## **2.6 Supporting Teachers**

In my casual discussions, teaching experiences, and collaborative work with both classroom and gifted education teachers, regarding the support of gifted learners, three concerns have repeatedly emerged. First, teachers felt they needed a better description or definition for who would be deemed a gifted learner. The second was confusion over the roles of supporting staff for whom giftedness was the responsibility. The third was a lack of understanding of their own role within the identification process. Based on my own anecdotal experiences, there is a need to provide classroom teachers within my own division, with the professional development and support required to arm them with the definitions, skills, and access to resources necessary to support their gifted students. From these experiences, I believe all school divisions will therefore benefit from a working definition for giftedness which incorporate local Indigenous ways of knowing, a systematic study of the assessment practices within their current gifted programs, as well as the development of assessment practices to support their teachers in identifying giftedness. For the division involved in this research, that means focusing on Nêhiyâw voices.

Recognizing the role that classroom teachers play as the first line of student support, and that their involvement in the identification process of gifted students is needed in addressing the

issue of underrepresentation; it is essential that all educators have access to data that support all of their students both their Indigenous and Non-Indigenous. My research looks at finding one piece of this data as it is missing from the broader published research context. In attempting to become more culturally responsive in my own practice, I seek understanding from the Nêhiyâw community about how giftedness is defined, assessed, and nurtured within the Nêhiyâw culture. Using these understandings I will create a working definition and suggest some identification strategies that would better support Nêhiyâw students within their learning community. My hope from this line of inquiry is to provide some suggestions for giftedness programming that would support the learning outcomes for gifted Nêhiyâw students.

## **Chapter Three**

### **3. Methodology and Methods**

#### **3.1 Theoretical and Ideological Perspective**

My research question is grounded in my philosophical views of education. I am motivated and driven by my students and these students represent populations that are absent or underrepresented within the educational community's identified gifted population. A common complaint of teachers is that they are presented with a problem, in this case underrepresentation of Indigenous students in gifted education programming yet provided with few resources to address the problem. Teachers, when given the necessary resources, can be significant agents for change. Consequently, I seek to discover a working definition for giftedness as well some teaching and assessment strategies for giftedness, which reflect Nêhiyaw ways of knowing. By connecting to the Nêhiyaw community as a learner, my hope is to glean a better understanding of how giftedness is defined, identified and nurtured within the Nêhiyaw community. As intelligence and giftedness are constructs that are impacted by both culture and language, it is essential that the Nêhiyaw community be consulted and informed regarding the definition and practices in gifted education for their children. When working in an educational community that is serving any Indigenous population, there will be a similar benefit from working with local cultural knowledge keepers. This will help educators to support their own students who possess and demonstrate other ways of knowing. As defining, identifying, and nurturing giftedness within the Nêhiyaw community is currently absent from the current research discourse, my hope is that my own inquiry into this perspective will provide myself and other educators with data that they can use to support their practice and thus support the Nêhiyaw students within the educational community. For my study, my data and the definition and recommendations arising

from these data will be limited to supporting teachers in communities serving Nêhiyáw students. The conceptualization of giftedness as a cultural and language based construct, the structure of a working definition of giftedness that incorporates other ways of knowing, as well as strategies in approaching an Indigenous community as a non-Indigenous researcher may have applications in other teaching and research contexts, but will have limits in the direct application.

After a review of numerous studies, Greene and Caracelli (2003) concluded that the researcher must identify his/her philosophical basis for the research. Greene and Caracelli (2003) argued “it is time to balance the philosophical, conceptual, practical, and political considerations so relevant to our inquiry” (p.108). Mertens (2005) suggested that by understanding the philosophy behind the design, the researcher will be better equipped to understand how the research applies to the complex social context.

All researchers should be cognizant of the philosophical assumptions that guide their work. However, because of the potential strength of mixed methods research to provide a basis for social change, it is imperative that the mixed methods researcher understand their assumptions and the methodological implications of those assumptions. (Mertens, 2007, p.212)

The principal context for this research project is to study the issue of underrepresentation of Nêhiyáw students within the area of gifted educational programming, as teachers’ anecdotal evidence and my experiential evidence has shown this group to be statistically absent from the current, identified gifted population. Intelligence is not a product of race, culture, or socioeconomics; rather, intelligence is a factor of brain structure and function, and is expressed through learning experiences (Clark, 2013; Dai, 2012; Gagne, 2004; Renzulli, 2011; and Tonemah, 1992). This understanding of intelligence is also congruent with my worldview. Recognizing this, underrepresentation of Indigenous students, cultural minorities, and those students from lower socioeconomic communities is therefore a problem of practice. This problem is rooted in non-culturally responsive curriculum practices, systemic racism, and



socioeconomic biases and barriers, rather than a difference of ability or intelligence. As resolution to a set of perceived inequalities and injustices (the underrepresentation of Nêhiyáw students within gifted programming) is guiding this inquiry, this research reflects what Mertens (2007) described as a transformative paradigm.

The recognition that realities are constructed and shaped by social, political, cultural, economic, and racial/ethnic values indicates that power and privilege are important determinants of which reality will be privileged in a research context. Methodological inferences based on the underlying assumptions of the transformative paradigm reveal the potential strength of combining qualitative and quantitative methods. (Mertens, 2007, p. 212)

Inquiry within the social sciences is driven by the researcher's prior experiences, theoretical perspectives, and worldview. Creswell, Plano Clark, Guttman, and Hanson (2003) explained that social science researchers bring the extent of their backgrounds to their research, which impacts their research at all levels.

Many researchers are driven towards mixed methods research due to its ability to incorporate value driven ideology within the research context (Mertens, 2005, p. 299). The inclusion of values within the mixed methods research context has been termed as transformative. "The nature of transformative mixed research methodology is such that in both perspective and outcomes, it is [the research and researcher are] dedicated to promoting change at levels ranging from the personal to the political" (Creswell et al., 2003, p. 223). Mixed methods research allows the researcher to benefit from both statistical data and narrative stories in order to construct understanding. In a study of the value of mixed methods design Driscoll, Appiah-Yeboah, Salib, and Rupert, (2007) noted that mixed methods allows for "pragmatic advantages when exploring complex research questions" (p. 26).

Dewey (1933) discussed the states of equilibrium/disequilibrium as the driving force for inquiry and learning. As a learner, being presented with a situation that disrupts one's

equilibrium, one can be driven, through inquiry, to seek answers. As an educator within two schools where the problem of underrepresentation of First Nations students in gifted programming is evident, I felt compelled toward this area of inquiry. Dewey also believed that research should address practical problems with the goal of reaching a positive outcome for the quality of life of members within society (Teddlie & Tashakkori, 2009). The goal of this research is driven by this philosophical ideal and seeks to find culturally responsive supports for educators to utilize in minimizing the levels of underrepresentation of First Nations students currently present within gifted programs.

This research project will benefit from the process of collecting and analyzing both quantitative and qualitative data sets. Collecting and analyzing statistical data from a single school division on the rates of identification of gifted First Nations students and comparing those to the rates of identification for Non-First Nations students will allow for a better understanding of the levels of gifted programming representation than is presently experienced. Survey data of the school division's gifted education teachers (those teachers with gifted education roles at the secondary and tertiary level of RtI) will also be collected regarding the types of identification strategies currently used and the gifted education teachers perceived effectiveness of those strategies. Qualitative data in the form of narratives of elders and knowledge keepers within the Nêhiyâw community will also be collected. These data will be used to develop an understanding (as it was taught to these informants) of how giftedness is defined, assessed, and nurtured within the Nêhiyâw culture. By utilizing both of these forms of data in succession, inferences can be formulated from the research, with the hope of developing themes and guiding educators toward culturally responsive pedagogical practices when working with gifted Nêhiyâw students. By collaborating with the Nêhiyâw community to develop a broader understanding of giftedness,

which also reflects the Nêhiyaw perspective, I hope that the data and conclusions will support educators in improving identification processes and program delivery for Nêhiyaw students within gifted education programs.

### **3.2 The Problem**

Many studies have been conducted looking at Indigenous and cultural minority representation rates within gifted education programs. These studies show that underrepresentation of minority groups is a ubiquitous problem among gifted education programs (Callahan, 2005; Daniels, 1998; Ford, Moore & Milner, 2005; Naglieri & Ford, 2003). Research has suggested a myriad of reasons including: socio-economic status, curricula which are not culturally responsive, hegemonic practices (including group administered standardized assessment), among others; yet solutions remain elusive.

The researched school division currently employs an inclusion model for its delivery of gifted education programming. The model utilizes group administered standardized full scale IQ testing delivered at the grade three and grade six levels. The data from this process are then used to refer students to a gifted education teacher who will provide pullout opportunities to those children that place in the top five percentiles. This method of identification has left many educators concerned, as there are clear representational gaps within the identified gifted population. The predominant focus on standardized testing for placement purposes has resulted in the underrepresentation of First Nations students. Relying predominantly on standardized testing scores has impacted the gifted identification rates among other groups including: other cultural minorities, EAL students, and those of lower socioeconomic status as well, however; this study will focus on underrepresentation within the gifted programming of the First Nations (specifically Nêhiyaw) student population.

Although other means of identification are available, including teacher and parent recommendations, they are not commonly employed within the identification process. Many teachers do not feel comfortable in making the identification due to their lack of comfort with their understanding of giftedness as a construct. Clark (2013) discussed the need for gifted education training within pre-service teacher education programs; nonetheless, many university and college education programs offer limited, or do not require, training in pedagogical teaching practices for giftedness resulting in most teachers leaving education programs without experiences with the topic of giftedness. Due to this training gap, educators may have difficulty and apprehension over making a gifted identification. Classroom teachers without focused gifted education training also make identification errors, often nominating high achieving students, and have difficulty with the identification within Indigenous, cultural minority, and EAL populations. Therefore, this study focused on three specific factors: rates of identification of the First Nations population, within the researched school division, current identification practices and their perceived effectiveness, and the definition, assessment, and nurturing of giftedness within the Nêhiyâw community. The goal is to provide feedback and support, in the form of an inclusive working definition of giftedness for this community, English and Nêhiyâw language descriptors, identification strategies, and program delivery options, for educators in addressing the underrepresentation of Nêhiyâw students.

### **3.3 Research Questions**

Creswell and Plano Clark (2011) discussed the importance of the research question(s) in guiding the mixed methods design stating “scholars writing about mixed methods research uniformly agree that the questions of interest play a central role in the process of designing any mixed methods study” (p. 60). In mixed methods design, the research question draws on both

qualitative and quantitative data in order to bring greater insight to a problem. This study examined a broad issue, seeking potential solutions to the underrepresentation of First Nations students in gifted education programs in one school division on the Canadian prairies. Specific questions, to be answered quantitatively (1-3), and qualitatively (4-5), are delineated below:

1. What are the current identification rates for giftedness for First Nations students compared with the non-Indigenous rates?
2. What are the current identification practices for giftedness?
3. What is the perceived effectiveness of those identification practices?
4. How is giftedness defined by respected Elders and Knowledge Keepers of Nêhiyâw communities?
5. Based in Nêhiyâw ways of knowing, in what ways might educators adjust practices to identify and deliver culturally responsive programming to gifted Indigenous students?

### **3.4 Conceptual Design: Research Methods**

This study used a mixed methods design. In mixed methods, quantitative and qualitative data were gathered across the different stages of the study and utilized in union to form a more comprehensive understanding of the focus of the inquiry. Creswell and Plano Clark (2011) described the added complexity of mixed methods design and suggested that a researcher should only choose the method when there is a compelling reason to do so.

As I felt it was important to both frame the context of the problem of practice as well as identify current educational practices that may be contributing to the underrepresentation of First Nations students from gifted education programs, the collection of the quantitative data from the researched school division and gifted education teacher cohort was necessary. The quantitative results gathered from the school divisions' group administered full scale IQ standardized testing

scores provided research-based data to illustrate the actual levels of representation within the current gifted program. Quantitative survey (Likert scale) data gathered from the gifted education teachers was used to develop an understanding of the broader assessment practices employed by the school division in the identification of their gifted student population.

The qualitative data sought knowledge of the gifted education teachers' perceptions of the current state of the gifted program as well as Nêhiyaw knowledge keepers understandings of giftedness within their own cultural context. The qualitative data would be used to develop an expanded working definition of giftedness as well as strategies for the identification and nurturing of gifted Nêhiyaw students. Qualitative data was collected from the open section of the gifted education teacher's survey as well as from two interviews with knowledge keepers within the Nêhiyaw community. Surveys of the gifted education teacher's perceptions supported my development of inferences into understanding what supports are necessary in addressing the issues of underrepresentation of Nêhiyaw students in gifted education programs. Qualitative data collected in the form of individual interviews with respected Nêhiyaw Knowledge Keepers would support the development of a working definition for giftedness as well as culturally responsive strategies for identifying and nurturing gifted Nêhiyaw students.

To choose my Nêhiyaw informants, I relied on members of the First Nations community with whom I had already had a relationship to suggest potential participants. I began by initially meeting with members from the First Nation/Métis support team within my own school division. Two key pieces emerged from these meetings, first a suggestion that I focus my research on the Nêhiyaw community and second, a list of possible Nêhiyaw informants. It was important to me as a non-Indigenous researcher that the list of possible informants come from the First Nations/Nêhiyaw community itself.

I spoke with five possible Nêhiyâw interview participants explaining my inquiry and desired outcomes. Nêhiyâw participants self-selected to be a part of the interview process, as well as deciding if they wished their data to be used within the research and could withdraw at any point up to and until the analysis stage.

### **3.4.1 Research design.**

The first phase in the research design was the conceptualization phase in which the research questions were formalized and then supported by a literature review. The next phase in the research design was the development of the quantitative research method which formed the baseline data for the study. The quantitative data that was collected in the first part of the study established a baseline of understanding of the problem of underrepresentation of First Nations students within gifted education programs as delivered currently within the researched school division. The data are represented statistically comparing ratios of students involved in this school division's gifted education programs to those that are self-identified as First Nations or Metis and those that are Non-Indigenous. The statistical data were generated from the data produced by the division using the results from the standardized, group administered, full scale IQ tests. These tests are completed by students in grade three and grade six within the school division that participated in the research.

In the second stage of the study, a five-strand Likert-style scaling questionnaire was utilized to generate data. Likert scales are designed to measure the participant's level of agreement or disagreement to multiple items within the research topic (Teddle & Tashakkori, 2009). Throughout the study the Likert-style scale used the following five point rating scale: Strongly agree, Agree, Undecided, Disagree, and Strongly Disagree. Individual steps in this phase included:

1. Preparing quantitative questionnaire for gifted education teacher group
2. Obtaining permissions from the University of Saskatchewan Research Ethics Board as per Canada's Tricouncil regulations, the School Board involved in the research, and the teacher participants
3. Administering questionnaire (Likert scale and Comment section) which was distributed by the school division and returned to me by Canada Post mail
4. Analysis of data

The goal of the questionnaire was the development of an understanding of the alternative identification processes currently in place. This focused on data from the gifted education teachers' current methods and processes of identification of giftedness –beyond the standardized testing tool. The optional, open-ended qualitative comments section was also completed by the gifted education teacher group. These data would help to develop an understanding of the gifted education teacher's perceptions of the current state of gifted identification, training, and programming. The qualitative data from the gifted education teachers were also utilized to understand their perceptions of the effectiveness of the identification tools as well as their perceptions of any problems of practice related to gifted education programming.

The third phase of the study was purely qualitative in nature collecting data in the form of narratives from knowledge keepers from within the Nêhiyâw community. The goal of this phase was to develop an understanding of how giftedness is defined, identified, and nurtured within this Nêhiyâw community. This study and the results were designed to have an impact on students and educators within education communities that contain both non-Indigenous and Nêhiyâw students. As numerous Indigenous cultural groups exist, all with unique languages, cultures, and teachings, the Indigenous group at the focus of this study was the Nêhiyâw cultural



group, as they are the dominant group in the treaty territory the researched school division resides. Individual steps in this phase included:

1. Preparing qualitative interview questions for the Nêhiyaw knowledge keepers
2. Obtaining permissions from the University of Saskatchewan Research Ethics Board as per Canada's Tricouncil regulations
3. Seeking suggestions from the Nêhiyaw community of possible informants
4. Sending letters of invitation
5. Some conversations pre-meeting regarding the research with potential informants
6. Obtaining consent from informants
7. Conducting individual interviews
8. Analyzing data

#### **3.4.2 Intent of transformative mixed methods.**

According to Creswell and Plano Clark (2011), a transformative research design should identify and challenge social problems or injustices (p. 73). In this study, statistical data were analyzed to develop an understanding of the representation of students within the gifted program that was researched. Non-Indigenous and First Nations representation rates were compared. These data were used to develop a better understanding of the current problem of practice—underrepresentation of gifted First Nations students within the school divisions' gifted programs. Once the problem of practice was statistically framed, the intent of this study was to learn from and share a Nêhiyaw perspective for giftedness. Data provided by the Nêhiyaw knowledge keepers were used to generate the language necessary to guide the development of an inclusive working definition of giftedness and culturally responsive, gifted education teaching strategies and tools to transform gifted educational practices to better acknowledge and incorporate

Nêhiyaw ways of knowing in gifted education programs that serve both non-Indigenous and Nêhiyaw students.

### 3.4.3 Implementation of the mixed method design.

Mixed method research designs allow a researcher to answer questions that cannot be answered in traditional quantitative or qualitative research methods. The difficulty for researchers in applying mixed method design is that there are many different approaches or typologies for this type of research. Therefore, it was important for me to determine the typology that would provide me with the data necessary for formulating inferences.

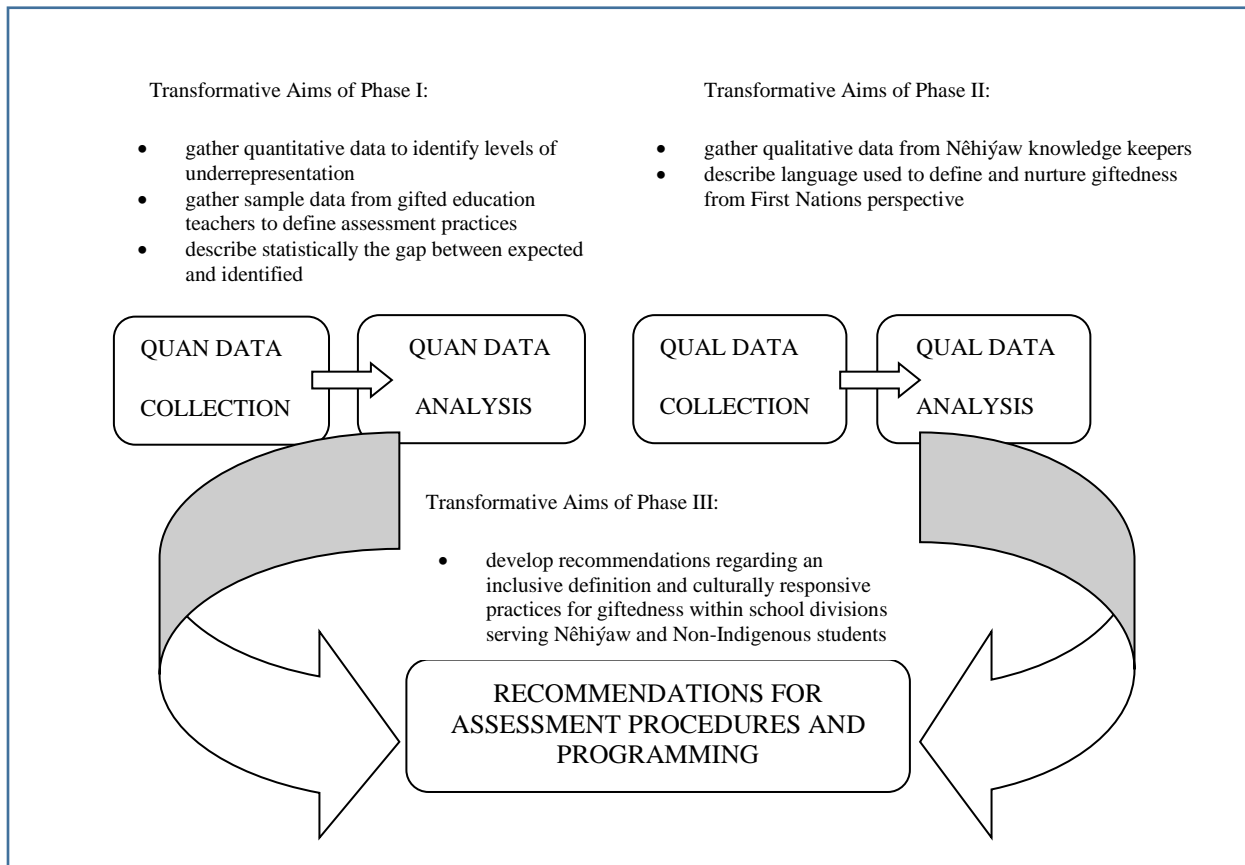


Figure 3-1 Graphic Illustration of Mixed Methods Design

#### **3.4.4 Sample.**

Within the research setting, it may not be practical or feasible to collect data from every individual within the researched populace and therefore, sampling techniques are used to gather representative data from the population (Mertens, 2005). There are numerous sampling techniques; however, I needed to utilize a method that would result in a sample group that would maximize my ability to answer my research questions (Teddlie & Tashakkori, 2009). This research required data be collected from two separate sources. First, non-random purposive sampling was utilized for this study in an effort to gain data from actively employed gifted education teachers whose role is to work directly with gifted students. Participant gifted education teachers were self-selected or volunteered for the study. The goal of these data was to both address the research questions and offer transferability of the results and recommendations to other schools both within the researched school division as well as for schools outside the division. Five of a total of six possible participants completed the survey.

Non-random purposive sampling was employed to gather data in the form of narratives to develop an understanding of the Nêhiyâw views of giftedness. This sample consisted of Knowledge Keepers from within local communities of First Nations peoples. Participants were sought out after nomination from others within the First Nations community. As a Non-Indigenous researcher, I cannot reliably identify those considered to hold community knowledge. By turning to members of the First Nations/Nêhiyâw community to nominate participants, I had a reliable sample for research purposes. By relying on the cultural group to self-select participants, greater reliability for the data was achieved. Participants who were nominated for participation in the study were contacted by me and then had the opportunity to choose their involvement and levels of involvement in the course of collecting data to find the Nêhiyâw voice

within the topic of giftedness. Three participants were initially sought to engage in individual interviews, however after five meetings, only two participants felt comfortable with their interview data being a part of the formal research process. The difficulty in attaining these data was a revelation for me within the research process. A researcher working on research outside of one's own cultural group is quite complex. Ample time needs to be placed into building relationship prior to collecting data. I was fortunate that some of this relationship building had already taking place within my own teaching practice; however many of the informants that were nominated I did not have relationship with. Within the confines my Masters research, I feel that I was unable to completely forge these relationships, but will continue forging these bonds into the future.

### **3.5 Data Collection and Analysis**

Mixed methods data collection refers to the gathering of both quantitative and qualitative data in the same study. Each type of data, quantitative and qualitative, has its own unique gathering and analysis procedures.

#### **3.5.1 Quantitative data.**

Quantitative research is most often associated with methods that gather numerical data (Mertens, 2005). In this study two sets of quantitative data were collected. The first set was baseline representation data provided by the school division involved in the research. These data were provided as four sets of population numbers: student population of the representative sample, population of students served within the gifted programs, self-declared First Nations population of the representative sample, and population of self-declared First Nations students served within the gifted program. These data were used to calculate and report representation rates for both Non-Indigenous and First Nations students within the gifted programs.

Survey data, from the gifted education teacher group, were also collected. These data were gathered in the form of three, five category Likert-style scale questionnaires. These data informed the analysis of the current problem of practice, and both the current use and perceptions of the effectiveness of assessment tools and instructional practices within the gifted education program. The data for each of the scales was reported as an average of the respondent's responses and correlated with the term (strongly agree to strongly disagree) connected to the value. Themes were also sought in comparing the responses of those surveyed with each other.

### **3.5.2 Qualitative data.**

Creswell and Plano Clark (2011) described the process of qualitative data collection as information gathering through interviews with the research participants. These interviews are often open-ended although guiding questions are used to provide some structure and to ensure research goals are met. Before beginning my research, I met with my own school division's First Nation and Métis education team to develop an understanding of approaches and protocols important in working with members of the Nêhiyâw community. This meeting provided me with protocols including procedures for connecting with the informants and the importance of offering of tobacco as a part of the meeting. I was also provided a list of possible informants who possessed the Nêhiyâw community knowledge and/or language.

Battiste (1998) described the need and importance of valuing and incorporating First Nations languages into the curriculum. Failure to recognize the value of First Nations languages in our curricular programming, results in the continued marginalization of First Nations students within our schools (Battiste, 1998). Therefore, turning to Nêhiyâw knowledge keepers, who are connected to their languages and ways of knowing, provided insight for teaching and learning for Nêhiyâw students. Although research in assessment practices for giftedness is abundant

(Kaufman, Plucker, & Russell, 2012; Pfeiffer, 2012; Stoeger, 2014; Vialle, 2013), literature describing gifted assessment practices from First Nations' perspectives and languages is limited, with most of the literature focusing on the issues of underrepresentation and underachievement (Gentry & Fugate, 2012).

As a researcher from outside of the First Nations community my research and thinking is impacted by my own worldview (Battiste, 2002). As the research involved the participation of First Nations peoples whose Indigenous worldviews are fundamental in exploring the research question, it was important for me to facilitate an environment of respect and reciprocity in order to collect useful data. Koster, Baccar, and Lemelin (2012) spoke to the need for a transition in Indigenous research paradigms arguing researchers need to research with and for Indigenous peoples, in contrast to past paradigms where research was conducted on Indigenous peoples. To address these concerns I followed these protocols during the research process:

1. I only contacted knowledge keepers as selected and referred to me by the First Nations community
2. I consulted with members of the First Nations community as I developed the guiding questions for the interviews
3. Interview participants were provided with the guiding questions prior to the interview
4. Participants were invited to add to or modify the questions during the discussion so the learning that is important to the participants became the focus of the discussion
5. In an effort to honour the sharing relationship, I began by sharing my story at the beginning of each interview, explaining how I came to the research question

6. In order to respect Indigenous epistemology and ways of knowing, I offered participants a range of data collection methods (both participants that remained in the study were comfortable having the interviews audio recorded and transcribed)
7. To honour the process of knowledge sharing, I sought an understanding of the Nêhiyaw protocol regarding knowledge sharing, including the presentation of tobacco and sharing of gifts
8. I took steps to honour the practice by offering each of the participants tobacco, and sharing food and drink during the interview process

The following guiding questions were used during the interviews with the Nêhiyaw participants.

Participants received a copy of these questions in advance of the interview session:

1. There is a concept known as “giftedness” in western white modern culture [provide definition]. I am wondering if in your culture and tradition, you have a concept for a child showing giftedness and how it would be described?
2. Were people identified as “special” in particular ways or set aside for particular roles?
  - a. Are gifts tied to specific roles within the community, and as such, are roles (Chief, Elders, Knowledge Keepers, Medicine People) assigned based on these gifts or are children expected to make their own decisions as to their roles within the community.
  - b. What were the indicators or in what ways is giftedness expressed and observed?
3. Given that a gifted program exists and functions in this way [researcher described gifted education programming assessment and delivery currently in place within

the researched school division]—is it appropriate for schools to identify gifted Nêhiyâw children?

- a. What traits should we look for in the child and how do we most effectively look for these traits?
- b. What qualities and education is important for those working with these children?
- c. What would you suggest we do to ensure the needs of gifted Nêhiyâw children are met?

Analysis of these data was made by reflecting back to the research questions and merging ideas and knowledge from all parts of the research stages. Patterns and themes were sought—while keeping the knowledge and stories intact, incorporating Nêhiyâw language whenever possible. These patterns formed the basis of the conclusions, which applied both the Nêhiyâw ways of knowing as learned from the research, current educational practices, and the incorporation of First Nation languages when possible.

***Trustworthiness, credibility, and transferability.*** Just as qualitative and quantitative data have their own research methods, they also have their own terminology around rigour. Trustworthiness according to Teddlie and Tashakkori (2009) is the extent to which the researcher can persuade an audience to value and have confidence in the data and the researcher’s interpretation of the data. Data must be rich and descriptive. The reader must be able to “see” the situation as something likely to exist, something likely to happen therefore trustworthiness is established through credibility, and transferability. Credibility as it pertains to quantitative methods is the degree to which the research has standing within a field of study. Within the realm of qualitative research, credibility is the believability of the research finding by the



participants in the research. Transferability is whether the descriptions within the research allow readers to make connections to their own situation outside of the research (Teddlie & Tashakkori, 2009).

The goal of this research was to support decision making for gifted assessment and programming practices in communities serving Nêhiyáw students. The credibility of the findings is supported through the triangulation of the data collected. By linking the research findings from current educational practice, incorporating First Nations languages, keeping Nêhiyáw stories intact, and the careful use of rich descriptive language when describing relationships, trustworthiness in the conclusion is attained.

Another goal of this research is for it be transferable, to support other teachers by providing evidence, using thick, rich, descriptive language of examples; thus the research findings can then be used or “seen” within other situations and contexts. Any teachers reading this study, who notice how their situations resonate with particular aspects of this study, are encouraged to transfer only as much as they see fit. Transferability is more likely with teachers of Nêhiyáw students, but aspects might also be transferable to other students, or other communities. Some transferable themes that teachers might want to consider are:

1. Giftedness is a construct impacted by both culture and language.
2. Working definitions for giftedness must include the culture and language represented within the student population.
3. Relationship building between cultural communities is complex, but important in addressing issues of inequality.

***Trustworthiness and Validity.*** According to Kovach (2009) “Indigenous epistemic research conducted under Western funding or academic parameters holds a unique ethical

complexity that is less about liability and is more relational” (p.147). Trust and relationship needs to be built and honoured throughout the research process as well as when the research data are utilized and published. Trust is earned by “following protocol, showing guardianship over sacred knowledges, standing by cultural validity of knowledge, and giving back” (Kovach, 2009, p.147). The concept of validity is complex when considering validity within the realm of qualitative research. The concept cannot be universally applied but “rather a contingent construct, inescapably grounded in the processes and intentions of particular research methodologies and projects” (Winter, 2000, p. 1). Therefore, rigor and trustworthiness become important guiding factors in conducting qualitative (and thus mixed methods) research. In recognizing this, I will honour the Nêhiýaw perspective of validity, by building and honouring relationships within the research process, and by attempting to use the data to support the Nêhiýaw community within my own practice and within the larger education community.

### **3.6 Ethical Considerations**

This study sought the approval of the University of Saskatchewan’s Behavioral Research Ethics Board which follows the national standards outlined by the Tri-Council Policy Statement – Second Edition. The nature of this study posed minimal risk to the participants. Prior to consenting to the study, participants were provided with an abstract of the study outlining their roles and the future uses of the data. Consent forms were issued and participation was voluntary. The consent forms will also provide information regarding the participant’s right to privacy, which includes the right to anonymity and confidentiality (Teddlie & Tashakkori, 2009). One difficulty which needed to be carefully addressed throughout the study was the innately small sample sizes within the Nêhiýaw knowledge keepers and the gifted education team. Special considerations were made, including the use of pseudonyms, and the return of the surveys

through pre-addressed mailing envelopes, to ensure participants maintained their desired level of anonymity within the research parameters. Survey and interview data were held in confidence, with the survey data and interview transcripts stored in a locked filing cabinet.

## **Chapter Four**

### **4. Data Analysis**

In this chapter, the findings of the study carried out with five gifted education teachers and two Knowledge Keepers is reported. This chapter is composed of the following sub-sections: Introduction, Response rate, Quantitative Data: Gifted Education Teachers, Qualitative Data: Gifted Education Teachers, Qualitative Data: Knowledge Keepers, and Summary.

The purpose of this study was to gain insight into current identification and educational practices used to support the divisions gifted student population within the researched school division. The themes and educational practices that emerged from the quantitative portion of the research are then correlated and compared with the qualitative data collected regarding Nêhiyaw traditional practices and knowledge. The goal is to draw on the wisdom from Nêhiyaw tradition, knowledge, and practices to inform a working inclusive definition of giftedness and to provide suggestions for adaptations in gifted educational practice to provide more culturally responsive practices for our Nêhiyaw student population.

#### **4.1 Data Presentation**

##### **4.1.1 Response rate.**

All current gifted education teachers within the division were given the opportunity to complete the survey, which was distributed on my behalf by the school division taking part in the research. Five of the six gifted education teachers completed the surveys. The completed surveys were returned to me via mail (Canada Post), school division delivery, or email on various dates throughout April and May 2017. Twelve letters of invitation were sent out to community-identified Nêhiyaw Knowledge Keepers and Elders. Five participants expressed interest and discussed their participation. In the end, two participants formally participated in the

interview process and granted permission for me to use the data collected for research purposes. Many of the identified potential participants, once contacted, did not feel they possessed the knowledge, wisdom, or authority of the community to speak to the topic of Nêhiyaw giftedness.

#### **4.1.2 Quantitative data: Gifted education teachers.**

The quantitative portion of the gifted teacher survey was designed to gather data to understand the current gifted educational practices in place within the researched school division. The first section of the survey was designed to gain insight into the current use of assessment strategies within the gifted education program. The second section was designed to garner insight into the perceived value of the assessment strategies to the gifted education teachers. The third section of the survey was designed to better understand current pedagogies within the currently offered gifted education programs. As the data from the five participants were calculated, the range and the mean were also calculated. As the sample size was small, five of six total possible participants, standard deviation was not reported as it is not reliable at this sample size.

*Gifted teacher survey section 1.* A ranking system with rankings one through five was used in the first survey section. The gifted education teachers were asked to consider their division's actual use of different assessment practices. They were asked to: "please rank the following indicators (1 through 5) for identifying giftedness within your school division. Rank as 1 the most commonly used. Rank as 5 the least commonly used indicator." Below, Table 4-1 is a representation of the statements, responses, and a calculated mean for the responses provided in the survey.

Table 4-1 What gifted education teachers perceive as the most common method for identifying giftedness within their division with 1 representing the most dominant through 5 representing the least dominant.

Statements	Responses	Mean Response Score
In your experience, IQ has been the DOMINANT factor in determining student participation in gifted programming.	1,1,1.5,1,3.5	$\begin{array}{c} 1.6 \\ \hline 1 \quad 2 \quad 3 \quad 4 \quad 5 \end{array}$
In your experience, scores on standardized ability tests have been the DOMINANT factor in determining student participation in gifted programming.	5,5,5,5,5	$\begin{array}{c} 5 \\ \hline 1 \quad 2 \quad 3 \quad 4 \quad 5 \end{array}$
In your experience, parent referrals have been the DOMINANT factor in determining student participation in gifted programming.	4,4,3.5,4,3.5	$\begin{array}{c} 3.8 \\ \hline 1 \quad 2 \quad 3 \quad 4 \quad 5 \end{array}$
In your experience, classroom teacher referrals have been the DOMINANT factor in determining student participation in gifted programming.	3,3,3.5,2.5,1.5	$\begin{array}{c} 2.7 \\ \hline 1 \quad 2 \quad 3 \quad 4 \quad 5 \end{array}$
In your experience, your own classroom observations/interactions have been the DOMINANT factor in determining student participation in gifted programming.	2,2,1.5,2.5,1.5	$\begin{array}{c} 1.9 \\ \hline 1 \quad 2 \quad 3 \quad 4 \quad 5 \end{array}$

***Interpreting data of survey section 1.*** Based on the rankings provided by the five gifted education teachers in the first section of the survey, the findings show that IQ testing (group administered, standardized testing) is the dominant factor used in identifying students for gifted programming support. The second most dominant factor used is the identification of students through the direct observations and interactions of the gifted education teachers. The field of gifted education has long relied on traditional intelligence testing as a primary indicator of giftedness. Group screening intelligence tests can be valued for their efficiency, reliability, and objectivity. In this case, efficiency means that large school divisions and districts can test large

numbers of students in a small amount of time with limited financial inputs. As these tests are produced and maintained by large companies, their reliability and validity are measured utilizing large populations and repeatedly tested to ensure the final scores reflect what is being tested sometimes referred to as construct validity (Cicchetti, 1994). Finally, these tests are viewed as objective assessments as they attempt to remove the subjectivity of individual teacher judgements. The complete reliance on measures of intelligence through IQ tests continued, relatively unchallenged, until ability tests began to be used and some students showed discrepancies between their IQ and achievement scores. Research within the field of gifted education has demonstrated that the use of standardized tests of intelligence and cognitive abilities in isolation is not best practice. Instead, these standardized assessment tools should be used as effective screening tools, designed to be a part of a larger assessment process (Erwin & Worrell, 2012), who argued for the use of multiple sources of evidence. This understanding is reflected in the survey data collected as the majority of respondents ranked equally the use of standardized testing methods and gifted education teacher classroom observations and interactions in their decisions for the identification of giftedness.

One other observation made from this subset of data is that the majority of respondents found that ability testing data played a lesser role in identifying a student for giftedness. In some cases, results gained from group screening forms of intelligence tests can be a reliable indicator of ability so further reliance on ability testing is unnecessary, however this is not always the case. In the cases of gifted children with disabilities and culturally and linguistically diverse students, discrepancies between intelligence test screening scores and ability scores often exist and would warrant further investigation if both data sets were compared and utilized in the assessment process.

Not all respondents utilized the 1 to 5 scale, instead valuing some of the items with equal importance. When this was the case, I interpreted the scores that had several items ranked the same as one of them taking the place of the missing rank, and averaging the two, thus allowing for the respondents to respond with equivalents. For example if the respondent ranked the items as 1,2,2,4,5 – each of the twos were replaced with 2.5 as to represent the 2 and 3 values. The values reported in the table above reflects this convention and will be used in the next data set as well.

*Gifted teacher survey section 2.* A ranking system with rankings one through five was used in the second section. Gifted education teachers were asked to consider the value of different assessment practices. The gifted education teachers were asked to: “please rank the following indicators (1 through 5) for identifying giftedness within your school division. Rank as 1 the most valuable. Rank as 5 the least valuable indicator.” Below, Table 4-2 is a representation of the statements, responses, and a calculated mean for the responses provided in the survey.



Table 4-2 What gifted education teachers consider as the most valuable methods for identifying giftedness within their school division with 1 representing the most dominant through 5 representing the least dominant.

Statements	Responses	Average Response Score
IQ being the DOMINANT factor in determining student participation in gifted programming.	1,1,1.5,2,4	$\begin{array}{cccccc} & & 1.9 & & & \\ & &   & & & \\ \hline 1 & 2 & 3 & 4 & 5 & \end{array}$
Scores on standardized ability tests being the DOMINANT factor in determining student participation in gifted programming.	5,4,5,5,5	$\begin{array}{cccccc} & & & & 4.8 & \\ & & & &   & \\ \hline 1 & 2 & 3 & 4 & 5 & \end{array}$
Parent referrals being the DOMINANT factor in determining student participation in gifted programming.	3,5,3.5,4,2	$\begin{array}{cccccc} & & & 3.5 & & \\ & & &   & & \\ \hline 1 & 2 & 3 & 4 & 5 & \end{array}$
Classroom teacher referrals being the DOMINANT factor in determining student participation in gifted programming.	4,3,3.5,2,2	$\begin{array}{cccccc} & & 2.9 & & & \\ & &   & & & \\ \hline 1 & 2 & 3 & 4 & 5 & \end{array}$
Your own classroom observations/interactions being the DOMINANT factor in determining student participation in gifted programming.	2,2,1.5,2,2	$\begin{array}{cccccc} & & 2.1 & & & \\ & &   & & & \\ \hline 1 & 2 & 3 & 4 & 5 & \end{array}$

***Interpreting data of survey section 2.*** In the second section the survey a group of five gifted education teachers were asked the same questions but instead of reflecting on which identification strategies are dominant in use, they were asked to reflect on the value of the strategy for giftedness identification. This data set allows us to understand the respondents' views on their values of the identification strategies, and to compare utilization of the strategy (from the first data set) to the value the educator places on the strategy (from the second data set). Respondents placed the highest value on intelligence testing for the identification of students for gifted programming support. The second most valued factor is the identification of students through the direct observations and interactions of the gifted teachers. These values

align with the processes for identification that they indicated are currently most commonly used. This finding shows us that the gifted education teachers would likely have confidence in the accuracy of the identified gifted population that they are presently providing support for. The gifted education teachers surveyed placed the least value in ability tests and parent referrals. These data for value in the assessment strategy align with the frequency of their use by the group of teachers surveyed.

An interesting finding when comparing the two data sets to each other is the degree of variation in the first data set regarding dominance of use, to the second data set regarding the values of the identification strategies. The spread in ranking values for the first set are significantly lower than the second set, yet the overall means when comparing the two data sets are relatively equivalent. This finding likely relates to the gifted program delivery method of the school division sampled. Although testing standards would be set at the division level and would therefore be similar for all of the gifted education teachers involved, the actual populations of students that they serve would be different culturally, linguistically, and in socio-economics. As a result, the value of the identification strategy may be affected by the community within which the individual gifted educator works.

***Gifted teacher survey section 3.*** The five gifted education teachers were then asked to consider seven statements that correlated with their own experiences with gifted education training and program delivery. Below, Table 4-3 is a representation of the statements, responses, and a calculated mean for the responses provided by the teachers. A Likert scale with rankings one through five was used in the third section. Each of the descriptors was represented by the following values: 1 (Strongly Disagree), 2 (Disagree), 3 (Neutral), 4 (Agree), and 5 (Strongly Agree).

Table 4-3 Gifted teacher responses on personal experiences in gifted education programming with 1 representing strongly disagree, 2 disagree, 3 neutral, 4 agree, and 5 strongly agree.

Statements	Responses	Average Response Score
My undergraduate university training adequately prepared me to identify gifted behaviors exhibited by students in the classroom setting.	3,2,2,2,2	<p style="text-align: center;">2.2</p> <hr style="width: 80%; margin: auto;"/> <p style="text-align: center;">1    2    3    4    5</p> <p>Overall: Disagree</p>
Professional development offered locally (division, provincially, or graduate work) adequately prepared me to identify gifted behaviors exhibited by students in the classroom setting.	4,3,2,2,4	<p style="text-align: center;">3.0</p> <hr style="width: 80%; margin: auto;"/> <p style="text-align: center;">1    2    3    4    5</p> <p>Overall: Neutral</p>
Professional development offered internationally adequately prepared me to identify gifted behaviors exhibited by students in the classroom setting.	3,4,4,4,4	<p style="text-align: center;">3.8</p> <hr style="width: 80%; margin: auto;"/> <p style="text-align: center;">1    2    3    4    5</p> <p>Overall: Neutral</p>
Once identified, programming supports these students in building relationship with like ability peers.	4,3,5,4,5,5	<p style="text-align: center;">4.3</p> <hr style="width: 80%; margin: auto;"/> <p style="text-align: center;">1    2    3    4    5</p> <p>Overall: Agree</p>
Once identified, programming supports these students in building relationship with community mentors.	3,3,3,3,3.5	<p style="text-align: center;">3.1</p> <hr style="width: 80%; margin: auto;"/> <p style="text-align: center;">1    2    3    4    5</p> <p>Overall: Neutral</p>
Once identified, programming supports these students in building relationship with their family.	4,2,3,4,4	<p style="text-align: center;">3.4</p> <hr style="width: 80%; margin: auto;"/> <p style="text-align: center;">1    2    3    4    5</p> <p>Overall: Neutral</p>
Once identified, programming supports these students in building relationship with their cultural community.	3,2,3,3,3.5	<p style="text-align: center;">2.9</p> <hr style="width: 80%; margin: auto;"/> <p style="text-align: center;">1    2    3    4    5</p> <p>Overall: Disagree</p>

*Interpreting data of section 3.* In the third section the five gifted education teachers were asked to comment on a series of questions that would impact program delivery within the gifted education program. These questions utilized a Likert scale and looked to establish the degree to which the respondents agreed or disagreed with the statement. From the responses provided by the respondents in the survey three of the questions resulted in mean scores that place the answers in the agree or disagree sections. The four remaining questions resulted in mean scores that correlated to a value of neutral, however they also showed the most variation between the respondents.

The first question asked respondents to reflect on their university training as it related to identifying gifted behaviors in students. Four out of five of the respondents disagreed that their university training adequately prepared them to identify gifted behaviors in students. This result was consistent with the literature findings previously discussed. The concern with the finding is that as financial resources become limited and programming cuts remove gifted teacher experts from the role, classroom teachers may not have the necessary training to make the identification or referral as they lack the education and training for making these identifications. Since gifted students require specialized programming just as those students with identified disabilities, it is vital that these students be properly identified.

The second and third questions in the survey were related to professional development on the topic of identifying gifted behaviors, with the second question asking about local professional development, and the third asking about international. The mean response scores for both these question were valued as neutral, however the mean score for international opportunities was higher than locally developed opportunities and four of the five respondents agreed with question three. There was more of a positive lean towards international professional development than

local. As gifted education programming has often been prioritized in countries (cultures) that value competition, there are more opportunities to access gifted education training within those countries.

The fourth question asked the respondents if the current gifted programming allowed for identified students to build relationship with like ability peers. The overall mean score fell into the agree category. This survey finding may be related to the respondent's school assignments, as some schools would have a greater number of identified students. Technology has also supported the gifted education teachers in incorporating online collaboration opportunities for the gifted students that may not have access to a larger community within their own school.

The fifth question was related to students' opportunity to connect with community mentors. Four out of five respondents reported a neutral score. From the survey results we can see that mentorship is not a mandatory part of the gifted programming. It is utilized, but likely is a function of request by the student, parent, or gifted educator. The availability of suitable mentors may also be a barrier to facilitating this type of connection to a student's community.

The sixth question related to student support for building relationship with family. Clark (2013) identified the importance in involving the family in the identification process, education, and socio-emotional support of gifted children. There was significant variation in the five gifted teachers responses within this section. Survey results found three out of five respondents agreed with this statement. One was neutral and one disagreed. Again, this may be related to the unique communities which the individual gifted education teachers serve. Based on the importance of the issue of building family relationship as illustrated through gifted research, the survey results illustrate that this may need to be further addressed by this respondent group.

The seventh question of this section of the survey asked if programming supported identified students in building relationship with their cultural community. The overall mean score aligned with the disagree category. Ford, Howard, Harris, and Tyson (2000) spoke to the need for more culturally responsive teaching practices generally, but most importantly for culturally and linguistically diverse students. One of the practices encouraged by these researchers is supporting students by providing opportunities to connect with their own culture. Based on the survey results, there is a need to increase the opportunities within the programming provided for students to connect with their cultural community.

***Gifted teacher survey section 4 open responses.*** The five gifted education teachers were also provided with an opportunity to comment (in an open response section) on any items from the survey. Three of the five anonymous respondents chose to include comments with their survey and for the purposes of this section will be referred to as respondent A, B, and C. Three broad themes emerged from the comments provided: discussion of their own educational background, professional development opportunities, and identification practices. Two of the respondents also commented on two aspects of the gifted program delivery.

***Gifted teacher survey section 4 discussion.*** As the respondents discussed their own education, they cited concern over insufficient training on the topic of giftedness within their own undergraduate teacher programs. Respondents B and C mentioned that giftedness identification was “one small part” or “one part” of one undergraduate course. These responses are consistent with the literature on teacher training and giftedness. According to Clark (2013) “Unfortunately, many teachers of gifted programs have no experience in gifted education beyond occasional conference sessions or district in-service meetings” (p. 353). This lack of experience impacts teacher’s abilities to differentiate between high achievers and gifted students, to identify

gifted students who are from cultural minorities or EAL, and to create and deliver quality differentiated programming. This is concerning as more reliance is placed on classroom teachers to make the initial identification, as part of referral processes (RtI) that many school systems use. The implication of this finding is that group administered IQ tests become the primary and possibly only tool used for identification for most students, even though research in the field of gifted education advocates for the utilization and implementation of a variety of assessment tools and strategies.

The three respondents also commented on their professional development [PD] opportunities within the field of giftedness. All three respondents noted that most of their learning regarding the identification of giftedness has taken place within their own professional learning community. Participant A stated “professional development with my [name omitted] group offers a balance of experience, collaboration, and scholarly work.” This statement was corroborated by participant C who said “I have learned much from division professional development offered by [name] my [name] colleagues and, in a couple instances, members of the FNM [First Nations and Metis] team, in the past 18 months. From their referral of current textbooks and journal articles to sharing of experiences and observations, they have helped me understand the path [name of division] is going to identify what might be "gifted behaviours" exhibited by students.”

Participant A reported not having had the opportunity to attend an international level PD event. In reference to international PD participation, participant B remarked that international PD provided learning opportunities related to not “only identifying, but strategies to use with gifted students.” Participant C stated “international PD supported my understanding in both the identification of and programming for students.” These experiences are consistent with the

literature findings of the researcher. Canadian university education programs do not offer an abundance of programming within the field of giftedness. At most, giftedness may be included in some of the educational psychology courses offered, but there are limited opportunities to specialize in this area. Other countries such as the United States, Australia, Hong Kong and some European countries provide greater opportunities for learning in this field. Therefore, for Canadian gifted education teachers, reliance on research and research based practices developed outside of Canada will be necessary in guiding programming decisions. This includes their participation in international PD.

The third theme that emerged from the respondents was related to giftedness identification practices. Respondent A explained their experience in identifying giftedness came from a combination of reading, classroom experience, and parenting and interacting with the parents of children identified as gifted. Respondent B described the factors for identification of giftedness as interwoven, referencing the five factors listed in the survey. Respondent C described the role of each of the five identification strategies listed in the survey and explained them as all “part of a larger puzzle.” These responses are consistent with current research on identifying giftedness, which advocates for a multimodal approach to identification.

Respondents B and C also noted key programming aspects of the current gifted program. Mentorship opportunities were discussed by both respondents “if student needs a mentor the programming would support it however, I have never had a mentorship situation occur in which a student worked alongside someone.” “Students have access to community mentor/experts in nearly all groups.” Research has shown that for gifted students, the relationship with a mentor can improve social skills and foster continued passion in fields of interest (Clark, 2013). Clark (2013) also noted some concerns for gifted teachers to be aware of when incorporating



mentorships including: opportunities provided should replace some classroom expectations, not simply add on an extra job for the student; opportunities should not isolate the gifted student from their peer group; and an understanding that the mentor is not a replacement for the teacher and should not be responsible for evaluating or reporting on the student as this can erode the mentorship relationship.

Parental involvement was also discussed by both respondents B and C. Parents and guardians are contacted at the beginning of the year. “At the beginning of the year, I contacted a parent/guardian of every child and asked if they feel comfortable to share with me their hope/fears for their child, their experiences with school and how they feel their child knows best” (Respondent C). Both respondents also stated that parents are invited to attend celebration of learning events. These connections with the families of identified children are important. Gifts and talents in children are nurtured by the environment that surrounds them. Having family understanding and support will facilitate further growth for the student. Families can also provide valuable information that can guide programming decisions and facilitate mentorships. Parents and families can also become strong advocates for the gifted child, a valuable voice, which can direct policy and funding of gifted programming (Clark, 2013).

#### **4.1.3 Qualitative data: Nêhiyâw perspectives.**

Qualitative data in the form of interviews were collected from two self-identified Nêhiyâw participants. The interview participants came from a list of potential participants who were provided to me by others within the First Nations community. Suggested participants were emailed or phoned regarding their potential involvement in the study. Each participant was provided a letter prior to the interviews regarding my research goals and future intended uses of

the data, as well as a list of guiding questions. The following questions were used to guide the interview:

1. There is a concept known as “giftedness” in western white modern culture [provide definition]. I am wondering if in your culture and tradition, you have a concept for a child showing giftedness and how it would be described?
2. Were people identified as “special” in particular ways or set aside for particular roles?
  - a. Are gifts tied to specific roles within the community, and as such, are roles (Chief, Elders, Knowledge Keepers, Medicine People) assigned based on these gifts or are children expected to make their own decisions as to their roles within the community.
  - b. What were the indicators or in what ways is giftedness expressed and observed?
3. Given that a gifted program exists and functions in this way [researcher described gifted education programming assessment and delivery currently in place within the researched school division]—is it appropriate for schools to identify gifted Nêhiyáw children?
  - a. What traits should we look for in the child and how do we most effectively look for these traits?
  - b. What qualities and education is important for those working with these children?
  - c. What would you suggest we do to ensure the needs of gifted Nêhiyáw children are met?

These guiding questions framed the interviews, however both participants provided additional perspectives I had not considered within the framework of the original questions. The interviews took place at locations of the participant's choosing. Each participant was offered tobacco prior to the interview and I also brought food and drink to share. Both participants expressed comfort with the process of recording and transcribing the interview, and I made notes regarding the use of the Nêhiyâw language. After the interviews, I used the transcribed data and notes to seek themes, connections, and differences. The transcribed data that was made from the recordings and the interpretation sections were emailed to the informants. A second interview session was offered to address any mistakes, misconceptions, or language concerns the informants may have regarding the transcripts or the interpretive sections. Any names or places discussed by the informants were changed or removed to maintain anonymity.

The gifts of the knowledge that were shared by the two informants were rich in both culture and language. As a non-Indigenous researcher I viewed my informants as experts. Both informants began the interviews with approaches that showed great humility regarding their knowledge and wisdom. Both remarked throughout the interview process that the knowledge and wisdom they shared were gifts of story and wisdom that had been shared with them. They made reference to their community and Elders within their community as their teachers. My take away from this learning has been to change my own language replacing terms such as expert and expertise with terms such as knowledge, wisdom, community, and shared understandings. I also feel that if I had understood this earlier within my own research process, it may have improved my response rate for Nêhiyâw informants.

#### **4.1.4 Learning from informant 1.**

As we progressed through the questions, informant 1 shared their knowledge and wisdom as it had been taught and shared with them. Informant 1 acknowledged others and the community throughout the interview, as teachers, providing insights to the knowledge being shared as community knowledge. As literature on the topic of Saskatchewan based Indigenous conceptions of giftedness is limited, I found the wisdom and insights that were shared as exceptionally valuable for myself as a non-Indigenous educator. The informants' knowledge in both Nêhiyaw ways of knowing and experiences within the current Western perspective education system allowed for valuable discernment on current practices and possible adaptations to practice to better serve our Nêhiyaw students.

Informant 1 began the interview by sharing their understanding of giftedness as defined within the Cree [Nêhiyaw] community. "From my understanding, when I work with Elders, there is a term that they use when they talk about giftedness and it's something like manacitowin a term that means being gifted spiritually. Something is given to you and it forms into knowledge and it helps you in finding your purpose in life" (Informant 1, 2017). Spiritual gifts were further broken down into different talents all of which would have helped individuals in fulfilling the roles that were needed by the community.

Some people are gifted to be able to understand what is in the environment [pause] to be able to learn something with their hands [pause] gifted with spiritual songs that would come from the spirit guides [pause] being able to interpret what the spirits say in ceremony and be able to translate to people in that ceremonial setting what those spirits are saying [pause] being able to work in the environment as a hunter, as a fishermen, as a trapper that's certainly a form of giftedness because you have to know your environment you have to know what you're hunting and fishing and how to go about that, and where to go, and when to go, to be able to get those foods that you're seeking from nature. (Informant 1, 2017)

The aforementioned gifts originate from the Creator. The ability to identify gifts in others is tied closely to relationship. These relationships are built within the community. This

could be the community in which you live or within the school or classroom community. Without relationship, it is unlikely that a young person will feel comfortable in revealing or sharing their gifts. Informant 1 remarked, “being able to feel at home in your school, being able to feel valued and once you know that, you are apt to show your gifts and it would come out (Informant 1, 2017). Relationship is vital for these students and an educator’s capacity to build these relationships is vital for their understanding of the student’s abilities, needs, and potential. Informant 1 shared the idea of a teacher’s responsibility in using strategies and creating opportunities to build relationship with the classroom with the children. The term for this partnership or authentic relationship that was shared was “okiskinamahasowin” [Cree]. Informant 1 then went on to explain how this might look in a classroom.

So let’s say in a real world setting how would I look for a gifted child in my classroom. Well I’d look at him as an uncle, and he’s my relative and that’s how in my actions as a teacher I approach all my students. I’m their relative and they’re my relative. And so, as their uncle, I have a relationship with them, and I ask them where they’re from, who are their parents, what are their interests. Then in my teaching I talk a lot about my own culture, what about your culture? Do you believe in spirits? I believe in spirits. Then kids, they talk about their own gifts, sometimes kids divulge that they have divine gifts something that comes from a spiritual nature, that you don’t learn from a book, it’s just natural. (Informant 1, 2017)

Once a young persons’ gifts are identified by an elder or a relative, they must be nurtured. “Specific roles were nurtured because the old people would see those gifts showing up, that phenomenon in the kids and they would be, they’d be, exhorted to continue that, to grow with that, and to share some of those gifts with those teachers that looked at them and being encouraged” (Informant 1, 2017). Schools can play an important role in this process if we are looking with eyes that stretch beyond that of a simple Western worldview. The reality for some First Nations students in our schools, is that they are limited in their access to their First Nations community. Understanding that educators can play an important role in providing opportunities

within the curriculum for First Nations students to build their cultural knowledge as well as bridging relationships for these gifted students with Elders and Knowledge Keepers with whom the educator has working relationships – these opportunities and relationships can have important implications for the student, their family, as well as their community.

Nurturing these things is through a path, through these rites of passage... I've seen a child or two in my experience in working with our families back home in the sweat lodge. There's just some kids that pick it up so quickly and I know that they're the ones that are going to seek after the lodge and that they are going to continue that tradition. It's just in their behavior, it's like they are older than they really are. They're precocious and they're like little old men in a kid's body or little old women in a kid's body. You know they are special and I see that as giftedness and so I've encouraged those kinds of kids that behave that way to continue learning and continue singing the songs because they are going to be the song keepers, the knowledge keepers. I look at people older than them, and they come to the lodge, but they are not interested that way that these kids are – it's just something different about them and the way they behave – they are just so respectful and I know they are gifted, I just know it, I feel it and I see that in how they act, how they behave. They are not acting like other little kids their age. So I nurture that in them, I encourage that in them. (Informant 1, 2017)

These individuals and their talents are important to their community and thus it is imperative that we find space within our current education practices to ensure that these students are not missed within our current gifted identification and nurturing processes. Failure of the community to recognize and nurture gifts creates a loss for the community, but gifts extend beyond those simply connected to the mental part of the Medicine Wheel, and thus we need to ensure we provide opportunities within the education setting to nurture more than just academics.

The Medicine Wheel is divided into the four factors representing the socio-emotional, sometimes called social and sometimes emotional; the physical; the spiritual; and the intellectual, sometimes called cognitive and sometimes mental. Gifts need to be recognized and nurtured in all parts, mental, physical, spiritual, and emotional.

There are a lot of kids that have it but it is not pressed or assessed for that. It's all mental stuff, all from that medicine part of the wheel that's mental. There is no emotional assessment. There is physical you can assess them in Phys Ed. Body skills, are they able

to throw the ball, are they able to be coordinated, to have body awareness. But what about spiritual assessment? So those are the two things I think that Western education forgets – is that spiritual part and that emotional part. (Informant 1, 2017)

Once the relationship is built and a student begins to reveal their gifts, teachers need to effectively engage that student in order to nurture those talents—*kiskeyitamowin* (Cree term). That may require the teacher to connect with the family or community in an effort to provide the child authentic opportunities in which to nurture cultural gifts along with rethinking or extending opportunities within the classroom by taking advantage of their curriculum's pedagogical foundations in incorporating other cultural understandings or ways of knowing. Informant 1 shared a story about a student with giftedness traits.

I am referring to that same little boy that I am referring to is learning how to play chess and chess is such a hard game. You have to know how to move in chess like 10 moves ahead of time in order to best your opponent and that's the kind of mind he's got and I think he gets that from his grandfather... I know he's got something DNA wise from his grandfather that same ability to think like that to think spatially and to be able to do that sort of work in chess – yeah he can play sports like other kids, but he's special. I know in school he shows that, he likes his math, he's a really good communicator, he likes storytelling, like already you can see it. (Informant 1, 2017)

In this case, it is important as non-Nêhiyâw teachers that we do not simply focus on nurturing the math traits that we culturally value as important, but to also recognize the value of the communication and storytelling gifts. Providing a learning environment with opportunities to nurture all three gifts from both Western and Nêhiyâw perspectives is essential. As a non-Indigenous educator, I may not possess the necessary perspective for nurturing Nêhiyâw giftedness, but I could look to other resources, including other people to help ensure we create an authentic learning space. Informant 1 provided some strategies for non-Indigenous educators working with Nêhiyâw students that share or show their gifts.

I think you start looking for things that would crop out of your creative lessons. That would encourage a child to think spiritually if there is such a way of doing that or to be spiritual and to be emotional. To be able to be sharing some emotional intelligence, being able to maybe bring out something because of your lesson, the way you've created

it to bring that out and to nurture that, to nurture those kids that excel in that and not to denigrate them like other kids would make fun of each other because of their gifts right. It's supporting those kids in that environment and making sure that the kids that excel mentally and physically be accepting of the kids that are the empaths, the kids that are able to be intelligent in that way, but yet encourage them to be mental too. Sometimes those kids are spacey they're the dreamers but it's bringing them down to earth in such a way that they are able to not lose that connection, to connect here earthly speaking, physically speaking, mentally speaking, be able to engage. It's finding that sweet spot so to speak, through your lessons and helping them. That's something I would do as a teacher knowing that there are more ways to learn than just that physical/mental way. There's an emotional spiritual way of learning too through use of hands, through manipulation, through beading, through working in the garden...using that problem based learning that inquiry based learning...they are able to think but they are able to feel as well. (Informant 1, 2017)

#### **4.1.5 Learning from informant 2.**

Informant 2 began by framing the knowledge shared as grounded in learning and experiences with Cree [Nêhiyâw] and Lakota language, culture, and traditions. This informant's background has provided opportunities and experiences in both Western and First Nations cultures.

Informant 2 began by sharing their understanding of giftedness from the Nêhiyâw perspective. They shared that within the culture there are many forms of giftedness and many ways to be gifted, that in fact everyone has gifts and these gifts have purpose and are important within the community. Everything is also a gift, the rocks, the trees, the plants and animals.

When it comes down to people being skilled, or talented, or having certain aptitudes, there's many different forms of that and I guess in our societies pre-contact, not so much now I guess, but it takes a community for everyone to function and there are different roles and all kinds of things from being a skilled hunter, or being skilled at working with birch bark, being skilled as an oral historian, there's a million different roles and so my understanding is people would be identified fairly young as having gifts in these certain things and it could be from observing them. (Informant 2, 2017)

Within the traditional community setting, children were watched carefully as they were cared for. Elders would look for aptitudes, gifts, and talents in the children's behaviours and if witnessed, the Elders would mentor them in building their skills.



I heard one woman [named Elder] say, she is kind of a medicine person, and she said one of the things they look for in kids to see if they might be a good fit for pursuing that kind of learning and service to their community is those kids who walk, they like being outside and on the ground playing in the dirt and they walk down a path and they are running their hands through the trees and they just like being connected and all of that so those are little tells that that person might be a person who has the aptitude to pursue that kind of learning. (Informant 2, 2017)

Children were also identified by the Elders within the community in more spiritual ways, through dreams or visions. This identification, whether through dreams or observations, could in some cases take place at a very early age.

[Named person] who I work with from the [division], he was identified as a ceremonial leader at the age of seven and I think he ran his first sweat at the age of nine or something like that so that's pretty young and that's a more modern example, but I think kids would be identified fairly early and then there would be a mentorship program or kind of program like mentor apprentice where you would just go and help and it wasn't direct instruction you just went and did it every day with that person and you would learn by being there. (Informant 2, 2017)

The process of identification of gifts and talents within the community is relational and teaching and nurturing of those gifts is active and experiential. Mentorship and teaching was the job of the Elders and Knowledge Keepers. The beginning of this process was the building of relationship, and, as the learning continued, the relationship, not the task, remained the focus. It is through the relationships that gifts reveal themselves, and through relationship that they nurture the children's gifts. Therefore, as educators, relational pedagogical practices are essential as we look to improve the gifted identification rates for First Nations students.

Even just being around kids and Elders while they're interacting and then the kids go do something else and we [Elders/Adults] just sit around chatting and someone will be like oh that one boy, he's a good speaker, he's got the attitude, the voice, he's got the presence to be a really good speaker. Even just things like that, always watching and observing and kind of being in touch, and it comes from having a relationship. You can't tell those things about people that you don't know and that you don't spend time with...it's just a natural way that Elders and more traditional people are always kind of keeping an eye out for those kinds of things it's just part of how they operate I think. (Informant 2, 2017)

Relational pedagogy also requires the teacher create a safe environment for learning: a place where children can trust that they are safe to reveal things about themselves, especially if these children represent a cultural minority within the classroom. In the case of students who represent a cultural minority, teachers need to take care of them as culturally located. To do this, teachers must create an environment that the student sees himself or herself reflected in. This will look different in all classrooms, but some things to consider include “honouring Indigenous ways of knowing and being, maybe more land based kind of education, more culture based education, language included” (Informant 2, 2017). This idea of relationship extends beyond the teacher and the student and includes the student’s family, the physical space, and learning activities, assessment practices, and the relationship fostered between peers.

The classroom teacher is a good place to start maybe since you spend a lot of time with the students and you can make some of those observations but you might not, for some of our Métis and First Nations students schools might be a safe place for them, it might not be a comfortable place for them where they are showing you all of their gifts necessarily. (Informant 2, 2017)

Once a safe environment is established, a gifted student may begin to start showing or sharing their gifts. If their gifts and talents are academic, academic gifted programming offered within the current process may work, but teachers still need to recognize that if that programming removes that student from their community, particularly if they experience cultural programming opportunities within the school, that the teachers involved need to proceed carefully. Decisions about placements need to include the student, family, and community elders or leaders.

Once decisions about where the programming supports will be provided, decisions about enrichment opportunities need to be made. Research participants were asked to consider the type of programming that would best benefit an Indigenous gifted student. Informant 2 suggested a number of considerations that educators should make when planning programming:

1. Incorporating other knowledge (ways of knowing) and tradition into the classroom learning and assessment environment
2. Building connections to the Nêhiyaw community by including family, knowledge keepers, and elders in the learning environment
3. Encouraging and honouring mentorship relationships (oskâpêwis) between Nêhiyaw students and Nêhiyaw Elders
4. Facilitating learning opportunities that give students a chance to give back to or connect with their community
5. Acknowledging place within the learning

One manner to facilitate this in an authentic way is for the educator to connect with the community that the student belongs to. This includes both the people and the physical community. This action can foster both relationship between the educator and the student allowing them to feel comfortable in fully revealing their gifts and talents, but it also provides the opportunity for the student to build relationship with their community and for the community to play a role in nurturing their gifts. This connection is important for both the student and the community as these students have the potential to play important leadership roles within their cultural communities. Informant 2 (2017) referred to these steps as the “Indigenizing of gifted education” which is done by recognizing other ways of knowing including recognizing gifts outside of the purely academic, building connections with the community, and ensuring opportunities for learning that are land based or place based and thus creating spaces for Indigenous gifted learners.

Informant 2 discussed the features of such programming. First, educators must understand the nature of the gifts and talents of the student. If these gifts are purely academic,

they can be nurtured in a way that balances Western educational practices and Indigenous knowledges. However, if the gifts and talents are rooted in the emotional or spiritual realm, greater efforts need to be made to connect the learner with leaders and teachers from within their own Indigenous community. Regardless of the nature of the gifts, the programming offered should allow the students to meet both their cultural and academic goals.

I can see a spiritually gifted school program having those people [students] working with the others [elders or knowledge keepers] and have them become their helpers and work with them as part of the program. I think that would be amazing to see and getting some school credit for it too. Not just as an extracurricular kind of thing, but having that recognition, recognized as an important kind of learning. (Informant 2, 2017)

Gifted Nêhiyâw students need to be provided with opportunities to learn and grow at a pace that fits both their individual academic needs as well as their cultural needs, and academic need should not be met at the expense of their cultural needs, but rather in harmony together.

Programming should be designed to meet the needs of all parts of the student, and should ensure a pathway that supports graduation within the current system. The difficult part for teachers, especially those from outside of the First Nations community, is finding ways to incorporate cultural learning in authentic ways, without relying solely on extracurricular programming to support Indigenous culture within the school setting.

#### **4.1.6 Common themes and understandings from Informants 1 and 2.**

Three consistent themes emerged from the interviews. The themes related to how giftedness is defined, assessed, and finally nurtured. These themes are consistent with the direction that the questioning guided. However, while correlating these data, the interesting piece to me was the degree of consistency between the two participants' responses.

*Definition.* Both participants provided wisdom on the idea that giftedness, as defined within Western culture, is more multifaceted within Nêhiyâw tradition. At the beginning of this thesis, current research in the field of giftedness guided the formation of a current working

definition for giftedness. This definition included ideas of brain structure and cognitive output. Within the context of Western science, brain scans have shown structural differences from the norm within the gifted brain. Unfortunately, brain scans to show the structural differences (although present, based on neurological scans and research findings) are difficult and expensive to attain and therefore an unrealistic tool for school systems to use for assessment.

Instead, the education system relies on evidence of cognitive performance in areas that include intellectual, creative, socio-affective, and sensory motor tasks. These measurements have been typically found using group administered standardized testing tools that are developed, tested and sold by large companies. As education budgets shift in priorities, staffing shifts to reflect these priorities. Clark (2013) presented an overview of the ebb and flow of funding for gifted education in the last forty years in the United States, with significant decreases seen in the last ten years. As funding for gifted education programs shift, standardized testing models replace teachers and response to intervention programs. School divisions rely on the use of tests that often report solely on the intellectual realm of giftedness. As a result, the applied definition of giftedness is based on abilities that can be assessed with low financial outlay, and therefore cognitive ability in math, language, and reasoning becomes the practical definition for giftedness within many of our school divisions (Clark, 2013).

The limiting and culturally biased definitions and assessments used within schools may result in Nêhiyâw student lack of representation regardless that they are equally gifted in areas of math, language, and reasoning. As research and education on the utilization of culturally responsive pedagogical practices evolves, there should also be an evolution on how we define different cognitive characteristics for culturally diverse learners. The new definitions must be grounded in the learner's cultural origins and identity and have consequences for educational

practice. Importantly though, as both informants recognized, within the First Nations community gifts and talents can be displayed in Nêhiyáw students through spirituality.

***An inclusive definition.*** A definition of giftedness for Nêhiyáw students would need to include the concept of spirituality. Thus, an inclusive working definition for giftedness for a school system that serves both non-Indigenous and Nêhiyáw students could be: Giftedness is a change in brain structure and physiology, which results in an individual being able to perform tasks at levels that significantly exceed the ability of others. These tasks can occur in intellectual, spiritual, creative, socio affective, and sensory motor domains. With appropriate developmental support and nurturing from teachers and Elders, these individuals can apply their gifts and talents in support of their community.

This definition was reached by combining current research on giftedness and the learning gained from the Nêhiyáw informants. This definition provides both insight into the areas where giftedness assessment needs to occur, but also addresses the need to nurture gifted students within the context of their own community.

***Assessment.*** Due to the fact that classroom teachers lack training in identifying gifted children, the assessment practices for identifying gifted students often relies on educational practices and assessment tools that are heavily influenced by standardization. The standardized tests (typically large-scale group screens) are designed to efficiently measure IQ scores as well as other cognitive ability scores. The tests are standardized, controlling the testing conditions and measuring, calibrating, and reporting the data normatively, as well as creating detailed reliability and validity measures. Repeatedly in the literature, concerns are noted about the use of standardized tests with cultural minority students. According to Stevenson, Heiser, and Resing (2016) cultural biases in the tests as well as the testing procedures may result in decreased

performance by students representing cultural minorities. Thus, First Nations' students are unlikely to reveal their potential on these tests. This was evident in the representation rates (2015-2016 school year) provided by a school division for this research. Based on the data provided, 6.35% of the general student population—those who have not declared any Indigenous ancestry, were identified and receiving gifted education supports. This is compared to 1.77% for those students that self-declared as either First Nations or Métis. Research has repeatedly shown that standardized assessments have reliability and validity concerns when used to measure the abilities of special populations including cultural minorities (Erwin & Worrell, 2012; Ford, 2010). When reflecting on the representation data it is possible that the standardized assessments used for the identification of gifted students appear to (based on the representation rates) be less successful in identifying First Nations and Métis students. According to the informants' data this is likely related to two key issues. The first issue is that the assessments lack questions that recognize 'other ways of knowing'. This can be particularly problematic for cultural minorities when assessing their crystallized knowledge. Crystallized knowledge or intelligence refers to a person's knowledge of their culture and their own application of this knowledge. It is developed through their experiences: at home, with their language, in their community, and at school (Flanagan, Ortiz, & Alfonso, 2013). As crystallized knowledge is often used as one of the factors for identification, the tests become culturally biased against students that do not grow up as members of the cultural majority. Therefore, the testing tools themselves can fail to identify giftedness for Nêhiyaw students.

The second issue with assessment is when the assessment process has an overreliance, or sole reliance on a standardized assessment screening tool. This type of assessment process does not come from a position of relationship. One research participant even noted that students

might be fearful of divulging their gifts if a relationship is not first built — “so some kids divulge that but they only do so because they trust you” (Informant 1, 2017). Large scale standardized assessments are not designed to be relationship building, but they were not designed to be used in isolation. They do not honour First Nations’ ways of knowing, and although some of our First Nations’ students have been exposed to Western culture and ways of knowing and will be successful in these testing environments, many will not and the experience will be further marginalizing (Battiste, 1998). As the survey data indicated, the IQ scoring data served as the dominant factor in the identification of the students for gifted programming supports. The second most valuable tool was observation and identification by a gifted education consultant. Both interview participants raised concerns about assessment practices that lack authentic relationship. Recognizing these concerns, it is fundamental for the success of our First Nations students to build relationship, before assessments take place. Informant 2 (2017) described the following:

Even just being around kids and Elders while interacting and then the kids go do something else and we just sit around chatting and someone will be like oh that one boy he’s a good speaker he’s got the attitude, the voice, he’s got the presence to be a really good speaker even just things like that always watching and observing and kind of being in touch and it comes from having a relationship. You can’t tell those things about people that you don’t know and that you don’t spend time with and that’s probably one of the biggest challenges I think here, because we’re looking at a very narrow definition of Giftedness it’s sort of more of an intellectual thing that we would measure through standardized tests [pause] just a natural way that Elders and more traditional people are always kind of keeping an eye out for those kinds of things it’s just part of how they operate I think.

As an education community, we need to become more aware of how our Eurocentric practices are marginalizing our Nêhiyaw and other First Nations’ students and turn to our students cultural community to broaden our instruction and assessment practices when working



with First Nation youth – to step out of our Eurocentric box and build relationships that invite us into their circle.

*Culturally responsive gifted programming.* The final theme that was common between the interview participants was that, in their experiences, gifted programming currently offered to Nêhiyaw students fails to connect the student with their culture and community. This problem is quite complex and the capabilities of gifted programming are tied closely to funding. As I was beginning my research, and focusing my research question, a colleague asked me the reason I, as a non-Indigenous researcher, had chosen this topic (this colleague was Nêhiyaw). This challenge to my thinking was valuable throughout the process as my colleague further challenged me on the root of my questions – who are you doing this for? This language resurged during my interviews and throughout my analysis. The basis for my question was rooted in an interaction with two students. They had come into my classroom to visit and asked what the group of students at the table were doing. I told them that they were working on a project for the gifted program they were in, and their response was it looked cool, but kids like them (implying Nêhiyaw) didn't get to go in that program. I had not recognized this. As a former student from gifted program education I saw myself in that group and I could see myself in that space, however, these students did not. I looked around my classroom and thought about who could see themselves represented in this place and in what I taught and how I was teaching. We had been discussing inclusive spaces since I was in University, but I had failed to see this meta-lesson that our school had cultivated, which for these students was First Nations kids are not in the gifted education programs. As an educator, maintaining a reflective practice is important and, therefore, I began this journey. As the statement of these students drove the problem of practice, I felt the data and potential for solutions would come from their community. Therefore,

identifying First Nations students should be for their benefit and the nurturing of their gifts and talents should benefit their community, families, and themselves.

Identification and programming are explicitly tied. If one cannot provide appropriate supports for the identified student, then questions need to be raised about the value of the identification. For Nêhiyaw students, it is important that gifted programming allow the student to connect with their community and the place that they live. Their gifts and their talents should be nurtured to benefit themselves, their language, culture, and community. Wherever possible, opportunities to connect with Elders and Knowledge Keepers should happen.

All students should be provided the opportunity to take their gifts to work with their community.

You have to have a relationship and connections with all those people and they have to be comfortable enough talking to you and comfortable enough too with the idea that these students might be taken away from their community, classmates and peers to another program that may be even more Eurocentric than where they are. I don't know where things are at but you might be, take a kid from say [named school] a Cree [Nêhiyaw] language school, one where they have their culture around them all the time and you are going to take them out of there and take them to another school where the culture is not really there and are going to be in the gifted or advanced program—is that something that the student or family wants and maybe, maybe not. It's hard it's really difficult to say so. (Informant 2, 2017)

Therefore when designing gifted education programming, carefully considering the type of enrichment and where the programming takes place is important for our gifted First Nations students. Informant 2 (2017) noted that as we recognize that gifts come from all four directions, each gift needs to be uniquely nurtured in its appropriate place.

## **Chapter Five**

### **Conclusion**

In this chapter, I will discuss the educational recommendations garnered from the findings of the current study. The goal of this chapter is to provide educators with insights as to the identification and nurturing of giftedness for Nêhiyaw students.

#### **5.1 The Assessment**

The reliance on large scale standardized testing for the assessment of giftedness for Nêhiyaw (or for any cultural minority) may not yield valid results, primarily if the test's standardized sample does not match the demographics of the population being tested. Therefore, educators need to employ additional assessment strategies. These strategies are relationship based and therefore who is doing the assessment matters. Based on the suggestions of the informants, strategies could include: careful observations of student interactions with people and nature, creating trust environments where students feel comfortable to share, and discussing observations with other members of the student's community, including family or elders.

Nêhiyaw students may be reluctant to reveal their gifts and talents due to embedded fears and distrust of the education system. As longer-term relationships can be built within the school setting, the classroom teacher in collaboration with the family may provide the best options for gifted identification. Working as a team, the student's family members and teacher can work through existing gifted checklists, evidence of behaviour and knowledge from both Nêhiyaw ways of knowing as well as Western philosophies, and evidence provided by Elders and Knowledge Keepers from their own community. Using the evidence collected, judgments can be made regarding cognitive abilities. Once an understanding of their cognitive abilities is reached, programming supports can be put into place.

Connections can also be made using traits of gifted behaviors and applying them within the Nêhiyâw cultural context. Clark (2013) lists the following traits related to cognitive function: storage and retention of large amounts of information, advanced comprehension, unusually curious, high level of language development, ability to process information quickly, comprehensive synthesis, and complex abstract thinking (p.47-48). When working with Nêhiyâw students we may see these traits expressed as follows: can retain and tell complex stories that have been shared with them [âtayôhkêw], curious about how the world works [ayapinikesk] as shown through a desire to physically interact and inquire about nature, interested in learning how different things are interrelated, able to explain (perhaps through story) the relationship between themselves and the land (Informants 1 and 2, 2017).

## **5.2 The Environment**

Student success, for all students, is directly related to a student's ability to see themselves within their learning environment. For Nêhiyâw and other First Nations students, this feeling of belonging will vary greatly depending on the school they attend and the programming that is offered. Depending on the school that a student attends, they may see their culture reflected in the language that is spoken, see it in the books in the library, the art on the walls, and within the places that learning happens. They may have opportunities to hike and gather paskwâwihkwaskwa [sage], maskêkopakwa [muskeg for tea], or wîhkwaskwa [sweet grass]. They might have the opportunity to sit with, listen, and learn from Elders – gifted children will show a special ability to listen [nahihtam]. They may have opportunities to participate in ceremony [isistâwin]. Through these experiences students are able to connect to their world – their worldview – their way of knowing and understanding their world. It is also through these

experiences that gifts and talents may be revealed. This is reiterated from a story shared by Informant 1 while interacting with kids at their lodge:

I've had kids that come into my lodge and some of them are really intuitive – I don't know where they get it from. They are intuitive, they know they are in ceremony, they are older – or they seem to be older than they are. They sing the songs and it seems like they have a purpose. I've seen a child or two in my experience in working with our families back home in the sweat lodge. There's just some kids that pick it up so quickly and I know that they're the ones that are going to seek after the lodge and that they are going to continue that tradition. It's just in their behavior, it's like they are older than they really are. (Informant 1, 2017)

Without offering the opportunity for these students to experience their culture, we may miss an opportunity to see their expression of wisdom or intelligence [iyinisowin], which is hidden when observed from our Western worldview.

One of the ways giftedness is expressed by Nêhiyâw and other First Nations students is through spirituality. Based on my learnings from the two informants, I recommend incorporating land based learning and ceremony into the classroom. This provides opportunities for Nêhiyâw and other First Nations students to experience this learning and to express this form of giftedness. As educators continue on our journey of reconciliation teaching in Canadian schools, there are also many benefits for non-Indigenous students to experience this type of learning as well. As a non-Indigenous educator it is important to build relationships with Elders and Knowledge Keepers as these relationships can support both my work with students as well as help to bridge relationships between leaders in the First Nations communities and my students. In working with Nêhiyâw students that I suspect possesses giftedness, building these relationships within the classroom may be invaluable when it comes to identifying and nurturing their gifts.

How might this look? The participants in this research suggested a number of ways to facilitate these types of experiences within the classroom. First, school divisions have resources,

and Elders and Knowledge Keepers who can support teachers. Teachers must consider cultural practices and protocols for inviting guests. There are organizations including: Indigenous Cultural Centers, universities, and school division employees including FNM departments that can help to connect teachers with an Elder or Knowledge Keeper. It can take time to build a relationship with an Elder, so teachers are encouraged to access school division and community resources early and often. Teachers might find Elders and knowledge keepers who are members of their students' families, or within the school community. Working to build a relationship with an Elder, and supporting the relationship building between Elders and students can be transformative in the classroom environment. For First Nations children, these relationships illustrate the importance and value of their culture within the classroom. For non-First Nations students, these experiences raise their cultural awareness and facilitate thinking on issues related to reconciliation; they may also connect with these ways of knowing revealing their own gifts and talents within this context of learning.

Some teachers might also be able to draw on students and their families. Care should be taken here, since Indigenous peoples have been marginalized, and it is not fair to then ask them to teach their oppressors. However, it is important to build connections between the school and students and their families. As families are invited and present in the school, it builds trust and opens dialogue between the family and the school. Through these relationships, parents may share information about a student that may lead to a discussion of giftedness.

### **5.3 The Instruction**

Teachers have a responsibility to all students in their care. They need to teach in a way that all students feel that the differences that they bring to the classroom are of value to the classroom environment. Students should see that their differences enhance the learning of

everyone present. Teachers need to ask themselves what kind of experiences and opportunities they need to create within the classroom so that all students can see themselves within the classroom, within the stories, in the lessons, and learning experiences they have created. When planning for instructions teachers need to consider how they show students they value and celebrate their cultural differences. In doing so, teachers create a culture within the classroom that create a safe place for other ways of knowing, creating a place where students feel safe to share their understanding, even if their ways of knowing differ from what the teacher has shared. Those differences need to be celebrated within the classroom as they will enhance everyone's learning. It is within an environment like this that gifted Nêhiyáw students may begin to share, providing insight for the classroom teacher on how they understand the world and how those gifts could be nurtured.

As learning through story is one way of incorporating Indigenous ways of knowing and acknowledging relationship in the classroom, I will model that strategy here. Electricity is a unit of study that repeats itself in three separate grade levels. As I have grown in my career, my ability to step out of the comfort of my own epistemology of science and incorporate other ways of knowing has also grown. As I plan for lessons, I look to my students as guides to the path for exploring our learning. The class and I began the study of electricity with a story, legend, shared via YouTube from a West Coast First Nation perspective on lightning. We collected a list of what we had heard and what we had seen. We then used this list to make connections to what we know about lightning and thunder from a western science perspective. We then worked on a split page drawing showing a representation of thunder and lightning from both perspectives. While drawing, a student who rarely shares in class shared with the class a third perspective taught to him by his grandfather. This is a paraphrase of his story. In contrast to the legend we

had listened to, the student told us about Thunderbirds who originated from a rock nest, as Thunderbirds were here before the plants. The birds could take human form and in this form spoke thunder and flashed lightning from their eyes. They are black and can hide in the dark clouds, even though they are two canoes long. Their relationship with the land and with the people brought the birth of the forests. As forests grow old the Thunderbirds will fly over igniting them with fire so they can regrow. The new forest gives people the resources they need for food and shelter. He told us that the new Thunderbirds are born in August and that is why there are so many thunderstorms in August. As a class we added this to our see and hear chart. We found that we could make connections across the chart, that the teachings were often the same, but how it was explained looked different. To this point, this student had rarely volunteered to share in class. There are many possible reasons as to why this student chose to open up. By introducing the video, which brought a West Coast First Nations perspective into the classroom environment, did he feel that First Nations ways of knowing were valuable? Was it because he thought the West Coast First Nation got it wrong, and he wanted to express a correct version? Was it because he felt comfortable in the class, because relationships within the classroom community had been established?

Through the creation of these spaces for learning, our gifted Nêhiyáw students may begin to reveal themselves. They may begin to share how they see and interpret their world. They may shed light on the complex ways that they see themselves in relationship to their community, their spirituality, their stories, and the land. These experiences set up opportunities for teachers to identify gifted Nêhiyáw students. As students begin to reveal their talents, there are a variety of supports the classroom teacher can access. Teachers can refer these individuals to specialized gifted education teachers, so they can be considered for extra gifted programming. Teachers can



also turn to the First Nation community to access resources to help the students to learn, grow, and share in their gifts.

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## Appendix A

### Guiding Questions Interviews

#### Interview Guiding Questions

- a. There is a concept known as “giftedness” in western white modern culture [provide definition]. I am wondering if in your culture and tradition, you have a concept for a child showing giftedness and how it would be described?
- b. Were people identified as “special” in particular ways or invited to take on specific roles?
  - Are a child’s individual gifts tied to specific roles within the community, and as such, are roles (Chief, Elders, Knowledge Keepers, Medicine People) assigned based on these gifts or are children expected to make their own decisions as to their roles within the community.
  - ii. What were the indicators or in what ways is giftedness expressed and observed?
- c. Given that a gifted program exists and functions in this way [describe current GSCS programming]—is it appropriate for schools to identify gifted Nêhiyâw children?
  - i. What traits should we look for in the child and how do we most effectively look for these traits?
  - ii. What qualities and education is important for those working with these children?
  - iii. What would you suggest we do to ensure the needs of gifted Nêhiyâw children are met?

## Appendix B

### Survey Tools

#### Gifted Education Teacher Survey

Please rank the following indicators (1 through 5) for identifying giftedness within your school division. Rank as 1 the **MOST COMMONLY USED**. Rank as 5 the **LEAST COMMONLY USED** indicator.

In your experience, IQ has been the DOMINANT factor in determining student participation in gifted programming.	
In your experience, scores on standardized ability tests have been the DOMINANT factor in determining student participation in gifted programming.	
In your experience, parent referrals have been the DOMINANT factor in determining student participation in gifted programming.	
In your experience, classroom teacher referrals have been the DOMINANT factor in determining student participation in gifted programming.	
In your experience, your own classroom observations/interactions have been the DOMINANT factor in determining student participation in gifted programming.	

Please rank the following indicators (1 through 5) for identifying giftedness within your school division. Rank as 1 the **MOST VALUABLE**. Rank as 5 the **LEAST VALUABLE** indicator.

In your experience, IQ has been the DOMINANT factor in determining student participation in gifted programming.	
In your experience, scores on standardized ability tests have been the DOMINANT factor in determining student participation in gifted programming.	
In your experience, parent referrals have been the DOMINANT factor in determining student participation in gifted programming.	
In your experience, classroom teacher referrals have been the DOMINANT factor in determining student participation in gifted programming.	
In your experience, your own classroom observations/interactions have been the DOMINANT factor in determining student participation in gifted programming.	

Gifted Education Teacher Questionnaire Form – Likert Scale

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. My undergraduate university training adequately prepared me to identify gifted behaviors exhibited by students in the classroom setting.	1	2	3	4	5
2. Professional development offered locally (division, provincially, or graduate work) adequately prepared me to identify gifted behaviors exhibited by students in the classroom setting.	1	2	3	4	5
3. Professional development offered internationally adequately prepared me to identify gifted behaviors exhibited by students in the classroom setting.	1	2	3	4	5
4. Once identified, programming supports these students in building relationship with like ability peers.	1	2	3	4	5
5. Once identified, programming supports these students in building relationship with community mentors.	1	2	3	4	5
6. Once identified, programming supports these students in building relationship with their family.	1	2	3	4	5
7. Once identified, programming supports these students in building relationship with their cultural community.	1	2	3	4	5

Optional: Comments for the researcher to consider.

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