

**BUILDING ALLIANCES TO UNDERSTANDING AND WORKING WITH STUDENTS
AFFECTED BY FETAL ALCOHOL SPECTRUM DISORDER**

by

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ABSTRACT

The purpose of this thesis was to examine the question, “What are the differences in the attitudes and beliefs between Aboriginal and non-Aboriginal teachers with regards to students with fetal alcohol spectrum disorder (FASD)?”.

I randomly selected Aboriginal (n=5) and non-Aboriginal teachers (n=5) to participate in a semi-structured interview and to complete a series of 13 vignettes with the researcher. The teachers represented five schools in northwestern BC; three at the local high school and seven from four elementary schools.

I assessed the interview data qualitatively and the vignettes quantitatively. The data revealed that there were many shared beliefs between the two groups of teachers. The differences were apparent in their “variant” orientations, or the nuances in behaviour. Many of the dominant orientations were similar between the two groups. I conclude the thesis with recommendations for further research and present my conclusions for the study.

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Chapter 1: Introduction

Students with special needs often struggle in the public and private education system, whether on reserve or off. Public attention and policy has been focused on the needs of these students in the hopes of improving their educational outcomes. I was interested to learn more about the attitudes of teachers towards their students with special needs. In particular, I was interested in students with fetal alcohol spectrum disorder (FASD), and the attitudes and beliefs of teachers, whether Aboriginal or non-Aboriginal. This cultural perspective was of particular interest to me because of the cultural composition of the community in which I live and work.

The teachers whom I interviewed for this research unanimously believed that there is an increase in the number of children with exceptionalities in the school system in British Columbia, as definitions become more precise, assessment practices become more refined, and research informs practice. FASD is one disorder that many teachers believe is on the rise. In fact, in recent years, school boards have not reported an increase in the number of high-incidence disabilities, including chronic health, which is how FASD is categorized. The number of high-incidence special needs students in BC has declined from 48,021 students (8%) in 2001/2002 to 37,401 (6%) in 2006/2007 (British Columbia Ministry of Education, 2007). In terms of funding, allocations for students with high-incidence disabilities in provincially-funded schools are part of the base allocation to the school. This funding is in contrast to low-incidence disabilities, which are supported through supplemental funding to school boards each year, and are based on enrollment numbers.

It is difficult to accurately quantify Canadian FASD prevalence rates, as a result of several factors which include difficulties in obtaining a diagnosis in some locations and the cost of the diagnosis (CanFASD, 2012). If a conservative estimate of 3.5 cases per 1,000 births is used as a rate for FASD (Government of British Columbia, 2003), then, out of the total of 40,000 live births per year in BC, as many as 140 children that enter the education system each year may be affected by prenatal alcohol exposure. A more commonly-accepted prevalence rate is 9.1 per 1,000 live births, or roughly one percent of the population (Health Canada, 2006), which is considerably higher than the number currently used in BC. The Health Canada rate is a national one, extrapolated from studies conducted in the United States. Based on a prevalence rate of one percent of the population, the annual cost of FASD in Canada is estimated to be approximately \$7.6 billion (Thanh & Jonsson, 2009).

A reclassification of language regarding FASD in the literature and in day-to-day use is another factor that makes the prevalence rate difficult to calculate. FASD is a more recent umbrella term that refers to the spectrum of disorders associated with prenatal exposure to alcohol; it is not a diagnostic term. In general, FASD replaces the use of FAS (fetal alcohol syndrome), FAE (fetal alcohol effects), and ARND (alcohol-related neurodevelopmental disorder), unless specifically a medical diagnosis. This change has resulted in some confusion with regards to prevalence, particularly when trying to make comparisons between older and more recent rates. A previously-documented FAS prevalence rate of 3.0 per 1,000 is not necessarily equal to an FASD prevalence rate of 3.0 per 1,000. The latter figure suggests a lower prevalence overall, as there are likely cases of FAE and ARND not reported in the FAS rate.

Obtaining accurate prevalence rates would be a strong indication that the Canadian government and individuals care about this disorder and the people who are impacted by it. Additionally, accurate numbers would bolster appropriate funding levels for research, prevention and intervention initiatives, and diagnosis. Adequate diagnostic facilities and funding are available to accurately determine the prevalence rate of other diseases and disorders, such as breast cancer.

Background to the Research

Both the British Columbia Government (2003) and the Health Canada (2006) prevalence rates indicate that FASD is a significant issue in communities and in schools. The prevalence rate of FASD in the four small, largely First Nations communities in northwestern BC, which is the geographic location of this research, is likely under-reported. It is my intuition, based on numerous conversations and reading, that currently the local prevalence rate is unknown. Anecdotally, the numbers are high. Studies have been undertaken which quantify the prevalence of FAS in this part of the province, although there are no recent studies since existing studies occurred before FASD was a term in common usage.

For instance, Robinson and his colleagues from BC Children's Hospital, carried out a systematic evaluation for FAS and FAE for most every child and mother in an isolated, unnamed community in northwestern British Columbia (Robinson, Conroy, & Conroy, 1987). Of the 123 children who were living in the community, 116 children were included in the study group. The children were interviewed, educational screening was carried out for children in Grades 1 – 12, and medical examinations were performed on each of the 116 children. The educational screening included a rating of

the child's general learning ability, ratings of ability in five specific subject areas, ratings of the child's activity level (e.g., hyperactive) and aggressiveness, and an indication of whether school personnel wished to refer the child for in-depth psycho-educational assessment. Prenatal alcohol use was confirmed and 22 children were diagnosed with fetal alcohol syndrome/fetal alcohol effects (FAS/FAE). Of that number, 14 had FAS and eight had FAE. Accordingly, the prevalence rate of FAS/FAE was 190 per 1,000 in children age 18 or younger in the research community that Robinson and his colleagues studied.

The impact of a formal diagnosis of FASD for an individual and his or her family is significant. In an educational context, the diagnosis can result in increased services and possibly changed outcomes in terms of a life trajectory. Unfortunately, for the many children who do not obtain a definitive diagnosis, many of these opportunities are not available. For these undiagnosed children, the implications of prenatal exposure to alcohol can still include delayed speech and language development, compromised executive functioning, possibly a diminished intelligence quotient (IQ), and growth deficiencies, but without the benefits of early intervention at the school or community level (Burgess & Streissguth, 1992; Duquette, Stodel, Fullarton, & Hagglund, 2006b).

Working as the Educational Advisor at the local community college, I interview many students who return to school as adults with the intention of upgrading their marks, completing their Adult Dogwood, or both. Many students explain that they did not complete high school, citing poor academic performance or behavioural issues as the main reasons. The constellation of stressors experienced by young people in northern, largely First Nations' communities with high levels of unemployment is great.

Rarely would any single one of these stressors be the sole explanation for their truncated schooling.

Given earlier research about the preponderance of FAS in this region, it seems possible that this disorder is one of the key educational disadvantages experienced by many of the current, unsuccessful students. In fact, some of the students I have talked with at the community college could have been part of Dr. Robinson's research in 1987; the younger children in his research cohort would be approximately 32 years old today.

Overview of the Research

This current thesis research explores teachers' attitudes and beliefs towards their students with FASD. Specifically, the study examines the attitudes and beliefs of Aboriginal and non-Aboriginal teachers, in relation to their students with a formal or perceived diagnosis of FASD. E-mail correspondence with Dr. Ann Streissguth (personal communication, October 26, 2011) established that research in the area that I have undertaken does not exist and has not been published, which is further confirmed by my literature review. In general, the published articles relate to FASD and educational approaches, teachers' perceptions of the inclusion of exceptional children in their classrooms, or cultural differences between teachers or students. I did not discover any published research discussing the differences in attitudes between Aboriginal and non-Aboriginal teachers towards their students who may have an acquired brain injury caused by the maternal consumption of alcohol during pregnancy.

Educators and the BC Ministry of Education have considered the learning styles and needs of Aboriginal students. Many school districts have Aboriginal Education Enhancement Agreements which are working agreements among the school district,

local Aboriginal communities, and the Ministry of Education, designed to enhance the educational achievement of Aboriginal students (British Columbia Ministry of Education, n.d.). Furthermore, entire university-level education programmes are dedicated to meeting the unique needs of Aboriginal students and pre-service teachers (UBC Faculty of Education, 2012). With this current research, I considered the two separate cultural groups of teachers concurrently, and explored their attitudes and beliefs towards students with FASD. This is a unique research approach, investigating two cultural groups of teachers side-by-side about a prevalent issue (FASD), which affects both of them in their professional roles.

I used a combination of interviews and vignettes to ascertain the participants' views. As used in this research, a vignette was a short anecdote followed by two or three possible outcomes (Kluckhohn & Strodtbeck, 1961). The teachers were asked to select their preferred outcome, the second preferred outcome, and the one that the teacher believes most other teachers in their cultural group would select, thereby ranking their responses. The schedule of vignettes is included in Appendix A and this approach is discussed more fully in Chapter 3 – Methodology.

There are several theoretical frameworks, methodologies, and approaches that could have been adopted for this research, depending on my personal and academic motivation. As mentioned earlier, the community in which I live is largely Gitxsan and I am interested in the attitudes of the Aboriginal teachers who live near the “river of mist” (the Skeena) and the attitudes of many of my non-Aboriginal teacher colleagues. I see signs of the differences in values exhibited by teachers in several domains: at the college where I work, at the high school, and at the local elementary school. The more

time I spend with people, listening to their stories and working with them daily, the more I want to understand their perspectives. As such, the primary research tradition I followed is ethnography.

LeCompte and Schensul (2010) defined applied ethnographic research as “research that is used to develop and assess approaches to solving problems or helping to bring about positive change in institutions or communities” (p. 13) using the concept of culture as the lens to interpret the results. In the case of my research, results may be useful for their relevance to this specific geographic area and the knowledge gained may, through its existence, bring about changes in the community. An interpretive lens was used as the epistemological paradigm to frame my questions. This is also described more extensively in Chapter 3 - Methodology.

There is a common misconception that FASD is associated primarily with certain ethno-cultural backgrounds. Studies of certain groups (i.e., Aboriginal people) may support this thinking, as two of the most common facial features associated with FAS, the flat philtrum and short palpebral fissures¹, occur normally among Aboriginal people (Ollech, 2001). Van Bibber (2011), researcher and educator, noted at a recent FASD conference in Vancouver that countries with the highest rates of FASD are also the ones with a history of colonization. The majority of the population in this area of northwestern BC is First Nations, but the ethno-cultural focus of this study will be on the ethnicity of the teacher, not the ethnicity of the student since my research is about the teachers' attitudes and beliefs. While there are more Aboriginal students here than

¹ The philtrum is the vertical groove between the nose and the upper lip; the palpebral fissure is the eye slit length.

non-Aboriginal students, there was no intention on my part to seek out one group of students over another; I was interviewing teachers.

Purpose of the Research

FASD is one of the most pressing, misunderstood issues that I see in my work as the Education Advisor at the community college. I see instructors struggle with how to best meet the needs of students; I see students struggle, grappling perennially with the same issues in the classroom. While research is available to assist teachers in the classroom to instruct their students with FASD, nothing suggests that Aboriginal and non-Aboriginal teachers may approach their students with FASD differently. One of the purposes of the research is to determine if this is the case.

There are potential implications from the research for teacher education (formal university-based training, as well as professional development opportunities), for the allocation of resources within this geographic region for education, and possibly for more extensive diagnostic services. While not a purpose for the research, this research will become part of the existing literature and may be pursued further by other researchers, or me, at a later date. These implications will be discussed further in Chapter 6 – Concluding Remarks.

Researcher Context

I am a non-Aboriginal woman, who has lived in this community for the past eight years, mainly on First Nations reserve land. In my employment as the Educational Advisor for the local community college, as a part of my job, I regularly interview people who did not complete high school, either because they were asked to leave, or who left

of their own volition. These individuals continue to struggle with their courses, particularly mathematics. It has been suggested to me by many that this situation could be related to FASD, although data specific to this community regarding prevalence are limited.

The differences and occasional similarities in viewpoints of teachers and special education assistants about a variety of issues, including FASD, have been recurring themes for me for the last eight years. These observations have led me to the research question, "What are the differences in the attitudes and beliefs between Aboriginal and non-Aboriginal teachers towards students with FASD"? I decided to use an ethnographic framework to address my research question, as I was interested specifically in the cultural differences between teachers in the community in which I live, with regards to certain values.

Definition of Terms

Below are terms used regularly throughout this thesis. Definitions are provided to support the use of the terms in this document. These are not necessarily the only definitions, but they are useful in understanding my intention.

Attitude: The way a person expresses or applies his or her beliefs and values. Generally attitudes are expressed through words and actions. For example, at the college where I work, the learning assistance coordinator supports all the students, but has a particular interest in students with FASD. This attitude can be seen in the coordinator's willingness to suggest appropriate accommodations for these students.

Aboriginal: Comprised First Nations, Inuit, and Métis people. For this study, the participants were all First Nations; I did not differentiate between people who were

status or non-status. Initially the names of Aboriginal teachers were provided to me by the principal of each of the schools. I accepted that the teacher's agreement to participate as an *Aboriginal* teacher was confirmation of their birthright.

Beliefs: Convictions individuals hold to be true, not necessarily with proof or evidence. For example, some teachers believe that they do not have any students with FASD in their classroom.

Fetal alcohol spectrum disorder (FASD): A brain-based disability caused by the maternal consumption of alcohol during pregnancy.

Culture: A group of individuals who share similar beliefs, customs, interaction patterns, and language. This notion operates at varying levels of specificity: Western culture, Canadian culture, white middle-class culture, and culture of a particular school or a particular classroom (McAlpine, Eriks-Brophy, & Crago, 2006).

Non-Aboriginal: In this case, the term is used to encompass everyone who is not Aboriginal. I did not ask participants about their cultural heritage.

Teacher belief: Tacit, often unconsciously-held, assumptions about students, classrooms and academic material to be taught (Kagan, 1992).

Value: A measure of the worth or importance that a person places on something. Generally these govern the way we behave, communicate and interact with each other.

Chapter Summary

This chapter identified that the purpose of the research was to isolate what the differences were between Aboriginal and non-Aboriginal teachers' attitudes towards and beliefs about students with FASD. The complex nature of determining prevalence rates for FASD was discussed. As a result of this complexity, the true extent of the

disorder is not known. By some estimates, as much as one percent of the population may be impacted by the effects of prenatal exposure to alcohol (Health Canada, 2006). The implications of this statistic in the classroom and in the community are significant, as is the estimated \$7.6 billion paid by Canadians each year in associated costs (Thanh & Jonsson, 2009).

The findings from previous research (Robinson et al., 1987) indicated that the prevalence rate in this region of northwestern BC may be much higher than 3.5 per 1,000 or even 9.1 per 1,000. This latter figure is more in accordance with my experience in my employment at the local community college. In part because of this prevalence, I have been exceptionally interested in this disorder throughout the period of my graduate studies, and have focused much of my research on various aspects of this brain-based disability, including speech and language issues and classroom implications. Given the bi-cultural nature of this region, I wanted to explore the issue from an ethnographic standpoint, particularly from the perspective of the teachers. This perspective allowed me to undertake research that has not been conducted before, using a proven approach for determining cultural variation.

Chapter 2: Literature Review

Chapter 1 outlined the aim of this study which is encapsulated in the research question, "What are the differences in the attitudes and beliefs between Aboriginal and non-Aboriginal teachers towards students with FASD?". Also included was an overview of FASD, suggestions regarding the prevalence of this brain-based disability, and the impact of the disorder that I see on students as the Educational Advisor for the local community college.

In this chapter, I provide an analysis and summary of the professional literature, beginning with a discussion of fetal alcohol spectrum disorder (FASD) and its symptoms, particularly in relation to school-age children. Then I consider studies and research related to screening and diagnosis for FASD at various ages, in schools, and in the community. Then I review studies related to teacher beliefs, particularly to teachers and students with disabilities, including FASD. From there, I discuss specific studies which examined culture and learning disabilities. In the absence of studies specific to teachers, I provide a review of the perspectives of families and their children towards learning disabilities. Finally, I explore a number of studies which considered cultural assessment, and introduced the concept of cultural value used by Florence Kluckhohn and Fred Strodtbeck.

There was a clear rationale for these particular areas in the literature review. First, this study is about teachers. After introducing FASD as a considerable issue, particularly in schools, the focus of the literature review was given over to teachers, their beliefs, and their relationship with students with disabilities, including FASD. Second, but equally important, this study is about culture and whether there are

differences in the attitudes and beliefs of teachers from differing cultures towards students with disabilities. The articles confirmed that anthropologists have considered issues related to culture previously but none, before Kluckhohn and Strodtbeck (1961), had an adequate tool for measuring cultural values. Very few studies of this sort exist in the field of education.

Fetal Alcohol Spectrum Disorder

Jones and Smith (1973) first described fetal alcohol syndrome (FAS) in North America. These researchers recognized a distinctive pattern of malformations among infants born to alcoholic mothers. They proposed that children's behaviours and academic developments could be impacted by prenatal exposure to alcohol (cited in Chudley, et al., 2005; Streissguth, 1997; Watson, Westby, & Gable, 2007).

Since FAS was first described, it has become apparent that people affected by FAS exhibit a wide range of characteristics which can include severe growth restriction, intellectual disability, birth defects, and characteristic dysmorphic facial features. They can also include normal growth, facial features, and intellectual ability but with lifelong deficits in several domains of brain function (Chudley et al., 2005). This consideration makes the disorder particularly relevant for teachers.

FASD is the current "umbrella" term for disorders related to the effects of prenatal alcohol exposure on the developing fetus and embryo. Included in this designation is fetal alcohol syndrome (FAS), alcohol-related neurodevelopmental disorder (ARND) and fetal alcohol effects (FAE). In order to be definitely confirmed, FASD requires a medical diagnosis.

Physicians and others use terms such as FAE and ARND to describe children with definite prenatal exposure to alcohol and less severe physical effects (Burgess & Streissguth, 1992; Duquette, Stodel, Fullerton, & Hagglund, 2006a). Unique FAS facial features result from the specific timing of prenatal alcohol exposure.

In the late 1990s, Astley and her colleague (Astley, 2004) developed a diagnostic tool for FASD. Astley and Clarren considered four attributes in their numeric scale: growth retardation, characteristic facial dysmorphism, damage to the central nervous system, and confirmation of maternal drinking during pregnancy. This diagnostic tool is described more thoroughly in a subsequent section of this literature review.

The damage a child incurs as a result of fetal alcohol exposure is not dose dependent since contributing factors could include the physical size of the mother, nutritional intake, or the presence of binge drinking (Burgess & Streissguth, 1992). While the physical damage may not be as apparent, children and adolescents with FASD, depending on the severity, may be as obviously affected cognitively as children with FAS.

The danger with alcohol is that it is an invisible chemical teratogen, altering the developing fetus which is in contrast to thalidomide, for example, which is a highly visible teratogen, causing shortened or missing extremities. It is not known how much alcohol a mother has to consume before the fetus will be affected, but 30% – 40% of the women who drink heavily have babies with FAS (Burgess & Streissguth, 1992).

Watson et al. (2007) expressed a concern that use of illicit drugs, including alcohol, has reached epidemic proportions, and will have significant public health and educational implications. According to these researchers, the number of children born

to mothers who have abused alcohol and other drugs during their pregnancy has increased immensely in recent years. They cited a 1996 United States' National Institute on Drug Abuse figure that 5.5% of women used an illicit drug while pregnant. This figure includes alcohol and other drugs, and does not separate the two teratogens.

Garber (2009) described a comparative study in which three distinct groups of children (n=60) at an average age of 27 months were tested by a speech therapist and a psychologist. Each group was exposed to heavy drinking in the first trimester, exposed to alcohol during the first and second trimesters, or exposed to alcohol throughout the entire pregnancy. The group threatened by alcohol throughout the entire pregnancy scored much lower on the *Bayley Scales of Infant Development (Mental Scale)* and the *Reynall Verbal Comprehension Scale* than those who were exposed during the first trimester only.

Garber's conclusion was that the more alcohol consumed by the mother, the more affected the child would be, particularly in relation to mental development and language delays. This conclusion contradicted the earlier findings of Streissguth (1994), which noted the drinking pattern of the mother and the time of consumption as factors related to fetal damage.

Prenatal exposure to alcohol may result in additional congenital impacts, beyond damage to the central nervous system, such as fine-motor control deficits, auditory processing deficits, language delays and disorders, and mathematical comprehension difficulties. Of particular interest to teachers, students may exhibit a variety of socio-emotional behavioural issues. Some children may be overly friendly and social while

others are aggressive. Still others may be socially withdrawn (Garber, 2009; Watson et al., 2007).

Still other researchers have described comorbidity among prenatal alcohol exposure, neglect, and adverse environments (Coggins, Timler, & Olswang, 2007; Hyter & Way, 2007). Existing research connects poor nutrition and impaired cognitive skills in children, possibly exacerbated in children with FASD. Literature on nutrition in rats has suggested that prenatal exposure to alcohol may affect the functioning of internal organs such as the intestine, limiting absorption of nutritive value contained in some foods (Hyter & Way, 2007).

Since FAS was first identified in the 1970s, research about the effects of alcohol and awareness of its impact on the developing fetus has grown. While a known teratogen, alcohol use is socially sanctioned and its effects on the developing fetus may be largely invisible. Unfortunately, the cognitive and behavioural effects are borne out in children in myriad ways, including in the classroom.

Diagnosis and Screening for FASD

Prevention of FASD should remain a priority, but screening and diagnosis are also critical. Some research has indicated that early identification of FASD, subsequent interventions, and living in a stable environment are protective factors, resulting in increased positive outcomes for children and their families (Watson, Finkelstein, Gurewich, & Morse, 2011).

Both the issues of screening for and diagnosing FASD have been discussed widely in the literature. Yet Chudley et al. (2005) noted that screening should not be equated with diagnosis. A diagnosis can be important to families and in navigating the

school system. It should be noted again that FAS is a diagnostic term, while FASD is not. FASD is a spectrum disorder and includes FAS.

A diagnosis of FAS is based on an evaluation of the physical characteristics of the affected individual and confirmation of maternal consumption of alcohol during pregnancy. To be valid, the diagnosis must be made by a physician specifically trained to recognize birth defects, or conceivably by a team of development experts. Until fairly recently, there was no single tool that could be used to make this diagnosis, although various testing has been used to corroborate medical opinion (Astley, 2004; Astley, 2013; Burgess & Streissguth, 1992).

In 1996, the United States' Institute of Medicine first published recommendations for diagnosis of FAS in consultation with a panel of experts. In the late 1990s, Astley and Clarren from University of Washington developed a separate, but related, 4-digit diagnostic criteria (cited in Chudley et al., 2005; McFarlene, 2011; Winzer, 2008). The 4-digit code is a formula used to assess the key components of diagnosis: growth deficiencies, facial features, brain function and alcohol consumption. The degree of each feature is ranked independently on a 4-point Likert scale with 1 reflecting the absence of the feature, and 4 reflecting the greatest expression. The 4-digit diagnostic code criteria are outlined in Table 1. This diagnostic tool is now being used throughout Canada and the United States (Chudley et al., 2005).

After assessment, the resulting 4-digit code is assigned a diagnostic definition. There are 256 possible codes which are grouped into 22 diagnostic categories. For example, 3443 is FAS (alcohol exposed) but 1344 is partial FAS (alcohol exposed).

Table 1

4-Digit Diagnostic Criteria for FASD (adapted from Astley, 2004)

Rank	Growth deficiency	FAS facial phenotype	CNS damage or dysfunction	Gestational exposure to alcohol
4	Significant Height and weight below 3rd percentile	Severe All 3 features: PFL 2 or more SDs below mean; Thin lip: rank 4 or 5; Smooth philtrum: rank 4 or 5	Definite Structural or neurologic evidence	High risk Confirmed exposure to high levels
3	Moderate Height and weight below the 10th percentile	Moderate Generally 2 of the 3 features	Probable Significant dysfunction across 3 or more domains	Some risk Confirmed exposure. Level of exposure unknown or less than rank 4
2	Mild Height or weight below the 10th percentile	Mild Generally 1 of the 3 features	Possible Evidence of dysfunction, but less than rank 3	Unknown Exposure not confirmed present or absent
1	None Height and weight at or above the 10th percentile	Absent None of the 3 features	Unlikely No structural, neurologic or functional evidence of impairment	No risk Confirmed absence of exposure from conception to birth

Note: PFL=palpebral fissure length; SD=standard deviation

Retrieved from <http://depts.washington.edu/fasdpn/pdfs/guide2004.pdf>.

Their respective categories are fetal alcohol syndrome and partial fetal alcohol syndrome.

Screening is the process of determining whether risk is present and whether further assessment and diagnosis is required. Screening is successfully used in a number of health areas (Watson et al., 2011). Other researchers, including Carmichael

Olson, Jirikowic, Kartin, and Astley (2007), have supported the value of early diagnosis and intervention for FASD. In particular, Carmichael Olson et al. (2007) have noted the plasticity of the central nervous system early in a child's life, which might result in improved functioning with early intervention. Numerous researchers have highlighted the importance of early intervention, particularly in schools (Burgess & Streissguth, 1992), to improve academic outcomes.

Ideally, the purpose of the screening should be to facilitate referral to a diagnostic clinic. Rural and remote communities may not have access to a diagnostic team, or adequate resources and services. Recent advances in digital imaging and computer-assisted analysis for the diagnosis of the characteristic features of FAS have shown promise for rural and remote communities, in particular (Astley, 2013; Chudley et al, 2005). A number of screening tools have been developed and piloted, as discussed in the literature and outlined below.

Watson et al. (2011) described a pilot study (*Project FAST*) in which a standard assessment tool was developed and implemented in Massachusetts to screen children for FASD between birth to 3 years old. A task force, which consisted of a clinical geneticist, a pediatrician, a pediatric psychiatrist, and a developmental psychologist with experience with FASD, was charged with the responsibility of developing the tool. Its goal was to develop a method that was easy to implement, based on the understanding that easier protocols are more likely to be adopted.

The ultimate screening tool was both a process and a form that included three physical markers (small head circumference, smooth philtrum, and confirmation of alcohol use during pregnancy) and three behavioural markers (sleeping, eating, and

ability to soothe). The presence of at least one physical and one behavioural marker was considered a positive screen. This identification triggered a referral for further assessment and diagnosis.

The intention of the *Project FAST* study was to pilot the screening tool in three early intervention (EI) sites, all recommended by the Massachusetts Department of Public Health. These sites were selected, in part, for their history of embracing innovation. There were issues complicating this study, including issues with funding, which resulted in its termination before the anticipated completion date. Even with these considerations, there were 1,161 children screened across three EI sites. Of that group, 2% (n=19) displayed one of the physical risk factors and one of the behavioural risk factors from the *FASD Screening Tool* and were referred for further assessment. At the time of the project ending prematurely, one child had been diagnosed with FAS. There were successes, including raising the awareness of FASD, and identifying some children at risk.

Clarren, Randels, Sanderson, and Fineman (2001) studied the feasibility of screening for FASD in primary schools for epidemiological and interventional purposes. In the study, all the elementary schools in two counties in Washington State were asked to screen first grade students for FASD. A child was deemed to have a positive screen if he or she exhibited growth deficiencies, had certain facial abnormalities, or had a known history of prenatal alcohol exposure. If screen-positive, the student's family was offered diagnostic services and treatment planning. First grade students were being screened for other physical abnormalities at this point already; this additional FASD

screening was not considered exceptional and utilized the existing skills the school and public health nurses.

In County A, all students were screened and in County B, roughly 25% of students were screened, for a total sample of 3,740. Of this total, 124 in the group were screen-positive; 65 families attended special diagnostic clinics. There were a number of other diagnoses confirmed for a variety of conditions, but seven children were confirmed to have FAS. A follow up study of these children was conducted one year later to see whether there had been changes or improvements in the lives of the children. Most families noted improvements in terms of access to services or accommodations.

Clarren et al. (2001) identified several distinct advantages to screening at this point in a child's school career: his or her age allows for an accurate diagnosis; school entry was the first time after the newborn period that students come into contact with a single system; early academic interventions are possible, and are believed to reduce secondary disabilities; and children with another previously unrecognized syndrome might also be identified and offered appropriate services.

Watson et al. (2007) later observed that many problems related to FASD are not apparent in infancy, but can appear at an older age. This fact supports a case for school-based screening. Carmichael Olson et al. (2007) felt that children's problems may not become evident until well past the ideal window for early intervention, around second to fourth grades, later than the screening suggested by Clarren et al. (2001).

The advantages for early intervention and screening have been well documented, yet there are also difficulties presented, particularly with school-based

screening beyond the pilot study period. For example, privacy issues might arise that may not be possible to address in the school system, and families may not welcome medical information they did not request (Clarren et al., 2001).

Access to widely-available diagnostic and assessment services for FASD in adults is also relatively rare. By this stage of life, it is likely that an adult may have encountered issues with the education system and, conceivably, the corrections system. It has been documented that FASD-informed interventions contribute to suicide prevention (Astley, 2005, as cited in Watson et al., 2011). While 3% of the general US adult population attempts suicide, 22% of people with FASD attempt suicide, mainly as a result of social difficulties and lack of FASD-informed interventions (Astley, 2005, as cited in Watson et al., 2011).

Since 2002, Lakeland Centre for Fetal Alcohol Spectrum Disorder (LCFASD) in northeastern Alberta has provided community-based, mobile diagnostic and assessment services to adults prenatally exposed to alcohol. The community team has been doing mobile outreach successfully with children since 1994, also using the 4-digit code diagnostic criteria (McFarlene, 2011).

The LCFASD team attempted to diagnose one adult per month, yet over an eight-year period, they have screened only 57 adults. Within that group, 12% had partial FAS, 85% had ARND and 3% had no diagnosis. The adult team consisted of a physician, a neuropsychologist, a mental health therapist, a psychiatrist, a career counselor, a cultural liaison, a legal representative, a disability services coordinator, a team coordinator, and a post-diagnostic outreach worker. The team required for a medical diagnosis with children is typically not much smaller, although the composition may

differ slightly. In reality, in rural and remote communities, where diagnostic services are limited or professionals are not available, the diagnostic rate will not likely equal the prevalence rate.

Chudely et al. (2005) provide current, relevant Canadian guidelines for diagnosis. These guidelines were divided into seven categories: (1) screening and referral, (2) the physical examination and differential diagnosis, (3) the neurobehavioural assessment, (4) treatment and follow up, (5) maternal alcohol in pregnancy, (6) diagnostic criteria for FAS, partial FAS and ARND, and (7) the harmonization of Institute of Medicine and 4-digit diagnostic criteria.

Within the areas of screening, the researchers cited the importance of early diagnosis to allow for appropriate interventions. It was also noted that in children, while facial dysmorphia is often absent, that does not reduce the impact that prenatal alcohol exposure can have on brain function. There are other syndromes which have symptoms similar to the facial development of FAS, including Noonan syndrome, Dubowitz syndrome and others. Chudley et al. (2005) reiterated that screening is not diagnosis.

Clarren et al. (2001) argued that screening could be conducted through the education system, the mental health system, the judicial system, or social service systems. Sadly, the lack of a medical diagnosis in childhood may result in fewer supports from within the school system, or to lack of early interventions which can be critical to future success in school and beyond (Burgess & Streissguth, 1992; Duquette et al., 2006a).

Teacher Belief

Teacher beliefs have been defined as “tacit, often unconsciously held assumptions about students, classrooms and academic material to be taught” (Kagan, 1992, p. 65). Beliefs may be inferred by what individuals say, intend to do, and do (Jordan & Stanovich, 2004). McAlpine et al. (1996) noted that beliefs are “based on personal and collective histories for why we choose to act in certain ways” (p. 390).

Jordan and Stanovich (2004) contended that much of the research in education has been restricted to a single sub-component of beliefs, as a result of beliefs being methodologically difficult to measure and identify. Some of the types of beliefs that have been researched are outlined by Kagan (1992). These include teachers’ sense of self-efficacy, teachers’ beliefs and interpretations of classroom events, teachers’ practical arguments (reasoning about their practice), for example. Nothing was identified in this review related to the beliefs of teachers based on their cultural orientation.

Pajares (1992) suggested that attention to teachers’ beliefs can be a focus of educational research. He felt that those beliefs can inform educational practice in ways that prevailing research cannot, since beliefs are the best indication of the decisions teachers and others make routinely. He further postulated that there was previously an understanding that beliefs do not lend themselves to empirical investigation within the educational research community. Yet research in the area of beliefs in other disciplines as diverse as medicine, law, and anthropology, was a subject of legitimate inquiry.

For this review, I surveyed research into the teachers’ beliefs within the categories of teachers’ attitudes toward inclusion of children with handicaps, teachers

and their students with FASD, and the perceptions and opinions of Aboriginal teachers or students.

Teachers' beliefs towards the inclusion of children with handicaps. No examples shed light on any differences in this area related to the ethnicity of the teachers, but literature surrounding this theme offered the most depth into the topic of teachers' beliefs. Notably, there were a number of older, largely quantitative studies found when the search was based on handicapped students; exceptional students generated more recent, qualitative studies.

Stoler (1992) explored the opinions of teachers towards inclusion of all manner of handicapped students in their classrooms, rather than only including particular handicaps, as had been the case in previous research. Stoler, a teacher and consultant in Michigan, was responding to the *Education for All Handicapped Act (1975)* that mandated the concept of "least restrictive environment" for students in the United States. The importance of this study was that it built on Raver's earlier research (1980, as cited in Stoler, 1992), and indicated that the attitude of a regular education teacher toward a child with handicaps could influence the climate of the classroom. Stoler attempted to determine if teacher attitudes towards children with handicaps differed with the teacher's educational level or if attitudes were influenced by their previous training in Special Education.

Surprisingly, Stoler found that teachers with a Master's degree, or higher level of education, had fewer positive attitudes towards the inclusion of children with handicaps. More predictably, teachers who had taken Special Education coursework had more positive perceptions of inclusion than did those teachers without this

education. The tool used to collect the data was adapted from one developed by Berryman and Neal, Jr. (1980, as cited in Stoler, 1992), which measured teachers' attitudes toward learning capacity, inclusion, traditional limiting disability, and classroom factors. The tool is a notable exemplar, in that it measures teachers' attitudes.

Swain, Nordness, and Leader-Janssen (2012) undertook research with pre-service teachers (n=777) to examine changes in their beliefs and attitudes towards inclusion following an introductory Special Education course, paired with a 24-hour practicum. Results showed that a Special Education course, paired with appropriate fieldwork, did influence pre-service teachers' attitudes towards inclusion. Pre-service teachers in this study reported that they had reservations about their ability to serve students with disabilities. Without this additional training, most teachers felt unprepared to address the needs of students with disabilities (Swain et al., 2012). They found that lack of Special Education experience and training had negative effects on teacher attitudes toward inclusion and towards students with disabilities.

Siegal (1992) conducted an attitudinal study which explored teachers' attitudes toward students with special needs integrated in the classroom. In this case, the researcher utilized the *Teachable Pupil Survey* (1982) to determine teachers' perceptions of students' behaviour, achievement, personality, and gender. Siegal found that being labeled as a *learning-handicapped student* did not influence the teachers' attitudes as much as the teachers' perception of the student's behaviour. The researcher felt that the results illustrated the need to train learning-handicapped students to use appropriate behaviour before placing them in an integrated classroom.

Education is one of the most influential variables in changing teachers' attitudes towards inclusion (Sharma et al., 2008; Sharma et al., 2006; Share & Stewart, 2001, as cited in Swain et al., 2012). In contrast, Rojewski and Pollard (1993) found that teachers with graduate-level Special Education courses perceived greater barriers to inclusion, were less inclined to view students with disabilities as their responsibility, and reported lower levels of efficacy. These results agreed with the earlier findings of one researcher (Stoler, 1992).

The surveyed research offered little insight into the cultural variation that teachers may exhibit with regards to students with disabilities. It did show that level of education impacts teachers' perceptions. In general, teachers without graduate level training are more amenable to including children with handicaps in their classrooms. The literature also confirmed that, often, it is the behavioural issues exhibited by children that make them more difficult to accommodate in the regular classroom.

Teachers' beliefs towards students with FASD. Most of the literature within this second sub-theme of beliefs towards students with FASD consisted of articles describing classroom strategies for teachers to use with these students (Ackerman, 1998; Edmonds & Crichton, 2008; Green, 2007), rather than extensive research into the attitudes and beliefs of teachers about students with FASD.

In their research, Watson et al. (2007) opined that teachers have not always recognized or understood the nature of learning and behavioural difficulties experienced by students prenatally exposed to alcohol and other drugs. Because of this omission, the researchers found that most school personnel neglected the needs of these students.

There were a number of additional relevant findings described in Watson et al.'s (2007) study. For example, mainstream teachers were less optimistic about learner progress than Special Education teachers. Yet Special Education teachers felt that students with learning support needs had more control over their own progress. A teacher who has strong feelings related to teacher efficacy may also support the idea of their ability to overcome the student's nature, and to make a difference in the learning outcomes for the child. In one example within this research, Leyser (2002, as cited in Brady & Woolfson, 2008) indicated that general education teachers were less likely to modify teaching strategies for children with learning difficulties than were Special Education teachers. The literature review conducted by Watson et al. (2007) showed that there is contradictory research in the field of Special Education in a number of areas.

In a related study (Watson, 2003, as cited in Watson et al., 2007), the researcher surveyed general and Special Education teachers and speech pathologists from five school districts. All were working with students that were prenatally exposed to drugs or alcohol. The researcher found that all three groups of educators needed more information about this special population and more training and information about how to teach and modify instruction for these students. Watson et al. (2003) and others (Streissguth, 1994) have identified FASD as a spectrum disorder. As such, the physical, cognitive, academic, social, and emotional impairments for students can range from mild to severe, which will inform teaching strategies and approaches.

In a study that combined research and strategies, Dybdhal and Ryan (2009) investigated the perceptions of regular classroom teachers whose class included at least

one student with FASD. They interviewed teachers (n=13) from three sites; the experience of the teachers ranged from 1 – 24 years within the K-12 system. Their interview data were analyzed inductively. Following standard procedures for interpretive research, they noted patterns and themes, and coded accordingly. These researchers were not interested in the ethnicity of the teachers, or how their ethnicity could affect their perceptions and subsequent behaviour in the classroom.

In their results, the researchers noted that teachers perceived their training in the area of FASD to be ineffective. The teachers in the study also cited value in knowing about the presence of students with FASD. Since the teachers had not known that they had students with FASD in their classes, they had not deemed the available information to be personally relevant. While not unanimous, many teachers in this study found a formal diagnosis and a label useful in their approach to the student. Additionally, this knowledge improved their ability to tailor their personal professional development towards that issue, where appropriate.

In their study, Dybdhal and Ryan (2009) also indicated that researchers have provided limited assistance for teachers who manage students with FAS. While there may be few actual research studies available, there were a significant number of articles related to techniques which teachers may incorporate into their classroom (Duquette et al., 2006b; Harpur, 2001; Streissguth, 1997).

In their conclusion, Dybdhal and Ryan (2009) presented five teaching strategies which were derived from the results of their research. These strategies include focusing and refocusing students, providing individual attention, establishing a positive relationship, facilitating partner work, attending seat assignment, and the promotion of

self-control. One of their additional concluding recommendations was that research supporting classroom teachers who teach children affected by FASD should be encouraged.

Timler and Olswang (2001) used a case study approach to evaluate a school-aged boy with a diagnosis of FASD and to explore the teacher's and parent's viewpoints about the best educational programme for him. The researchers studied this one child extensively by observation and through interviews with the parent and the teacher, and reviewed the boy's school and clinical records. Through careful coding and theming, the researchers identified differences in the perceptions of the teacher and the parent towards the boy's behaviour. The parent emphasized the boy's ability to function day-to-day, whereas the teacher looked at his current skills within the context of the classroom. With appropriate structure and consistent scaffolding, the boy complied with teacher directions; the mother knew that the boy performed inconsistently from one day to the next. These different viewpoints resulted in a difference of opinion with regards to school placement.

Watson et al. (2007) identified that teachers should be able to identify students' strengths and weaknesses and develop learning interventions that are aligned with the learning needs of the child. School administrators should prepare and support teachers facing the challenges that these students present. System-wide programme efforts that address early intervention are important in addressing the social, emotional, and academic needs of students with FASD. Still, teachers should not assume that every child who seems to exhibit the characteristics of FASD has been prenatally exposed to alcohol and other drugs.

Researchers, including Brady and Woolfson (2008), have found teacher efficacy to be an important variable in teaching learners with learning support needs. Efficacy was defined as the teacher's feelings regarding their own capacity to facilitate learning and is related to student outcomes such as achievement. Brady and Woolfson (2008) conducted a mixed methods study with teachers (n=118) to establish factors that influenced teachers' attribution of children's difficulties in learning. Teachers evidencing high efficacy were more willing to take responsibility for meeting the needs of students with learning difficulties in their own classrooms. Researchers identified two components regarding efficacy: general teaching efficacy (the belief that external influences can be overcome by teaching) and teacher efficacy (the teacher's belief about his or her own capability to bring about changes in students).

As with the literature related to teachers and their students with handicaps, the literature on teachers and students with FASD stressed the importance of teacher education. It also highlighted the fact that many teachers felt their training to be inadequate for addressing the needs of students with FASD. In part, this deficit can be attributed to teachers not always being aware of the composition of students in their classroom and, as a result, not seeking out appropriate training or supports. Some research has also shown that teachers' effectiveness in the classroom improves with an increased sense of self-efficacy (Brady & Woolfson, 2008).

Perceptions and beliefs of Aboriginal students or teachers. Studies related to the perceptions and beliefs of Aboriginal teachers or students encompass the third sub-theme of this portion of literature review. Wall and Madak (1991) examined whether there was a difference, in terms of academic self-concept, between Aboriginal

students who attended a band-controlled school and those who attended a public school off-reserve. Data were collected using three existing qualitative instruments (the *Michigan General Self-Concept of Ability Scale* [SCA], the *Perceived Parental Evaluation of Ability* [PPEV], and the *Perceived Teacher Evaluation of Ability* [PTEV]). Their results, collected through student responses (n=42), indicated that there is a difference in the opinions of students about expectations and performance in band-controlled versus provincial schools.

The researchers' rationale for undertaking the research is relevant: the results were used to support the development for more sensitive, effective approaches towards educating Aboriginal youth. Their approach examined ethnicity more directly than other studies reviewed about teachers and their perception of students with FASD, for example. The researchers looked at the type of the schools from the perspective of the Aboriginal students, without considering the ethnicity of the teachers, yet all of their study subjects were Aboriginal students.

In an ethnographic study looking at teachers, Kanu (2005) conducted research with teachers (n=10) to ascertain their perceptions about the integration of Aboriginal culture into the high school curriculum in Manitoba. Existing research suggested that the lack of Aboriginal cultural knowledge and perspectives in school curriculum and between teachers were significant features of school failure. Kanu (2005) believed this study was needed to provide a counterpoint to previous research which highlighted the persistent failure of Aboriginal students in the Canadian public school system.

Using a qualitative approach, the author undertook classroom observation, reviewed teacher journals, and interviewed the participants. Kanu found that it was

difficult to recruit equal number of Aboriginal teachers for this study, although this issue was not surprising as 94% of teachers in Manitoba are non-Aboriginal and belong to the dominant culture. Only two Aboriginal teachers were included and it was not explicit how their participation was solicited. Three themes were identified and explored, followed by a number of recommendations to assist policymakers and educators. The three themes were teachers' beliefs about integration and the reasons for these beliefs, teachers' understanding of, and approaches to, integration, and perceptions of challenges to integration.

In their study discussed in the section above about teachers and students with FASD, Dybdahl and Ryan (2009) suggested differences in Aboriginal learning styles. Their conclusion was that interactive approaches in the classroom are often more successful than purely cognitive-based perspectives with these students. Marcuzzi (1986, as cited in Dybdhal & Ryan, 2009) stated that Native children are at a disadvantage in Western schools because they are not accustomed to the learning styles utilized there, and therefore have to make adjustments before they can begin learning.

McAlpine, Eriks-Brophy, and Crago (1996) studied the teaching beliefs of three elementary school teachers (two Mohawk and one non-Aboriginal) to analyze the ways that their cultural identities and language impacted their teaching beliefs. It had been suggested that early life experiences outweigh the effects of teacher education, even though individuals may not be able to articulate the nature of these beliefs (Pajares, 1992). Although their sample was extremely small, the researchers concluded that there is not necessarily a set of uniform beliefs that can be designated as Mohawk. In

the face of individual variation, they considered whether or not it is possible to define exactly what *culture* means.

The reviewed literature was more focused on Aboriginal students than teachers. Overall, there are differences in the attitudes of Aboriginal students as seen in the article by Wall and Madak (1991). Differences in learning styles between Aboriginal and non-Aboriginal students were noted, but research into the differences in beliefs between cultural groups was harder to ascertain. McAlpine et al. (1996) researched the beliefs of three teachers, two of whom were Mohawk, and concluded that it may be impossible to designate a set of uniform beliefs to a particular cultural group. And, earlier, Pajares (1992) suggested that early experiences may outweigh the effects of teacher training.

Learning Disabilities and Cultural Assessment

A number of other articles were reviewed that related to culture and learning disabilities, the perspectives of parents and their children with regard to disabilities, and frameworks for cultural assessment. All of these areas are relevant to aspects of my research study.

Learning disabilities, culture, and ethnicity. Research related to Aboriginal students with disabilities and their families was sparse; slightly more prevalent was research related to disabilities, including learning disabilities, and culturally diverse families. It is important to restate that FASD is not solely an Aboriginal issue, but that the student population here is largely Aboriginal. For this reason, a review of literature describing research in this area seemed important.

Joe (1997), in writing about American Indians, noted that while there was tremendous diversity within Native communities, many Natives live in a bi-cultural world that blends traditional and modern views. She stated that responses to situations by Native families reflect both a traditional and a modern orientation. That observation was significant in that the school system and other mainstream systems often hold the economic resources to help families and their children with special needs. Joe stated that, "when faced with a conflict as to how this is to be done and by whom, an Indian family may quietly refuse services or withdraw from interaction with the agencies" (p. 253). She went on to say that as the Native population becomes increasingly acculturated, some of the more traditional beliefs are reshaped and/or supplanted by more modern or scientific beliefs. While the article was fairly dated, there are relevant concepts included.

As noted above, research was more extensive about culturally-diverse families and their approach or response to disabilities in their children. Kalyanpur and Harry's rejoinder (2004) to Reid and Valle's article (2004) reiterated that the education system continues to fail or exclude the same group of students, including students with learning disabilities, with additional emphasis on the families of children from devalued racial/ethnic groups. Both research teams suggested that mainstream culture was beginning to move away from an interpretation of difference that perceives the individual as being at fault, and is beginning to recognize the larger, systemic disparities that contribute to perceptions of difference. They are building on the original ideas of Reid and Valle (2004), who argued that learning disabilities are not always an objective fact, but are historically and culturally determined. Kalyanpur and Harry (2004) added

that culturally-diverse parents dealt with additional inequities in their struggle with the educational system on two counts: they were parents, not professionals, and culturally-diverse parents were often further excluded because of perceived poor parenting skills.

Students of culturally-diverse families often come to school with skills and knowledge not considered significant to academic success, which is not to suggest that children with the symptoms of FASD do not have significant learning challenges, but rather, certain aspects of formalized learning are valued more than others. The researchers commented that most parents, regardless of ethnicity, race, or economic status, are dismayed to be faced with the fact that their children are not academically successful in school seemed relevant, astute, and universal.

While these articles about learning disabilities and culturally-diverse families seem only tangentially related to the research question, there is a link, in part because of the attitudes and beliefs of the teachers who were asked to comment on their students and families of those students.

Perspectives of parents and their children with disabilities. Student experiences, together with family and professional's perspectives on FASD, are also central to the research question. For example, if a student is feeling frustrated, this emotion will impact the teacher, affecting their attitudes and beliefs about their students; it is a cycle that perpetuates itself.

Ryan and Ferguson (2006) described the individual experiences of five students with FASD living in rural and urban Alaska. Their research was based on a three-year qualitative study and consisted of interviews with, and observations of, the students, members of their family, and the educational and medical professionals with whom

they were involved. The researchers' interest was in sharing the experiences of these young people, adding to a body of literature on inclusion which was not—at that time—addressed in the FASD research. Their students lived largely in rural villages ranging in size from 554-7,900 people, where poverty levels were above the national average for the United States. All had experienced early trauma, not uncommon in children with FASD. The students were enrolled in general education classes with supports; two of the five had been in residential treatment facilities, and one was in prison at a point in the three years of the study.

The researchers identified and described four themes that emerged for the young people with FASD in the study: fleeting success, competence in the outdoors, the vulnerability of students and families, and anticipated trajectories for the students. In terms of fleeting success, all of the students excelled in outdoor activities, often identified as “traditional activities”, like hunting and berry picking, but all needed additional supports in school.

Their caregivers, parents, or teachers felt strongly about the need for lifelong supports for these individuals, both in the classroom and in the community. All five students were seen to be vulnerable to deaths in their family (often because of alcohol or illness), to an unstable home life, and to the reality of few after-school supports. In terms of interventions, families in this study indicated a need for organized after-school programmes that would teach their children social skills and appropriate behaviours. These researchers made the point that children and young people with FASD are often at greater risk of poor outcomes, particularly in communities such as those in rural Alaska with a small population base and limited services.

Duquette, Stodel, Fullerton, and Hagglund (2007) have written at length on FASD from a Canadian perspective. Their earlier FASD research suggested that caring teachers and appropriate programmes, along with a diagnosis and parental advocacy, contribute to a successful school experience for students with FASD. This particular research looked at high school persistence for students with FASD, using a qualitative approach, and involving eight students and 16 parents. The students all had a diagnosis of FASD, attended high school, or had recently graduated; all 16 parents had adopted their children with FASD as infants or pre-school children.

Their research approach was adapted from the earlier work of Tinto, whose 1975 *Student Integration Model* (SIM) assessed a student's risk of dropping out and was later revised in 1997 to assess student persistence in high school. Tinto's findings were that background characteristics (i.e., personal attributes and previous experiences), level of academic integration (i.e., grade performance and intellectual development) and level of social integration (i.e., informal peer groups associations, semi-formal extracurricular activities, and interaction with teachers) were all factors related to dropping out or persisting in high school.

Duquette et al.'s (2007) used Tinto's research method in their methodological approach. They found that most students were enrolled in programmes with regular classroom placement and Special Education classes, and sometimes with a paraprofessional and vocational courses; all had special accommodations. Parents were aware of the programmes in their urban area and of their child's social and academic needs. They were prepared to advocate for changes or, where necessary, move their children to a more appropriate school or programme. Parents were

planning for the next phase in their children's lives, whether there was a school-based transition programme available or not. Despite the academic difficulties that these students had, their parents provided continuous support and encouragement for them. They also tried to educate teachers about FASD and the needs of their children. Unlike the students in the Alaskan study, these students were not vulnerable because of issues such as an unstable home life, or deaths in their families.

Duquette et al.'s (2007) research indicated that there were principally two conditions that inhibited persistence in students with FASD: the curriculum and the teachers. There were instances of IEPs that were not followed, teachers who were unwilling to believe that students could not do the work as they "didn't look like they had a disability" (p. 579), and work that was either too easy or too challenging for students, both of which were issues. Conditions arising from the data that contributed to persistence were the opportunity to interact with peers at school and unwavering parental support, with the latter being the most critical. Their data suggested that the most important task for parents was to advocate for their children individually and at school, lobbying for accommodations. Streissguth (1997) stated that the school should advocate on behalf of students with FASD; however, parents in this research reported no teacher advocacy on behalf of their children.

Parents in Duquette et al.'s study (2007) also felt that time and energy had been wasted during the long process of obtaining a diagnosis. In some cases, parents were told their child had ADHD but continued to look for the cause of their child's deficits. Generally it was through reading, the internet or television that parents became aware of FASD.

Literature illustrating the perspectives of parents and families with regards to FASD highlighted the importance of families for supporting students and advocating on their behalf. Research also indicated the variation in outcomes that can result for students if this is in place, or not.

Cultural assessment. The field of cultural assessment is not new, nor is it the purview of one domain, such as anthropology. Lenartowicz and Roth (1999) presented a valuable conception of various types of cultural assessment, the fields in which these assessments are being utilized, and the value of a given approach, depending on its application. The authors' focus was international business, but the article was an excellent primer to organize thinking around various types of cultural assessment. For example, their conception was that there are basically two approaches to cultural assessment: culture-centred and personality-centred. Culture-centred approaches are often qualitative in nature and are derived from cultural anthropology. Personality-centred assessments are generally quantitative in nature and are used to identify and describe cultures. Ethnographical descriptions are an example of culture-centred approach. Personality-centred assessments are widely used in business studies and include proxies and values inference.

The authors mentioned the seminal work of Kluckhohn and Strodtbeck (1961) as two of the researchers in this field of ethnographical descriptions. In their conclusion, Lenartowicz and Roth (1999) made a comment important to FASD research: "some scholars have suggested that culture may be comprised of heterogeneous harmony. Similar to a choir, members of the group may be quite dissimilar and yet the overall group is harmonious as a collectivity" (p. 796).

Kluckhohn and Strodtbeck's (1961) book, *Variations on Value Orientation*, is the seminal and pioneering work relating to the concept of value orientation. Outlined within are three basic assumptions. First, a limited number of common human problems exist for which all people must find solutions. Second, while there is variability in solutions of all problems, it is neither random nor limitless within a range of possible solutions. Third, all alternatives to all solutions are present in all societies at all times, but may be preferred differently at different times and by different people.

The book summarized their research, clearly describing the instrument that they developed and the results that they found in working with five communities in the southwestern region of the United States (Navaho, Zuni, Spanish Americans, Mormon and Texan) in the 1950s. Their approach was successful in revealing between-group differences as well as within-group differences (or similarities). Their approach has provided a cornerstone to my research.

Kluckhohn and Strodtbeck's contention was that many basic value systems supported by other anthropologists were too facile, leading to generalizations and an impressionistic view of cultures. They saw a tendency for people to talk broadly about things like "national character," for example, without addressing the essential nuances within cultures. In large part, this tendency is because the *dominant* values of people have been over-stressed and the *variant* values have been largely ignored. It was Kluckhohn and Strodtbeck's opinion that these generalized conceptions do not allow for insights into the variations within social systems or the role of individual personalities (Kluckhohn & Strodtbeck, 1961).

In some respects, Kluckhohn and Strodtbeck's ideas on basic values were not radically different from those that other anthropologists presented; however, Kluckhohn and Strodtbeck contended that there was a degree of variation present in all cultures. The variation manifests itself in systems of *patterning*. Kluckhohn and Strodtbeck suggested that the orientations are variable from culture to culture, based on the ranking patterns. The orientations are cultural universals.

This distinction is what led them to create a classification of value orientations which was the basis for the theory of variation.

Value orientations are complex but definitely patterned (rank-ordered) principles, resulting from the transactional interplay of three analytically distinguishable elements of the evaluative process – the cognitive, the affective, and the directive elements – which give order and direction to the ever-flowing stream of human acts and thoughts as these relate to the solutions for “common human” problems. (p. 4)

A second distinction from earlier ideas about basic values was the focus on the directive aspects of values, not just the unconscious or the cognitive (existential) aspects. Kluckhohn and Strodtbeck felt that there were anthropologists (and others) who focused attention on unconscious values and there were those who treated the cognitive and the affective almost as an amalgam, and focused on that aspect. The unconscious aspects fell at one end of a continuum; the directive aspects were at the other. Kluckhohn and Strodtbeck's focus was on the “directiveness” of the evaluative process.

The definition for “directiveness” that Kluckhohn and Strodtbeck used was one that is used in biology. Tinbergen, a biologist, was quoted as saying, “it seems to be a property of the innate disposition that directs the conditioning to special parts of the receptual field” (Kluckhohn & Strodtbeck, 1961, p. 9). Kluckhohn and Strodtbeck’s was a value system which was driven by biologically given capacities and pre-dispositions, but was not instinct bound. This ability to be directive was a critical element of the model. Further, the evaluation process was not fixed in either its content or direction. People and cultures do change their basic values as part of a process. And people of one culture do—over time—become assimilated to the ways of another culture.

In summary, there was an ordered variation in Kluckhohn and Strodtbeck’s value system. In this system, there were “a limited number of common problems for which people at all times must find some solution” (p. 4). It was understood that while there was variability within the solutions, it was neither limitless, nor random. All alternatives were present in all societies at all times, but were differently preferred. In any society, there was a dominant profile of value orientations, and numerous variant or substitute profiles. And finally, there was almost always a rank ordering of preferences of the value-orientation alternatives.

Many researchers have used the concept of value orientation in their research. Carter (1990) stressed the idea that an understanding of cultural values can enrich cross-cultural effectiveness, particularly in the field of counseling. This understanding can result in the development of proper interventions, an understanding of uniqueness, and cross-cultural interactions. The author acknowledged the reputation that Kluckhohn and Strodtbeck have in the field of value orientation, having combined

methodical assumptions of previous approaches (ethnographic, social analyses and survey methods) to construct their model measuring cultural variation.

Carter and Helms (1990) enumerated the work of other researchers who later suggested that cultural or racial identity, acculturation, sex, education, socioeconomic status and industrial development may influence value orientations. He allowed that Kluckhohn and Strodtbeck's model can be criticized for its limited options, its static nature, and the fact that it does not capture all aspects of cultural characteristics.

Nevertheless, the model proposed by Kluckhohn and Strodtbeck (1961) has a long history in the social science and counseling literature and has been used in developing instruments, in describing cultural differences, developing culturally sensitive treatment approaches, outlining psychotherapy effectiveness across cultures, and in studying culture-specific value preferences. In summary, Carter and Helms (1990) concluded that cultural values are an extremely complex phenomenon with implications across a number of fields, particularly counseling.

Yang (1998) shared a similar focus with Carter, as both were interested in the implications of cultural variation in counseling. Yang paid homage to the contributions that Kluckhohn and Strodtbeck have made in measuring cultural differences, but cited the limitations for studying within-group and between-group patterns of cultural similarities and differences.

Yang (1998) reviewed selected worldview studies in an attempt to find valid information from data she described as inconsistent comparative data. As Yang was critical of the validity of information unless scientifically rational, her selected instruments were much more empirical and quantifiable. Her conclusion was that

numerous factors influence worldview including gender, religion, education, marital status, and modernity. The value of the article is in the description and review of a number of other earlier, existing worldview instruments.

Mahalik (1995) also examined the role of values in counseling and psychotherapy, basing his research on Kluckhohn and Strodtbeck's Value Orientation model. In his research study, Mahalik hypothesized that practitioners would endorse alternatives within value orientations according to their own value orientation and that, as a group, they would endorse certain alternatives within value orientations over others. Unlike Yang (1998), Mahalik (1995) reported substantial evidence of between-group and within-group differences examining cultural groups. The *Intercultural Values Inventory*, the tool Mahalik used to solicit the information from practitioners (n=119), was based on the value orientation instrument first developed by Kluckhohn and Strodtbeck. Developed by Carter and Helms (1990), this is a 150-item written inventory, answered in a yes-no fashion, measured five value orientations. These were relations, human activity, person-nature, time, and human nature.

The length of the inventory has been shown to be negatively related to response rate in survey research. As a result, the tool was adapted; two orientations (relations and human activity) were deemed essential and person-nature was included randomly from the other value orientations, as it was felt that respondents would also differ on the other three scales. The development of this later tool highlights the importance of Kluckhohn and Strodtbeck's earlier research, emphasizing that the work was ground breaking in its day, and influenced future research and researchers.

There were fewer articles related to value orientation in an educational setting. These articles were generally more directly linked to my research, as they looked at culture in the sense of ethnicity, which is the focus of my research.

Ortuno's article (1991) used Kluckhohn and Strodtbeck's approach most directly, although it is not research. The study by Banville, Desrosiers and Genet-Volet (2002) used an approach that measured values according to priority, but the values were based on the work of other researchers within the field of Physical Education and did not have the broad, universal approach that Kluckhohn and Strodtbeck had in their research.

Ortuno (1991) has written extensively about her use of the Kluckhohn and Strodtbeck model in her elementary and intermediate foreign language classes to instill a sense of cross-cultural awareness. In this article, Ortuno was not describing research she had undertaken: she also altered the original instrument developed by Kluckhohn and Strodtbeck so that her students would have the tools for identifying their own cultural value orientations and those of others. In using this model, she created a workable tool which was a framework for analyzing one's own dominant and variant cultural values and an effective means of making cross-cultural comparisons. Additionally, her students had the tools necessary to recognize the "standard cultural capsules" (p. 455) found in most elementary grammar texts. She described the Kluckhohn and Strodtbeck instrument as a "cognitive organizer" (p. 452), which allowed her students to transcend their own culture and be more receptive to accept the differences of another system. In her case, this was the Hispanic system.

Banville et al. (2002) examined American and Quebec Physical Education teachers to compare priorities given to a set of value orientations and to determine if value orientations are prioritized similarly in both cultures. Five value orientations were identified by Ennis and Chen (1993, as cited in Banville et al., 2002), based on works performed initially by Eisner and Vallance (1974, *ibid.*) in the educational field, and later by Jewett and Bain (1985, *ibid.*) in the Physical Education field. These value orientations were disciplinary mastery, learning process, self-actualization, social responsibility, and ecological integration. There was a similarity to Kluckhohn and Strodtbeck's instrument, in that a number of options were laid out for the respondent who then prioritized their preferred response on a scale of one to five. Unlike Kluckhohn and Strodtbeck's method, the instrument was delivered by mail and the response rate was modest, as was the opportunity for other input through an interview or by participant observation.

An understanding of value orientation has applications in fields as diverse and counseling and education. The existing research indicated that Kluckhohn and Strodtbeck were at the forefront of this type of analysis and that their work has impacted many subsequent researchers in various disciplines. Their Value Orientation Framework has been used intact but has also been altered and adapted to suit the particular needs of many current situations.

Chapter Summary

The chapter began with a review of literature related to fetal alcohol spectrum disorder (FASD), and a discussion of methods for screening and diagnosing the disorder. The review illustrated that there is extensive research in this area, including

descriptions of the characteristics of FASD, which can range from mild to severe. This area has been actively pursued by researchers since Jones and Smith first identified fetal alcohol spectrum (FAS) in the United States in 1973.

Three methods of community or school-based screening were presented. The examples cited were pilot research projects, undertaken with various age groups to assess the viability of screening for FASD. Each project had some successes, along with challenges, which were duly reported. In general, screening is a viable option and a necessary precursor to a formal medical diagnosis. Researchers, including Chudley et al. (2007), make the point that screening should not replace a medical diagnosis.

I discussed diagnosis, as relates to FASD, which included insight into the 4-digit diagnostic code developed by Asley and Clarren in the late 1990s. This tool built on the earlier work by the United States' Institute of Medicine. I presented the tool with the assertion that it is now a recognized diagnostic instrument in both Canada and the United States. FASD refers to the disorder and includes a range of diagnoses, including FAS and ARND. In itself, FASD is not a diagnostic term.

From that point, I shifted the review to investigate teacher beliefs which included three sub-themes: beliefs teachers with regards to students with disabilities (Siegal, 1992; Stoler, 1992), beliefs of teachers with towards students with FASD (Duquette et al., 2006; Dybdhal & Ryan, 2009; Harper, 2001; Streissguth, 1997) and articles and studies relating to Aboriginal teachers or students, including that of Wall and Madak (1991). There is little written about Aboriginal teachers' beliefs about students.

The literature related to teachers and students with disabilities suggested that the most significant issue for teachers is the challenging behaviour of students which has the greatest impact on teacher's perceptions of the student. In comparison, whether or not the student has a formal label identifying him or her as being *learning-handicapped* is secondary to their perceptions of the student's behaviour.

Articles related to students with FASD emphasized strategies for teachers for use in the classroom. Some of these strategies address behavioral issues such as focusing and refocusing the students and promoting self-control. According to the literature, professional development is less effective in cases where the teacher was not aware that he or she had a student with FASD in the classroom. A formal diagnosis and a label were useful to teachers, focusing their attention on the issue.

In the cases where teachers were able to provide adequate supports to students, the teachers noted an improvement in the students' behaviors. This sense of meeting needs of the students was described in the literature as *teacher efficacy*. The more efficacious a teacher perceived themselves, the more willing they were to take responsibility for meeting the needs of students with learning difficulties in their own classrooms.

There is limited existing literature comparing the beliefs of Aboriginal and non-Aboriginal students or teachers. The literature often only offered insight into the performance of one particular cultural group in certain situations, for example. Many of these studies were focused on addressing the performance gaps between Aboriginal and non-Aboriginal students in the mainstream education system.

This literature review has confirmed there are existing studies that reflect aspects of my research. But, most significantly, the review has confirmed that none of the existing literature encompasses all of the issues that my study addresses. My review has shown that nothing has been written examining variation between teachers from differing cultures with regards to students with disabilities.

Chapter 3: Methodology

Chapter 1 outlined the background to the study and introduced the central research question, presented key terminology, and explained the context of the research. Chapter 2 surveyed the existing literature and demonstrated a need for this study. In particular, the chapter pointed out that research akin to this thesis does not exist. This chapter will explain the research methodology as it relates to the research question: What are the differences in the attitudes and beliefs between Aboriginal and non-Aboriginal teachers with regards to students with fetal alcohol spectrum disorder (FASD)?

Chapter 3 begins with a discussion of the decision to use an ethnographic approach as the most appropriate method of research. The steps taken to ensure that I conducted the research in an ethical manner are then presented. The chapter includes a description of the administration of the schedule and the study sample selection. It concludes with an overview of value orientations as defined by Kluckhohn and Strodtbeck (1961), the design of the vignettes (which measure value orientations), and the design of the interviews.

In this chapter, I will describe the methods of research analysis that I used, including the approach I used for coding the interviews and the methodology I used for graphing the results obtained from the vignettes. The semi-structured interview protocol and the actual text of the vignettes that I used are provided in Appendices A and B.

Ethnographic Research

Creswell (2012) provided a synopsis of ethnographic research designs by indicating that they are “qualitative procedures for describing, analyzing, and interpreting a culture-sharing group’s shared patterns of behavior, beliefs, and language that develop over time” (p. 462). He identified and described a number of types of ethnographic designs, but his category of *realist ethnography* is where my research most accurately fits, rather than as a case study or as critical ethnography. I was delighted to be a researcher “in the midst of whatever it is I study” (Berg, 2009, p. 191), as what I hoped for with this study was to gain an understanding of the beliefs of each individual participant. I would then consider the participants as two separate cultural groups (Aboriginal and non-Aboriginal).

Realist ethnography is an approach used by cultural anthropologists, including Kluckhohn and Strodbeck. It is an objective account of a situation, typically written in the third person, and includes participants’ views through edited quotes (Creswell, 2012). The researcher does not offer her personal reflections, unlike with critical ethnography. Most forms of ethnography, though, have similar characteristics such as shared patterns of behaviour, belief and language, and researcher reflexivity.

Consistent with an interpretivist paradigm, I used a research method consisting of semi-structured interviews which I administered initially, followed by a suite of vignettes which I then presented to each participant. I framed my ideas and questions with the viewpoints of Ferguson (1993) and Goodall (2003) in mind. That is, I looked for practices while being sensitive to norms (expected patterns of behaviour) and

emphasized discovery, rather than assuming the answers according to a pre-existing theory.

These interviews and vignettes support an ethnographic approach and allowed me the greatest interaction with participants, encouraging them to talk openly and honestly about their interpretations of their situations. Their responses to my questions were descriptive in nature and I bracketed my own experiences in listening, transcribing, and reporting. I used the technique of bracketing to isolate my own preconceptions related to the research and to increase the overall rigor of the research. The reflexive journal was the primary ongoing approach that I used to do the bracketing. There are varying opinions about when it is best to bracket (Tufford & Newman, 2010), but I decided to ascribe to the approach used by Glaser (described in Creswell, 2012), and developed an awareness of my preconceptions at the beginning of the research process. In fact, the method of considering researcher predictions, as suggested by Kluckhohn and Strodtbeck (1961), was useful in raising my awareness of my own preconceptions as well.

As mentioned in Chapter 1, I used an interpretive lens as the epistemological paradigm to frame my questions. Ferguson (1993) described *interpretivism* in her thought-provoking article on becoming a researcher within the field of special education. She explained that interpretivism might be characterized as the belief that *facts* are not concepts out in some objective world waiting to be discovered, but, rather, are the social constructions of humans who apprehend the world through interpretive activity. Ferguson talked further about her own experience, noting that the choice of this paradigm identifies that we all experience events differently through multiple

constructions or interpretations of the “same” experience, event, or practice. Goodall (2003) also wrote about interpretivist ethnography, stating that:

Our interpretive ethnographic work is *always* about the joining together of two otherwise disparate storylines - the story of the self who has the stake, asks the questions, and does the interpreting; and the stories of the others who help us find or create meanings. In this way, interpretive ethnography springs from a personal urgency that is intimately connected to larger, scholarly questions of meaning, purpose, understanding and action. (p. 60)

Berg (2009) noted that researchers should recognize that research is seldom, if ever, really value neutral. The notion of neutrality is something that I struggled with while conducting this research; I live and work in this community and care about the people here. In part because of my position as a citizen in this community, I made the decision to incorporate the first-person singular in my writing, as Berg did more recently in his own research.

I was also conscious of my attitude when entering schools and interviewing participants. This approach is also consistent with the advice of Berg (2009), who stressed that that the researcher’s frame of mind when entering a natural setting is crucial to the eventual results of a study. According to Manza (1969, as cited in Berg, 2009) one must enter *appreciating* situations, rather than intending to *correct* them.

I planned initially to compare and contrast teacher attitudes in on-reserve and off-reserve schools. With further reading and thought, I realized that I was interested in the cultural values of the teachers, not the culture of the schools. There is no guarantee of the cultural orientation of the teachers, based on location of the school in which they

are employed. Kanu (2005) observed, based on his experience in Manitoba, that there were far more non-Aboriginal teachers than Aboriginal, and so an adequate sample could have been challenging for me to find. While there was a possibility of an inadequate sample, it was not the reality. I found enough Aboriginal and non-Aboriginal teachers who were willing to participate in the research.

Sample Selection

The interview sample consisted of 10 individuals: five Aboriginal and five non-Aboriginal teachers. The principals of the respective schools provided a complete list of teachers from each school. Four of the five principals listed their entire staff, including administrators who also taught; one of the principals asked his or her teachers if they were interested in potentially being included and gave me the names of two Aboriginal and two non-Aboriginal teachers who were interested. In total, the list of teachers consisted of 17 Aboriginal and 33 non-Aboriginal teachers.

From that group of 50, I randomly selected five Aboriginal and five non-Aboriginal teachers, in addition to an alternate teacher from each group. The principal identified the ethnicity of the teachers; I did not question those assumptions. When I explained my study to each of the teachers, I made it clear that I was asking participation from Aboriginal and non-Aboriginal teachers. It was clear which group the teachers were being asked to represent; no one corrected my assumptions about their ethnicity.

Table 2

Demographics of Research Participants

Participant	Ethnicity	Level Taught	Years of Experience	Gender	Band school / Prov. school
P1	Non-Aboriginal	Elementary	< 15	Female	Band
P2	Non-Aboriginal	High School	< 15	Female	Prov.
P3	Non-Aboriginal	High School	> 15	Male	Prov.
P4	Aboriginal	Elementary	> 15	Female	Band
P5	Non-Aboriginal	High School	> 15	Male	Prov.
P6	Aboriginal	Elementary	> 15	Female	Prov.
P7	Aboriginal	Elementary	> 15	Female	Band
P8	Non-Aboriginal	Elementary	> 15	Female	Prov.
P9	Aboriginal	Elementary	> 15	Female	Prov.
P10	Aboriginal	Elementary	> 15	Female	Prov.

The teachers who participated in the research represented each of the five schools in the area. There were two men and eight women. The details regarding their ethnicity, grade level taught, years of experience, gender, and whether they taught at provincially-funded or band school are detailed in Table 2. Given the size of the community and the number of teachers in the area, I have generalized some of the details to preserve their anonymity, as they were assured of in the informed consent letter. For example, rather than specifically indicating the number of years of experience, I have identified experience as fewer than 15 years or greater than 15 years.

There are several details about the participants worth noting, although they were all selected randomly. Only two of the teachers had fewer than 15 years of experience. None of the teachers had taught at more than three schools and the majority had taught only in this school district or geographic area, in the case of band schools. As there are two band schools and three provincially-funded schools, the distribution of participants—three from band schools—is 10% less than proportional representation would require. Three of the teachers (33.3%) are currently learning support teachers. Two men were in the selection (20%); in fact, 34% of the number of teachers in the area is male. There were 33 non-Aboriginal teachers and 17 Aboriginal teachers across the five schools in the sample area; a decision was made to select five from each group, acknowledging that five participants constitutes 29% of the Aboriginal teachers, but only 15% of the non-Aboriginal group, based on conversations with the principals at each of the schools.

All of the non-Aboriginal teachers agreed to be interviewed and I did not have to contact the alternate. Initially, the five Aboriginal teachers agreed to participate but one of them did not attend the interview at the agreed-upon time and did not return my two phone calls to reschedule. I contacted the alternate teacher who felt unable to participate at present due to other commitments. At that point, I selected a second alternate from the 11 remaining names who was able to complete the interview and the vignettes with me. Considering these potential alternate participants, I contacted eight (47%) of the Aboriginal teachers in the area for this study.

Ethics

Before the study began, I obtained approval from the UNBC Research Ethics Board, the school district, and the principals of each of the schools. Once I received approval from the Research Ethics Board, I sent an information letter to the principals, requesting their support and a list of their teachers in their respective schools. It was clearly stated in the correspondence to the three off-reserve schools that district approval would be forthcoming. Principals from all five schools were eventually willing to participate, but one of the off-reserve schools preferred to wait for the district's confirmation of support before proceeding. All principals were assured that I would be approaching the teachers independently, and that the principals would not be required to solicit their teachers' participation on my behalf. Teachers could choose to participate in the study or not, with no consequence from the school or school district hinging on their decision.

The study was conducted with 10 teachers from five schools in northwestern British Columbia. Interviews were conducted and the vignettes administered to the 10 teacher participants between September 27, 2012 and November 2, 2012. There were 50 teachers in the area who were part of the random selection. This group of 50 included all of the teachers in four of the schools and four teachers in the one remaining school.

There were several reasons for selecting 10 teachers. In part, this size ensured that I had reasonable representation from each cultural group. There are five schools in the area; as a result of the random sampling, it was fortunate that I had representation of teachers from each of the five schools. Two of the schools are located on reserve and

are band funded, while three schools represented in this study are located off reserve and are provincially funded.

The principal at the school with four participants asked for volunteers; four teachers (two Aboriginal and two non-Aboriginal) agreed to participate. Each of the other four principals provided me with a list of all their teachers, with the understanding that I would contact them myself, and that each teacher's participation would be optional. While the research sample represented 20% of the teachers in the area, based on the 50 teachers for whom I had names, the sample size from each group was not large enough to provide analysis of the statistical significance of the results.

Ball and Janyst (2008) recognized that ethical practices and principles in research involving Indigenous people is one of the most contested issues in the current research environment in Canada. I have tried to be aware of that and sensitive to the implications throughout this research. The Aboriginal Capacity and Research Development Environment (ACADRE) has proposed four *Rs*—respect, relevance, reciprocity and responsibility—to guide research with Indigenous peoples.

I adhered to these principles by following cultural protocols and practices, including offering a small gift in exchange for participation. I tried to do as Ball and Janyst (2008) suggested by beginning with relationship building and dialogue about how to proceed “in a good way” (p.48). Above all, I endeavoured to do no harm with this research, and believe that the teachers have found the process amenable and that it offered insights into their own professional practice.

Interviews began with an overview of the research, as outlined in the informed consent letter (Appendix C). The consent letters were signed by each of the participants and a copy was kept by me; participants were given a copy for their records.

Schedule Administration

In May, 2012, I piloted the interview protocol and vignettes with an elementary school teacher whose school was not part of the five schools included in the research. This teacher, who is non-Aboriginal, has many years of experience as a teacher in this school district and has also taught pre-service teachers. She was very generous with her time and offered a number of helpful suggestions that I considered and incorporated, as appropriate. She was aware that the research proposal was still in progress for ethics approval at UNBC, and that her comments would not be incorporated into the research findings. The decision not to incorporate her comments was in anticipation of changing the approach or protocol based on the outcome of our interview and also because ethics approval was pending. In fact, the piloted interview was more informal and the discussion surrounding the vignettes was more fulsome than the actual interviews. Consequently, that pilot process was more time-intensive although the teacher with whom I piloted it seemed engaged and found the process interesting.

For the actual research interviews, I began each meeting with an overview of the research and an explanation of the informed consent letter, and answered questions from each participant. The interview portion preceded the vignettes and was based on a semi-structured interview protocol which I had designed to guide the process. In fact, the protocol resulted in the interviews being more structured than I had initially

intended which was partly a result of not wanting to impose too heavily on the participants, thinking that their time was in short supply.

The research vignettes were designed to reproduce the approach used by Kluckhohn and Strodtbeck (1961). I mirrored their language, and changed the setting to reflect an educational one and/or a setting where FASD was a central theme. For example, Vignette 3 (below) illustrates an educational setting, in which FASD is also a central theme.

Three teachers from three different areas were talking about the things that control student behaviour and learning, regardless of their diagnosis of FASD. Here is what each of them said.

- (A) One teacher said: Teachers have never controlled the behaviour of students or influenced their school outcomes and probably never will. There have always been students who will succeed and students who struggle. That is the way that it is, and you are wise if you take it as it comes and do the best that you can.
- (B) The second teacher said: I believe that it's a teacher's job to find ways to change student behaviours and attitudes just as teachers have changed many other things in the school setting. I believe that teachers can succeed in doing this and may even be successful in changing student behaviours and attitudes in the long term, not just for this school year.
- (C) The third teacher said: I believe that I help students by working closely with them, staying abreast of the nuances of their behaviours, listening, watching and caring for the whole child. By being attentive to the whole

child, and working with their nature, I will have successes that will affect their behaviours and attitudes.

Which teacher do you think had the best idea?

Which of the other two teachers do you think had the better idea?

Which of the three teachers do you think most other teachers in your cultural group would think had the best idea?

In Vignette 13 (below), FASD is the central theme, although the setting is not an educational one.

Three teachers were talking about whether people can alter the behaviour of mothers who drink during their pregnancy.

(A) One said: It is true that people like doctors and public health campaigns are raising people's awareness to the issue of drinking during pregnancy. If people will pay attention to this advice, they will almost always realize that drinking during pregnancy can affect the baby and will limit their consumption of alcohol.

(B) The second one said: I really do not believe that there is much that anyone can do to change the behaviours of others. It is my belief that every person has a life to live and the decisions they make are their own. If there are outcomes like children born with FASD, it just happens.

(C) The third one said: I believe that there is a plan to life which keeps all living things moving together, and if a person lives their life in accordance

with that plan, they will likely make the right decisions, whatever the outcome.

Which of the three teachers said nearly what you think is right?

Which of the other two is more right?

Which of the three would you say other people in your cultural group would say is the best?

Appendix A outlines the vignettes in their entirety; Appendix D presents a vignette developed by Kluckhohn and Strodtbeck next to a revised vignette used in this research.

I read the vignettes to each participant in a non-judgmental way with minimal vocal inflection, allowing adequate time for their responses. This method of administration was as Kluckhohn and Strodtbeck had initially intended. Participants were encouraged to respond intuitively, rather than deliberating about the *right* answer, wishing for a combination of two, or stating that they did not feel that any were appropriate answers to select from the choices given.

Participants were given a copy of the vignettes to refer to as I was reading which also meant that I did not have to read the vignettes several times. Participants were discouraged from discussing the vignettes with me, and I just asked them to select their answer before we moved onto the next scenario. Making a selection without discussion was a challenge for some, who felt that they were selecting the best of the available options, but not necessarily their preference, or who felt the need to verbalize the rationale their selection.

The two components were completed together at a location and time preferable to each participant, which included the teacher's school, the community college where I work, or my home. The duration of the meeting was approximately one hour: the semi-structured interview component and the administration of the vignettes each took approximately 30 minutes to complete.

Overview of Kluckhohn and Strodtbeck's Value Orientations

Researchers in various disciplines, including sociology, counseling and anthropology, have described and documented variations in the lives that people create for themselves (Kluckhohn & Strodtbeck, 1961). Florence Kluckhohn was critical of other cultural anthropologists whom she felt had the most significant impact on *absolutistic thinking* or universals. It is the concepts of relativity, critical to the thinking that shaped her work as described in her (1961) book, *Variations in Value Orientation*, which distinguishes her work from other anthropologists.

Anthropologists have written extensively about the notion of a central core of meaning shared by all cultures, called *basic values*. Other anthropologists have referred to similar concepts, calling them by different names, such as *unconscious system of meanings* and *culture themes*. Kluckhohn's contention was that these approaches were too simple, limiting the possibilities for cultural variation. In response to this perceived omission, she developed the framework that I have replicated for my research.

Originally, Kluckhohn's framework was used by her and fellow anthropologist, Frederick Strodtbeck, in the 1950s, in five culturally-distinct communities in the American Southwest. They based their approach on three assumptions. First, a limited number of common human problems exist for which all people, at all times, must find a

solution. Second, while there is variability in solutions of all problems, it is neither random nor limitless within the range of possible solutions. And finally, all alternatives to all solutions are present in all societies at all times, but are differently preferred (Kluckhohn & Strodtbeck, 1961; Ortuno, 1991). The model was an elegant one, allowing for a measurable indication of value preference, and a focus on the variant orientations, not just the dominant preferences. The fact that a number of researchers continue to utilize Kluckhohn and Strodtbeck's approach is an indication of the model's longevity (Carter, 1991; Carter & Helms, 1990; Ortuno, 1991). It is for the reasons cited above that I chose to emulate this model for my own research.

Kluckhohn and Strodtbeck (1961) believed that the rank-ordered principles (or solutions) result from an interrelationship of cognitive, affective, and directive elements of the evaluative process. The principles are variable from culture to culture, but only in the way that they are ranked; the component parts are themselves cultural universals. Kluckhohn and Strodtbeck's approach is distinguished from other models in part by the focus on the directive aspects.

In addition to being critical of the oversimplification of the notion of basic values, Kluckhohn and Strodtbeck (1961) were critical of other approaches to values which they felt overstressed dominant values exhibited by cultures, while ignoring variant values. Their approach to cultural variation outlined a classification of five value orientations which participants ranked through their responses.

Table 3

Kluckhohn and Strodtbeck's (1961) Value Orientation Framework

Concern	Possible response
Social Relations – what is the best form of social organization?	Hierarchical/collateral/individual
Man-Nature Relationship – what is the appropriate relationship to nature?	Subordinate to nature/harmony w. nature/dominant over nature
Activity – what is the best mode of activity?	Being/doing
Time Sense – how should we best think about time?	Past/present/future
Human Nature – what is the basic nature of people?	Evil/mixed/good

Within the original framework, Kluckhohn and Strodtbeck (1961) limited the problems common to all human groups to five basic concerns which they called orientations, outlined below and shown Table 3 with the possible responses.

- 1) What is man's assessment of innate human nature? (perception of self and others)
- 2) What is man's relation to nature? (man-nature relationship)
- 3) What is the temporal focus of life? (time)
- 4) What is the group's principal mode of activity? (activity)
- 5) What is the group's relationship to others? (social relations)

Kluckhohn and Strodtbeck's schedule (1961) had 22 vignettes (stories or anecdotes) that were delivered orally. These vignettes were consolidated into four orientations: Social Relations (seven items); Man-Nature Relationship (five items); Time (five items); and Activity (five items). Most of the orientations had three

alternatives. For example, with in the Social Relations orientation, the response was hierarchal, collateral, or individual (n=3). Within the Activity orientation, being/doing was a choice between two alternative responses, not three, as with the other orientations.

This value orientation framework allowed for systematic comparisons between cultures, while also permitting the analysis of variations within cultures. I have replicated their research instrument—a series of vignettes—for my research, making accommodations for an educational context. For educators—and for others—there is benefit to understanding our own individual cultural values, as well as those of others.

By utilizing the vignettes, I assessed for value orientations related to social relations, man-nature relationship, activity, and time. I coded and themed the interviews individually, looking for patterns across and within cultures that related to teachers' attitudes and beliefs towards their students with FASD. Finally, these value orientations were related to key themes that emerged from separate semi-structured interviews with each participant.

Design of the Vignettes

As mentioned above, Kluckhohn and Strodtbeck originally described 22 vignettes. While based on their original research design, I revised a number of the original vignettes to correspond with situations or choices that might exist for teachers in dealing with students with FASD in an educational setting. In planning for the revised vignettes, I considered four general topic areas: teacher's responsibility toward the student, outcomes for the student, intervention strategies, and etiology. Each of the four topics has three vignettes; teacher's responsibility has four. Kluckhohn and

Stodtbeck's vignettes were used verbatim or were altered slightly to reflect these four general topic areas, also considering the four orientations. In both cases, I stayed true to the original language and the structure of the vignettes, including the number of response options for participants to select. As I was not replicating the original research exactly, I decided not to develop 22 vignettes; I developed and utilized 13 vignettes, which I augmented with an interview with each participant. The two components provided me with suitable data and were possible to administer in a reasonable period of time during one interview.

Table 4 outlines the revised schedule number, the item number, the orientation it is designed to measure, and the corresponding vignette item title put forward by Kluckhohn and Stodtbeck. A complete schedule of the vignettes for this research is presented in Appendix A. An example of an original Kluckhohn and Stodtbeck vignette and the corresponding revision is presented in Appendix D.

Research Methods

This study was a mixed-methods study that used qualitative and quantitative methods for gathering and analyzing the data needed to address the research question. Both methods were used, as I wanted to use a variation of the instrument developed by Kluckhohn and Stodtbeck (quantitative data), but I also wanted to theme the interviews (qualitative data) and note if there were shared or consistent patterns of beliefs exhibited in both the interviews and the vignettes. I analyzed the data from both

Table 4

Schedule Vignettes, Orientation, and Kluckhohn and Strodtbeck's Original Title

Schedule Number	Item Number	Orientation	Kluckhohn and Strodtbeck's Original Item Title
1	A1	Activity	n/a
2	R1	Relational	Help in Misfortune
3	M1	Man-Nature	Belief in Control
4	T1	Time	Philosophy of Life
5	T2	Time	Child Training
6	A2	Activity	Ways of Living
7	R2	Relational	Choice of Delegate
8	R3	Relational	n/a
9	T3	Time	Water Allocation
10	A3	Activity	Care of Fields
11	M2	Man-Nature	Use of Fields
12	R4	Relational	Family Work Relations
13	M3	Man-Nature	Length of Life

approaches and considered them separately before I made linkages between the two.

The vignettes were my primary interest at the start of the study; the interviews were included to provide support material and for triangulation. It was not until later that I became aware of the richness of the interview data. Having both quantitative and qualitative data allowed me to use triangulation to make the findings more robust, by combining the data from two parallel sources. Triangulation is used in social science research for the purpose of instilling confidence in the findings of the research (Berg, 2009; Creswell, 2012). The assumption is that the findings from one source will corroborate the findings from the other source which ensures that the study will be accurate and contribute to a report that is accurate and credible.

Qualitative methods. The interviews were transcribed verbatim by me from the audio format. The participants were then sent the written transcripts via email and

asked to verify the content, as well as to provide any additional comments upon further reflection after the interview. This process, whereby the research asks the participants in the study to check the accuracy of the account, is called *member checking* (Creswell, 2012). I used member checking as a means of confirming the content but also as an opportunity for the research participants to augment their earlier responses, if warranted with additional consideration. Their responses to the transcripts were requested within a week; three responded with their approval of the transcript in that timeframe. Nothing was heard from the others by the requested date, which was interpreted as agreement with the interview as transcribed. I told them in conversation that this would be the process, but encouraged their responses.

The first cycle coding was completed, using methods outlined by Saldaña (2009) in his coding manual. Specifically, I applied attribute coding to capture the basic descriptive information such as school setting, participant demographics, and experience; descriptive or topic coding to identify the basic content of a passage; and affective methods to try and ascertain the values and beliefs of the teachers. There were many coding methods outlined by Saldaña (2009), not all of which would have been suitable for this research. Affective coding was particularly relevant for this purpose as my research question related to teachers' attitudes and beliefs towards students with FASD.

I began the process of coding by reading through each transcript carefully, trying to get a feeling for the whole, as Creswell (2012) had suggested. I used a reflective journal during the transcription phase to record preliminary ideas about the interviews, which proved helpful subsequently in coding. I did not begin formally coding the

transcripts until I had transcribed completely all the interviews. Once I started the coding, I used the comments feature in Microsoft Word to record my codes. An example of the first cycle codes from a portion of one of the interviews is included below (Figure 1). First, I identified a relevant text segment, highlighted it, and then added a code as a comment that accurately described the meaning of each segment. Most of the transcribed pages in each of the 10 interviews eventually looked like the example.

Learning assistance coordinator was coded as a job role, which is an example of attribute coding. Descriptive (or topic) coding included comments about funding and support, for example. These were the comments that got to the essential content of the passage. Affective coding was used for comments that referred to more subjective aspects of human experience. In the example below, anger with the system was an affective code as the teacher commented about the time required to secure a psycho-educational assessment when the education system is so far behind. To facilitate thematic analysis, I completed manually on the computer second cycle coding rather than using a qualitative research programme like NVivo.

As with the first cycle coding, I used the approach and methods suggested by Saldaña (2009). I did this second cycle coding in an attempt to make the invisible obvious and recognize the significant from the insignificant (Saldaña, 2009). I did not develop a code book to record all the codes as I generated them. In retrospect, a code book might have been a more effective data management tool. Instead, I coded the transcripts and then attempted to make sense of the myriad codes by grouping them into categories, collapsing and linking the notations in the list.

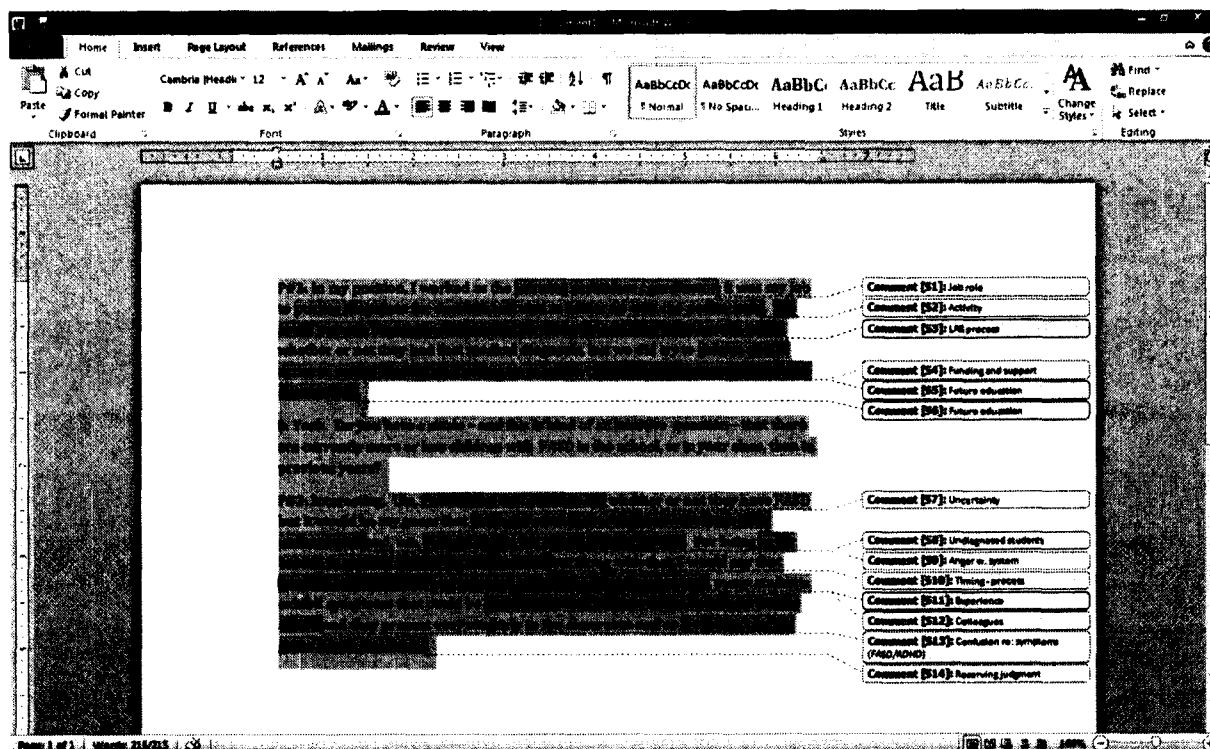


Figure 1. An example of first-cycle coding for one example transcript using Microsoft Word.

The themes in the data were exposed by coding initially the transcripts and subsequently regrouping the codes into categories. I distributed the first cycle codes into categories, thereby reducing the number of coded segments. The categories were then considered as possible themes for the research once saturation during the second cycle coding was achieved. Saturation occurred when no new categories were being created from the coded data. The process of identifying the theme the *importance of family* is illustrated in Table 5 by showing sample codes, the initial category, the eventual theme, and a sample quote.

The eventual themes were represented in the responses of the Aboriginal and the non-Aboriginal teachers. Some of the themes were preferred more assiduously by some participants than by others and will be outlined in Chapter 4.

Table 5

Example of Coding and Theming

First Cycle Codes	Initial Category	Theme	Sample Quote
<ul style="list-style-type: none"> • Interventions: family • Relationships • Relations: collateral • Parents • Young families • Young parents • Parenting styles 	Family	Importance of family	"Unless their parents are willing to come and be there, but they will never do it because they don't come to any functions"

Quantitative methods. An explanation of the research methods and the vignettes designed by Kluckhohn and Strodtbeck was provided above in this methodology chapter. The 13 vignettes administered are presented in full in Appendix A.

Vignettes were integral to the approach used by Kluckhohn and Strodtbeck (1961). I adopted this approach as I was interested in replicating their methodology. There is considerable literature discussing the values of vignettes in research, particularly social sciences and education (Jenkins, Bloor, Fischer, Berney & Neale, 2010; Parajes, 1992). Jenkins et al. (2010) outlined some benefits to using vignettes in research, including for insight into the participant's interpretive framework and perceptual processes. Given that the participants in my research commented on a story, it is less personal than talking about direct experience. I hope that the vignettes were non-threatening, as was my intention.

Table 6

Participant Value Orientations – Researcher Predictions (detailed)

Value Orientation	Non-Aboriginal	Aboriginal
Activity	doing > being	being > doing
Man-Nature	over > with > subject	with > subject > over
Social relations	indiv > coll > lineal	coll > lineal > indiv
Time	future > present > past	present > past > future

Critics suggest that while vignettes can be used to explore participants' knowledge, they do not accurately simulate the interpretive work that the participant would do in a real-life situation. As a result, the researcher may be faced with a response of how the participant *believes* a vignette situation would unfold, and how he or she would act if presented with a similar set of events. In my case, the tendency for participants to respond according to their beliefs was a distinct advantage: I wanted to understand the participants' beliefs.

For this portion of the research, I began by considering potential responses to the four orientations within each of the two cultural groups, as suggested in Kluckhohn and Strodtbeck's (1961) original method. I did not consider the interrelationship of vignettes or individuals. These considerations were performed without assigning a numeric value to the responses. In fact, this omission was a helpful reflective activity for me to begin the research in as much as it clarified my perceptions of my own cultural group. For the actual analysis, a numeric value was assigned to the responses, allowing a ranked preference from the participants. Again, an approach to scoring the responses is true to Kluckhohn and Strodtbeck's (1961) original method. Researcher predictions are presented in Table 6.

Within the Relational orientation, responses could be individual, collateral or lineal. I considered that non-Aboriginal participants would be more individual and that Aboriginal participants would be more collateral in their approach to this question. This assumption was based on my experience at the college, working with both Aboriginal and non-Aboriginal students, and my own personal experience as a non-Aboriginal woman who has lived and worked in this community for the last eight years.

The distinction between the responses is best clarified with an actual vignette from the research; I have cited Vignette 12 below. The significance or meaning of the indicated preference is in square brackets after response A, B, or C.

I am going to tell you about three different ways families can arrange work; assume the family has a child with a diagnosis of FASD and that their work is about how to function as a family.

- (A) In some communities it is usually expected that each of the separate families will look after its own business separate from all others and not be responsible for other families. [INDIVIDUAL]
- (B) In some communities it is usually expected that close relatives in the families will work together and talk over among themselves the way to take care of whatever problems come up. When a boss is needed, they usually choose one person, not necessarily the oldest able person, to manage things. [COLLATERAL]
- (C) In some communities it is usually expected that the families which are closely related to each other will work together and have the oldest able

person be responsible for and take charge of most important things.

[LINEAL]

In terms of the Time orientation, responses were past, present, or future oriented. I anticipated that the non-Aboriginal participants would have a *future* orientation, whereas the Aboriginal participants would be more *present* orientated. My experience is that I tend to do things with the future in mind. For example, more education (a Master's degree) will help me secure a better job *in the future*. Many Aboriginal students, with whom I work, share this opinion but also place a high value on the considerations of the present. For example, food harvesting and fishing in the fall is often a priority over school demands. In this example, the present is more important than the future. Another example, related to this research, was that one of the Aboriginal teachers cancelled our pre-arranged meeting because of a death in the community earlier in the week, which suggested that the *present* was more important at that point than either the past or the future.

There were two choices within the Activity orientation: either being or doing. I anticipated that the non-Aboriginal participants would be *doing* oriented and the Aboriginal participants would be more *being* oriented. This prediction was perhaps the most self-reflexive observation, as I forever seem to be doing something.

The Man-Nature Relationship orientation allowed for responses that either indicated that man was subject to nature, in harmony with nature, or was able to overcome nature. I expected that non-Aboriginal participants would think that they could overcome nature whereas the Aboriginal participants might be more in harmony with nature.

As with the Social Relations orientation, the distinction between the responses is best clarified with an actual example from the research; in this case, Vignette 13 is used. The indicated preference is in square brackets after response A, B, or C.

Three teachers were talking about whether people can alter the behaviour of mothers who drink during their pregnancy.

(A) One said: It is true that people like doctors and public health campaigns are raising people's awareness to the issue of drinking during pregnancy. If people will pay attention to this advice, they will almost always realize that drinking during pregnancy can affect the baby and will limit their consumption of alcohol. [MAN OVER NATURE]

(B) The second one said: I really do not believe that there is much that anyone can do to change the behaviours of others. It is my belief that every person has a life to live and the decisions they make are their own. If there are outcomes like children born with FASD, it just happens. [SUBJECT TO NATURE]

(C) The third one said: I believe that there is a plan to life which keeps all living things moving together, and if a person lives their life in accordance with that plan, they will likely make the right decisions, whatever the outcome. [HARMONY WITH NATURE]

Methodology used to calculate numeric value. I analyzed the vignettes using Kluckhohn and Strodtbeck's (1961) approach. After I presented each vignette to the research subject, the participant was asked to identify their preferred or first choice

from the three possible answers or choices given at the conclusion of the vignette, much like choosing the best ending for a story.

To examine the range of variations, I assigned a numeric value to each response for each vignette, from each participant. Their first choice was assigned a value of one, their second choice was assigned a value of two, and their third choice was inferred and was assigned a value of three. Accordingly, a lower score in an orientation was indicative of a higher preference. For example, I calculated a hypothetical score based on the Vignette 3, within the Man-Nature Relationship orientation:

Three teachers from three different areas were talking about the things that control student behaviour and learning, regardless of their diagnosis of FASD. Here is what each of them said.

(A) One teacher said: Teachers have never controlled the behaviour of students or influenced their school outcomes and probably never will. There have always been students who will succeed and students who struggle. That is the way that it is, and you are wise if you take it as it comes and do the best that you can.

(B) The second teacher said: I believe that it's a teacher's job to find ways to change student behaviours and attitudes just as teachers have changed many other things in the school setting. I believe that teachers can succeed in doing this and may even be successful in changing student behaviours and attitudes in the long term, not just for this school year.

(C) The third teacher said: I believe that I help students by working closely with them, staying abreast of the nuances of their behaviours, listening, watching and caring for the whole child. By being attentive to the whole child, and working with their nature, I will have successes that will affect their behaviours and attitudes.

- Which teacher do you think had the best idea?
- Which of the other two teachers do you think had the better idea?
- Which of the three teachers do you think most other teachers in your cultural group would think had the best idea?

I read the vignette to the research subject and the options A, B, or C. As the participant answered B in response to the first question, I assigned it a value of 1 since it was their preference. Their answer to the second question was C; this response was their second choice and it was assigned a value of 2. I assumed that their third choice would be A, the remaining response and assigned it a value of 3 so that $A = 3$ $B = 1$ $C = 2$. The combined total would always equal six when there were three responses. The response from the third question was used later in a different calculation.

Next, I calculated the sum of each value orientation, consisting of the combined score of the three or four questions within the value orientation. With the Activity orientation, for example, I totaled the responses for Vignettes 1, 6, and 10.

Finally, I conducted a detailed analysis of the variations within and between the four orientations for each of the two cultural groups. The results for each cultural group are discussed in detail in the next chapter.

Methodology used to graph numeric value. Responses were graphed, using the method developed by Kluckhohn and Strodtbeck, allowing me to chart multiple rankings for the responses, showing the preferential patterning for individuals and cultural groups. For example, in the Relational orientation, each participant had a preference for lineal, collateral, or individual; each response was assigned a numeric value.

If we assume a null hypothesis, $A = B = C$ (or the sum for alternative A = the sum for alternative B = the sum for alternative C), it is then possible to calculate the observed sum and the expected sum for the vignettes and to calculate the difference for each cultural group. In this case, the expected sum for each value would be two to achieve a null hypothesis.

To illustrate the method of analysis, I will briefly describe results obtained from responses to the Vignette 8 (which has a Social Relations orientation); the numeric values assigned are shown in Table 7, based on the five respondents in each group, along with the observed sum, the expected sum, and the difference:

The sum of the residuals is always 0. The sum of the squares of the three orientations (denoted as S) is calculated this way:

$$a + b + c = 0$$

$$a^2 + b^2 + c^2 = S$$

For the Aboriginal case:

$$(-1)^2 + (-1)^2 + (2)^2 = 6$$

For the non-Aboriginal case:

$$(-4)^2 + (0)^2 + (4)^2 = 32$$

Table 7

Vignette 8 - Numeric Values Assigned

	Aboriginal			Non-Aboriginal		
	Coll.	Ind.	Lineal	Coll.	Ind.	Lineal
R1	2	3	1	3	2	1
R2	1	2	3	3	2	1
R3	2	3	1	3	2	1
R4	3	2	1	3	1	2
R5	3	1	2	2	3	1
Observed Sum	11	11	8	14	10	6
Expected Sum	10	10	10	10	10	10
Expected less Observed	-1	-1	2	-4	0	4
Sum of Squares		6			32	

Lehmann (as cited in Kluckhohn & Strodtbeck, 1961) developed a visual version of the results attained by the following method. The number of respondents is symbolized by m . I will give an example of the calculation and then explain what I did in the course of my calculations.

For the Aboriginal case:

$$\frac{a}{\sqrt{m}} = \frac{-1}{\sqrt{5}} = -0.45$$

$$\frac{b}{\sqrt{m}} = \frac{-1}{\sqrt{5}} = -0.45$$

$$\frac{c}{\sqrt{m}} = \frac{2}{\sqrt{5}} = 0.89$$

The computing check is: $\frac{a}{\sqrt{m}} + \frac{b}{\sqrt{m}} + \frac{c}{\sqrt{m}} = 0$

$$-0.45 + -0.45 + 0.89 = 0$$

For the non-Aboriginal case:

$$\frac{a}{\sqrt{m}} = \frac{-4}{\sqrt{5}} = -1.79$$

$$\frac{b}{\sqrt{m}} = \frac{0}{\sqrt{5}} = 0$$

$$\frac{c}{\sqrt{m}} = \frac{4}{\sqrt{5}} = 1.79$$

The computing check is: $-1.79 + 0 + 1.79 = 0$

The graphs have been constructed with guidelines that are perpendicular to the A, B, and C axes. One end of the line is positive, indicating a stronger preference for a particular value orientation, and the other is negative. Using this method, I was able to Aboriginal teachers' in Figure 2, and the preference for the non-Aboriginal teachers in Figure 3.

In order to plot this graph for the non-Aboriginal teachers, I started from the centre and measured -1.79 along the A-axis, then drew a line perpendicular to the A-axis at that point. Similarly, I measured 0 along the B-axis and drew a line perpendicular to the B-axis at that point. By going 1.79 along the C-axis, the line perpendicular to the C-axis this point goes through the previously established point and functions as a check for the graphing.

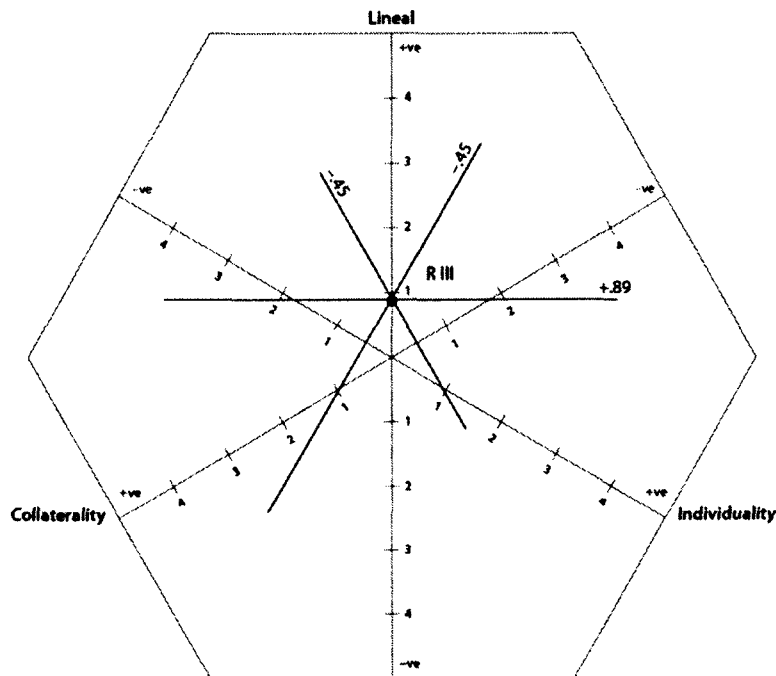


Figure 2. Aboriginal teachers' preference in the Social Relations orientation, based on responses to Vignette 8 (R-3). The three axes represent the possible responses.

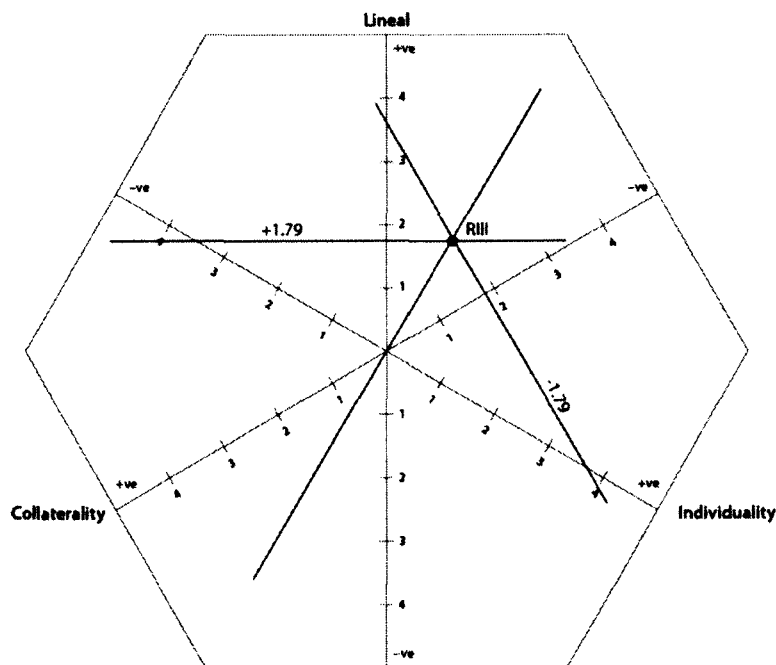


Figure 3. Non-Aboriginal teachers' preference in the Social Relations orientation, based on responses to Vignette 8 (R-3). The three axes represent the possible responses.

I then created composite graphs for the three orientations with three alternatives each (social relations, man-nature relationship, and activity), locating both cultural groups on one graph. I did not use this approach for the Time orientation, as there were only two options for the participants to rank. These are presented in Appendix E and will be discussed further in Chapter 4.

Kluckhohn and Strodtbeck's (1961) original graphs also showed the boundaries for use in connection with a statistical significance test. Kendall's *S* statistic for the measurement of consensus was used for this calculation and is appropriate for comparing ranked responses. The criterion for its use is a minimum of three ranked responses and a set of participants which is between 8 and 60. Given that each of my cultural groups consisted of five members, I was unable to calculate the statistical significance. I have included the graphs without this addition, as the representation is useful in showing trends, but is not statistically significant.

The overview provided above is to illustrate the methodology used to create the graphs; the results will be presented in Chapter 4, offered as illustrated graphs in Appendix E, and discussed in Chapter 5.

Chapter Summary

I began the chapter with a discussion of why this study was designed as an ethnographic project and outlined the steps I undertook to ensure that the study was conducted in an ethical fashion. I also demonstrated that I was cognizant of the issues surrounding research with an Aboriginal population.

I presented the demographic characteristics and teaching experience of research sample. The research group consisted of 10 teachers (five Aboriginal and five non-

Aboriginal) who I randomly selected for this study from a group of 50 teachers in the area. The teachers represented five schools: two band schools and three publicly funded schools.

I described the semi-structured interview protocol that I administered to each research participant before I presented the series of vignettes. I coded the interviews using first and second cycle coding methods (Saldaña, 2009). The first cycle coding was performed to generate the information needed to identify categories and themes. I provided an example of the approach to coding, as well as the winnowing of categories into themes.

I presented an overview of Klockhohn and Strodbeck's (1961) value orientations. There were five orientations proposed by the anthropologists; those orientations are: Activity, Man-Nature Relationship, Social Relations, Time and Perception of Self and Others. The orientations were originally measured using 22 vignettes, each with a choice of preferences as responses. Kluckhohn and Strodbeck did not screen for the perception of self and others, given the parameters of their project and the funding available. My research instrument was based on their approach but consisted of 13 vignettes and highlighted the same four orientations, omitting the perception of self and others.

Kluckhohn made several assertions about value orientations that distinguished her work from that of other anthropologists. She felt that there were a given number of solutions to problems and that are common across all cultures. She also felt that those preferences would be differently preferred by various cultures. Together with Strodbeck, they developed the aforementioned approach to value orientations.

I used Kluckhohn and Strodtbeck's (1961) book, *Variations in Value Orientation*, as a model for this research. The vignettes used in this research were predicated on their design, scored, and graphed accordingly, also based on that approach. I outlined the methods used for the scoring and the graphing in this chapter although the results and the themes identified will be presented in Chapter 4 and discussed in Chapter 5.

Chapter 4: Research Findings

Chapter 1 introduced the research question which was to examine what the differences were in the attitudes and beliefs between Aboriginal and non-Aboriginal teachers with regards to students with fetal alcohol spectrum disorder (FASD). Chapter 2 surveyed the existing professional literature on FASD, its screening, and diagnosis. Literature related to teachers and students with disabilities, including FASD, was also discussed, as were issues related to cultural values and cultural variation in several settings. Chapter 3 outlined the research methodology, discussed ethnography, and concluded with an overview of the qualitative and quantitative research approaches used in this research.

This chapter will present the qualitative and quantitative data that were collected during the course of the research. First, I will give a detailed description of the qualitative data, which were generated from the semi-structured interviews, and identify the themes that were determined through the process of coding. Then I will provide a description of the quantitative data that were collected from the vignettes based on the numeric scores assigned to the teachers' responses. These quantitative data are not statistical, although empirical in nature, and are based on a series of calculations that I conducted.

As I mentioned in Chapter 3, my initial intent was to replicate Kluckhohn and Strodtbeck's (1961) methodology through the development and administration of a series of vignettes to determine the value orientations of the research participants. I added the qualitative interview component to augment the findings from the vignettes, and also to triangulate those data, where appropriate. Triangulation is the process of

comparing one set of data to another, confirming the results in the process. It is done to ensure that the data are accurate, and that the resulting research is accurate and credible (Creswell, 2012). In the case of this research, the themes from the interviews were quite distinct from the results of the value orientations. While some triangulation was possible, the two components indicated quite different findings, which will be presented below. There were relationships between the data from the two research approaches which is explained in the section following the research findings for each of the two approaches. A discussion of the results follows in Chapter 5.

Qualitative Research Findings

I interviewed the participants and transcribed the interviews over a period of three months from September 27 to November 3, 2012. During the process of interviewing and transcribing, I kept a reflective journal in which I noted comments regarding preliminary observations about the data and other thoughts about the research process. Saldaña (2009) described the value of analytic memos, which was helpful guidance for me. As a regular journal writer, I am familiar with the process of journaling, but appreciated his suggestions as I believed they made the coding process more effective and reflected the true attitudes and beliefs of the research participants. Saldaña suggested that researchers might write about myriad topics in their journals, including emergent patterns, categories, or themes. On October 14 I wrote,

There seems to be variation in the teacher responses based on the length of time teaching. Interestingly, none of the teachers have taught many places but here, even the ones with the long teaching careers. Could their responses have something to do with the time elapsed since their training?

While this was not a theme, it was an observation and a question based on the interviews. Saldaña (2009) also suggested that a researcher could reflect on or write about problems with the study. On October 23 I questioned how I was going to link the interviews with the vignettes. I wrote, "Interview questions were divided into four areas initially (teacher's responsibility, outcomes, intervention strategies, and etiology). Is there a similar link with the vignettes? Look at that possibility. Code the interviews, but look at patterns with the vignettes."

Once the transcribing and first cycle coding was complete using the methodology outlined in Chapter 3, I began to think about initial categories into which I would consolidate the codes; eventually, the categories became themes. The final themes distilled from the interviews, after second cycle coding was completed, were the importance of family, the value of life skills and life skills training, culture, location, and teacher perceptions. Location had two sub-themes, one relating to the economy and the other to geography. Teacher perceptions also had two sub-themes: perceptions about of the education system and perceptions about students.

The code frequency for each theme is outlined in Table 8 for the two cultural groups, along with the summary of the number of codes. Some codes were relevant to more than one theme and were recorded in each appropriate theme(s).

While the themes were shared by each cultural group, they were differently preferred. Table 9 presents frequency of themes for the Aboriginal teachers in an descending format, whereas Table 10 presents the frequency of themes for the non-Aboriginal teachers.

Table 8

Frequency of Interview Themes - Summary

Theme	Theme Frequency - Aboriginal teachers	Theme Frequency – Non-Aboriginal teachers
Prevalence of FASD	13	11
Symptoms of FASD	30	28
Importance of family	33	15
Life skills and life skills training	14	4
Culture	11	8
Location: geography	10	7
Location: economy	5	3
Teacher perception: education system	24	29
Teacher perception: students	47	29
TOTAL	187	134

All research participants spoke about the prevalence and symptoms of FASD in response to questions asked directly by me; other themes emerged from the data as a result of the interpretive coding process. These two initial questions determined the teachers' impressions of the prevalence of FASD in this community and the symptoms of the disorder.

Prevalence of FASD. All of the teachers responded affirmatively when asked if they had children with special needs in their classes and if they felt that there were students with FASD in their classes. For Aboriginal teachers, comments in this theme accounted for 7% of their overall comments.

One Aboriginal teacher responded, "Every classroom would have some. But you know, since I started way back in '86, we used to just see one or two. Instead of decreasing, because of education, what not to do, everything, it has increased. Now we have maybe six or seven kids in each classroom". The awareness of a medical diagnosis

Table 9

Frequency of Interview Themes - Aboriginal Teachers

Theme	Theme Frequency
Teacher perception: students	47
Importance of family	33
Symptoms of FASD	30
Teacher perception: education system	24
Life skills and life skills training	14
Prevalence of FASD	13
Culture	11
Location: geography	10
Location: economy	5

Table 10

Frequency of Interview Themes - Non-Aboriginal Teachers

Theme	Theme Frequency
Teacher perception: students	29
Teacher perception: education system	29
Symptoms of FASD	28
Importance of family	15
Prevalence of FASD	11
Culture	8
Location: geography	7
Life skills and life skills training	4
Location: economy	3

of fetal alcohol syndrome (FAS) was much rarer: just one teacher (non-Aboriginal) in a band school noted that she had seen an individualized education plan (IEP) for a student with a medical diagnosis of FAS, which was documented on the psycho-educational assessment that teacher accessed.

Within the Aboriginal group, two of the teachers thought that there were fewer instances of FASD in their classrooms now than previously; one thought there were more cases; one thought the prevalence was about the same; and another did not comment on this question about prevalence. Regardless of the response, there was a general belief that parents are more informed about FASD as a result of public education and information about the harmful effects drinking while pregnant. The one participant who felt there was an increase in prevalence explained, “younger mothers but, you know, it’s not planned parenthood either. It’s always after a big drunk, or a long time and they are still drinking. You know, having a party and not knowing you are pregnant. There is a lot of alcoholism here and it starts so young”.

The non-Aboriginal teachers were less definitive about the prevalence rate but their comments on this theme accounted for 8.2% of their overall comments, a slightly higher percentage than for the Aboriginal teachers. One teacher felt that there was an increase in the number of students with FASD. That teacher’s comment was that trends are cyclical in nature and this is merely a time with a higher prevalence rate. The other non-Aboriginal teachers did not comment specifically on the rate, but had many observations to share which reflected frustration, trends, experiences, and the multiplicity of issues present in the community at any given time that could affect prevalence. One teacher experiencing frustration felt that there were a number of undiagnosed students and that they would “blame the system for that: for being so far behind in pursuing psycho-educational assessments”. Finally, the teacher with the least teaching experience did not comment on prevalence rates or trends, given that teacher’s tenure at that particular school.

Symptoms of FASD. A description of a range of symptoms was the second question that I asked the participants directly. For Aboriginal teachers, their comments related to symptoms accounted for 16% of their overall comments. Given the number of codes identified in the transcripts, the percentage of codes related to symptoms was higher for non-Aboriginal teachers, whose comments on this theme totaled 20.9% of their overall comments.

Participants, regardless of ethnicity, identified that student issues related to behaviour were a primary symptom, with cognition and physical appearance as secondary symptoms. One of the Aboriginal teachers commented,

I think that it's easier for us to focus on a child's behaviour. You know, if we are dealing with a child with challenging behaviour then we think along those lines: there might have been damage to this child in the womb. We think more along those lines with behaviour than we do with things like problems with memory.
(Aboriginal)

Student behaviours discussed included acting out; not being able to sit still; responding as if hearing the concept or instructions for the first time; not accepting the consequences of their behaviour; and being unable to focus on a task for long enough to see projects or assignments through to completion.

Responses about cognition varied between participants and varied across ethnicities. One participant from each group talked about "lack of ability academically" or "cognitive delays". The teacher citing "lack of ability academically" spoke of an elementary school class where each student had an individualized education plan (IEP) or a student intervention plan (SIP). None of the students were working at grade level

and the teacher suspected that, “there was fetal alcohol in there somewhere”. Another teacher related the experience of an older student in a regular programme who was supposed to have modifications to the curriculum. The student was too weak for realistic modifications at that grade level, so the teacher had individualized the curriculum to accommodate that student’s needs. It was the belief of this teacher that the student presented with the symptoms of FASD and attending cognitive delays. None of the other eight teachers reported cognitive delays in their students with FASD. In fact, one teacher (non-Aboriginal) explicitly acknowledged a student who was “more than academically capable, but just not behaviourally, attention-wise able to stick to a task to see it through to completion”.

The majority of teacher participants, regardless of ethnicity or grade taught, spoke of issues with memory and retention in students with symptoms of FASD, which I related to cognition. At the younger grade levels, memory and retention were issues related to reading; it was believed that mathematics was relatively straightforward for students at that level. In the more senior grades, memory and retention seemed significant regardless of the whether the subject was English or math. Teacher frustration was described by the participants, but they also spoke anecdotally about student frustration. Comments of this nature were particularly frequent from the three teachers with learning assistance training (two Aboriginal and one non-Aboriginal), perhaps due to the nature of their one-on-one relationship with students.

One of the Aboriginal teachers noted that “it is not simple with something like FASD, where there is so much grey”. The intersection of cognition and behaviour in

students exhibiting the symptoms of FASD is complex for teachers. One of the Aboriginal teachers commented,

I think sometimes if they are really quiet, they are doing their work. At least, you think that they are doing their work, and you check and see, and they either have it all wrong, or you ask them, “what did you just read?”, and their answer is like... “I don’t know, I just don’t know”. And sometimes you think that they are misbehaving, but really in their mind, they are not misbehaving. It’s so frustrating. How can I put it? They don’t understand that they are doing something wrong, they just don’t know. (Aboriginal)

A similar sentiment was shared by one of the non-Aboriginal teachers,

Some kids are really good at putting on a good front. I had one little girl, she could spell everything right, she could read everything right, but when you sat down to ask her comprehension questions, she didn’t have a clue what she was doing. Or the kids who have beautiful, perfect, neat work, and you think this is going to be really good, and it doesn’t have a lick of sense to it. Some of them are really good at creating coping mechanisms so that they don’t look different than everybody else and then having an assessment or then having a label makes me think that I really have to watch for this and make sure that I am not just assuming that they know it. (Non-Aboriginal)

None of the teachers with learning assistance training—regardless of ethnicity—mentioned facial dysmorphia as an indication of pre-natal exposure to alcohol. Six of the seven remaining teachers identified this characteristic (facial dysmorphia) as one of their primary indications of a child with FASD. The teachers with learning assistance

training all noted the similarities between the way that a child with ADHD presents and the way a child with the symptoms of FASD presents themselves in the classroom. The two non-Aboriginal male teachers commented on the potentially multi-factorial aspects of FASD including poverty and/or family disruption, or the notion that a child could be exhibiting several problems, each problem compounding the other.

In highlighting symptoms as the second theme of the research, one of the Aboriginal teachers observed, “because of the system, the way that it has been, there haven’t been many children diagnosed in my experience. So, we look at the symptoms.”

Importance of family. Each of the five Aboriginal participants spoke extensively about family. Their comments on this theme accounted for 17.6% of their overall comments. This theme includes the role of family and parents, approaches to parenting, and its importance to students. Not all comments were positive; in fact, a number were overtly critical. As noted in Table 8, the frequency with which Aboriginal teachers mentioned family outpaced non-Aboriginal teachers by a ratio of 1.6:1.

For two Aboriginal teachers, the need for *written* confirmation of maternal drinking while pregnant from the parents was critical. This confirmation was understood to be essential for access to additional funding through a chronic health designation with the British Columbia Ministry of Education. Parents were described by Aboriginal teachers as being afraid to go to Prince George, which was thought to be required for a medical diagnosis, once a child was referred by the local pediatrician. With regards to assessment and possibility of labeling the child, another Aboriginal teacher thought that “some parents were worried that the child will be labeled for the rest of their education. Some parents don’t want psycho-educational testing—just by

the name. Because it's called a 'psycho-ed', that title is intimidating to them". One of the Aboriginal teachers commented that in her experience of over 20 years teaching, only one parent said directly that her child was damaged in the womb because of drinking and had learning difficulties and special needs as a result.

Within the Aboriginal teacher cohort, the preponderance of young mothers in the community was also seen as potentially problematic. Reasons for this included the belief that these pregnancies often occurred quite unintentionally and, when the pregnancy was still unknown, pre-natal exposure to alcohol may be occurring, leading to more children with FASD. Several Aboriginal teachers commented that they are now teaching the children of former students. Knowing some of the challenges to which the first generation of students had been exposed in their lives did not make the teachers feel overly positive about the prospects for the second generation.

Another issue, although not necessarily specific to young parents, was the perceived lack of parenting skills. While programmes like *Starting Smart* (a provincial initiative that gives young children early exposure to the skills needed before school starts) were available in the community, they did not always attract the participation of those who may need the programmes most. This same comment was made by teachers about interviews between teachers and parents. The parents who were often absent at the meetings were those parents of students who were struggling.

One of the Aboriginal teachers with learning assistance training spoke passionately about the need for routine, particularly for children with disabilities. Her observation was that most children need routine, but none more so than a child with a disability, and that those routines can be hard for some families to adopt. Without

positive family routines, it may be hard for families to attend community programmes, such as *Starting Smart*, for example, or to give their children the needed structure at home in order for them to flourish at school.

The Aboriginal teachers made a number of observations about parents within the school setting. One of the teachers commented that students changed when parents were in the classroom. The effect was obvious, in that the students do not listen to the parents. The teacher found that she was able to control her class more effectively when parents were not present. Yet another participant suggested that teachers cannot be too truthful with parents although there is a disconnection between what happens at home and in the classroom. That teacher sensed that parents wanted to hear that their children were performing well. They wanted to hear that their children were well behaved when, at home, they knew that their children were exactly the same as at school. A final comment in the theme of family was made by one of the Aboriginal teachers and linked directly to the Social Relations orientation of the vignettes, discussed later. With regards to parenting she said, "I remember when the whole community helped with kids but just in the last 10 years, [we] not allowed to talk to kids out there. Mind your own business."

By contrast, one of the non-Aboriginal participants focused on family or parenting extensively, two did not mention it at all, and the other two talked about this theme briefly and in passing. This finding was borne out by the frequency of codes ($n=15$) related to family mentioned by the non-Aboriginal teachers. The comments related to the importance of family offered by the non-Aboriginal teachers accounted for 11.2% of their overall comments, in contrast to 17.6% for the Aboriginal teachers.

The one non-Aboriginal teacher, who focused on family, shared some beliefs with the Aboriginal teachers, particularly with regards to parent-teacher meetings. As before, the parents whose children were struggling in school were not the ones who became involved with the parent-teacher meetings or the parent advisory council (PAC). If parents did attend a PAC meeting, it was to “drop a bomb” about a certain issue, never to be seen again at future meetings, although their presence at celebrations such as graduation was consistent. It was the belief of this teacher that the family was the most important factor in the success of a child with FASD at school; community support was secondary to family, and the influence of the school was the third “tier” in relation to the child’s success. Other comments from non-Aboriginal teachers regarding family were in relation to young women partying and consuming alcohol, without the awareness of a possible pregnancy, and a desire that children with FASD eventually carve out a life for themselves, beyond their life with their families of origin.

Life skills and life skills training. As part of the interview protocol, teachers were asked what their hope was for students with FASD while in school and once they left school. Their response—adequate life skills and life skills training—is the fourth theme of the research, accounting for 7.5% of the total comments from the Aboriginal group and 3% of the total comments from the non-Aboriginal teachers.

The Aboriginal teachers unanimously wanted students to acquire the life skills needed to function as adults, ideally independently; three of the five non-Aboriginal teachers voiced the same hope. One of the Aboriginal teachers wanted young people to have the skills for parenting so that they could “manage challenging behaviours and help their kids to have good nutrition and routines, like life skills”.

Without exception, both Aboriginal and non-Aboriginal teachers all wished for students with FASD to be able to care for themselves. One of the Aboriginal participants hoped that, “they would be able to care for themselves without being dependent on anyone”. Another Aboriginal teacher, reflecting on the high frequency of deaths in this community, commented in a similar way, hoping that students could learn essential life skills so that if their parents were gone, or as they got older, they could look after themselves and function independently from day to day. This teacher felt that many students with FASD were not going to learn much educational material and most would stay at a Grade 3 or 4 level, although some would be a little bit higher. This was why she thought life skills were so important. The expectation was that the responsibility for this skills training should be primarily the responsibility of the school system, but one of the Aboriginal teachers felt that this role was important role for the health stations in the local villages.

Two of the non-Aboriginal teachers did not mention the necessity of adequate life skills for students with FASD. One of these teachers was at the elementary-school level and was a relatively recent graduate; the other was a high school teacher who focused on, instead, the importance of individual success. That teacher commented, “I actually saw success and I think that my particular opinion is that every single one needs to experience success. Every single one. And unless they experience success... and in their life success can be measured by little things”. The remaining three non-Aboriginal teachers, who did discuss the importance of adequate life skills, had similar expectations to the Aboriginal teachers, although with a greater focus on the lives of the students after school. Their comments related to practical and social skills being far

more integral to student success. The teacher felt that if a student “can get along in the world socially, even just, say, being polite to their boss or something like that, people are more open to helping them”. What this non-Aboriginal teacher hoped for students with FASD was that they developed the social skills at school and, “if we [the school system] can also get in practical skills like cooking, or you know, washing their own clothes, something like that, so much the better”. One of the teachers commented on the increasingly challenging post-secondary climate, where expectations and pre-requisites for incoming students continue to rise. This was exacerbated by this remote location, but that topic will be addressed later in review of the theme of location.

Culture. Culture was not mentioned by every participant, but it was mentioned by seven of the ten, and more so by each of the Aboriginal teachers. There were comments made by four of the Aboriginal teachers and three of the non-Aboriginal teachers. As such, culture warranted consideration as a theme in the research.

Two Aboriginal teachers talked about the value of cultural activities for students, particularly those with FASD. They were not generalizing about the prevalence of FASD in First Nations students, rather speaking from their experience as First Nations individuals, reflecting on their own connection to the culture, and offering commentary on the population in the area, which is largely Aboriginal. Their comments conveyed their beliefs that culture, “helps kind of ground them a little bit”, whether through language, singing, or drumming. These two teachers were both elementary teachers and, along with a third Aboriginal elementary teacher, they described how culture was integral to their school cultures, as seen in language programmes, dinners, and feasts.

When students moved to the high school, cultural aspects were more elective for students, which was a concern for these three teachers.

Two Aboriginal teachers made comments about the role of First Nations people in the community, although only tangentially related to their beliefs about students with FASD. The first commented her desire to see more First Nations staff in schools, but the comment was presented with hostility. She did not want to see “First Nations as people who clean up. They have First Nations support workers, but they are not First Nations. And don’t give me the line that there are no educated First Nations because there are a lot out there”. The second teacher, who responded to a comment about rising prevalence rates of FASD possibly linked to increased awareness, commented,

Part of it is that you hear more about it. When you look at it... First Nations people and alcoholism are more prevalent. Because we live here, that’s what we are surrounded by, right? And you know we will say in passing, some of these people we taught, there they are pushing a stroller. And I am going to get those kids in the few years. (Aboriginal)

Two teachers, one Aboriginal and one non-Aboriginal, commented about current-day Aboriginal governance; their responses were directly related to their beliefs about students with FASD. The Aboriginal teacher commented that while there were services available in the community to support families and individuals, it did not seem that every family was equal to get them. The non-Aboriginal teacher’s comments were similar; that teacher remarked that

the Band doesn’t pay for that [school trips for students] so in the end...there were a couple who were paid for by the Band but it was because their families were

influential, so that was why they got that. And if the families are not influential, they don't get that.

That same teacher lamented the way a number of First Nations students (with or without FASD) failed to thrive in an educational system which is based on "white man's ideas".

Location. Location was mentioned by both Aboriginal and non-Aboriginal teachers in the interviews. The combined frequency of codes warranted its own theme as it accounted for 8% of the overall comments of the Aboriginal teachers and 7.5% of the overall comments of the non-Aboriginal teachers. Upon reflection, it became clear to me that there were two distinct sub-groups in the theme of location: physical geography, but also location in relation to the economy. Both types of "location" impact students who have the symptoms of or a formal diagnosis of FASD. Four of the Aboriginal teachers and three of the non-Aboriginal teachers spoke about some aspect of location in their comments during the interview.

In terms of geography, there was shared recognition that we live in a rural, remote place. The implications of this location included issues like having to go to Prince George to see specialists who might provide a diagnosis for a child. This sentiment is seen in the comment, "we have good care, but we don't have lots of the advanced access in terms of access to diagnostics that we might have if we lived in a bigger area".

Teachers in both groups commented on the lack of availability of support services, like speech language pathologists, that they consulted in the course of their work. There was a general sense that some these services were limited because of our

location. While not angry, one Aboriginal teacher exhibited a sense of resignation about this and commented that the speech language pathologist visited infrequently because of her schedule and commitments to other surrounding communities.

Comments about the current economic realities of this were generally more impassioned, yet for both groups this was the least frequently mentioned theme. One of the non-Aboriginal teachers succinctly commented,

I think that one of the things we are seeing now is the cumulative effect of 12 plus years of economic collapse, so there are all sorts of social pressures. There are all kinds of other factors. A lot of kids are coming out of poverty, social dysfunction. Sometimes it is really hard to discern what is the root [*sic*]. Is it poverty? Is it tiredness? Is it a dysfunctional family that is creating stress, exhaustion that we are seeing played out in kids learning or behaviour, knowing that there is a pretty major background in the area of alcohol and drug usage, that kind of thing. Or, specifically, an FASD kind of root, with a lot of those other things at the same time. You know, it's not very clear cut. (Non-Aboriginal)

The current job situation was spoken about equally by both groups. Beyond the current implications for working-age adults and families, teachers talked about the impact of the economic situation on students with FASD when discussing their expectations for those students. This teacher's comment was related to work generally, regardless of whether or not the student had FASD. One of Aboriginal teachers felt that the ethnic composition of the community had changed because of changes in the economy. Years ago, there were more government workers and more loggers. Most of

those people have moved away, resulting in a population that is much more weighted towards First Nations.

The relationship between this population's exodus and FASD was captured in two comments by the same Aboriginal teacher: "I just don't see any positive change in lifestyle. There are no jobs, but they get so used to that" and, "there's a lot of alcoholism here and it starts so young". One of the non-Aboriginal teachers stated, "poverty and socially, if this is home, then movement away from here isn't an option. And fair enough. Then this is what they are going to have". Ironically, this teacher had been teaching in this community longer than any of the others.

Teacher perceptions. This theme was divided into two sub-groups: teacher perceptions regarding the system in which they taught, and teacher perceptions regarding students. Aboriginal teachers commented more about their students than non-Aboriginal teachers (47 comments versus 29 comments, or a ratio of 1.6:1) and their comments on this theme represented 25.1% of their overall comments. Non-Aboriginal teachers commented more on the educational system than their Aboriginal counterparts (29 comments versus 24 comments, or a ratio of 1.2:1) and the non-Aboriginal comments related to the educational system represented 21.6% of their comments overall.

All five non-Aboriginal teachers commented on the educational system; with the exception of one, they expressed frustration with the system and its processes to respond effectively to students with FASD. Four of the Aboriginal teachers had more general comments concerning IEPs, the increasing restrictiveness of college admission

standards, and diagnosis of FASD; one teacher made no comments about the educational system.

For non-Aboriginal teachers, the educational system was criticized for being far behind with psycho-educational assessments, which resulted in a delay in timely student diagnoses. One of the elementary teachers expressed great frustration in having prepared required testing needed for a formal psycho-educational assessment, and having the preparation result in next to nothing. Anecdotally, the teacher told me of a Grade 3 student who had a referral for a psycho-educational assessment dating back to Grade 1. When the student went on to Grade 4, the psycho-educational assessment was finally scheduled. By then, the collected paperwork was out of date, and the process had to be reinitiated. Equally important, the parents of the child had no sense of where their child was on the list, or when they could expect the testing.

While a diagnosis of FASD can garner extra supports, that same teacher reported how unlikely that outcome was, and that it was hard to get the students to be qualified to receive any additional help, even with a medical diagnosis. There were often many recommendations in the psycho-educational assessment that teachers were doing already, and sometimes suggestions that teachers could add in a whole-class situation. To implement other recommendations, teachers would have to be doing a one-on-one, individualized programme.

The comment about the futility of assessments was voiced by other teachers, including one of the Aboriginal teachers working at a band school, outside of the public educational system. For this teacher, the reality of a psycho-educational assessment and an IEP for even one child was not viable in a class with 22 children: “because it’s

individualized education planning, right? But it would just be more to my case load rather than just... it looks really good on paper.” Another Aboriginal teacher, whose entire class of 14 consisted of children with IEPs or SIPs, managed with extra assistance by emulating the high school model of a modified programme at the elementary school level. This teacher’s observation was that generally her classes had a three-way spread. Children in the middle really lost out—the so-called “grey area” students (who are not eligible for funding). She then added that in a different way, everyone lost out. She commented that if her children were reading at the Grade 2/3 level, they were already four years behind in Grade 6. These were years that the delayed students were not likely to catch up on in high school, leaving them perennially behind their peers.

Two Aboriginal elementary teachers explicitly expressed a hope that their children would go on to further educational training, including trades training. This was communicated and interpreted as the student being realistic about his or her abilities. The expectation of a written component, and at least Grade 10 completion, was seen to be the new reality for many college programmes and a potential barrier for students with FASD.

Three non-Aboriginal teachers—all in the public school system—questioned the “bottom line motivation” of the school district. One teacher with learning assistance training voiced her exasperation, and noted that the *lack* of services made the biggest difference to students with FASD. Another teacher questioned whether the decision to limit “pull out programmes” and integrate learner support directly into the classroom was based on what is best for the students, or on financial considerations. In a comment that reflected an approach to interventions and a perception about the

current system, one of these three teachers indicated that systemic change will have to happen from the ground up to be successful, but believed that it would never happen because it costs more.

One of the few positive comments about the system by either group was also a comment informed by our location and declining enrollment. This high school teacher stated, “We’re fortunate here, we have been able to do reasonably well. And certainly, I cannot complain with the size of the class that I have now.”

Many of teachers’ perceptions of their students with FASD were captured in the results reported above. Yet there were other important comments about student assessment for FASD; interpretations about what was possible by the time a student was in high school; an observation about new teaching approaches versus older teaching approaches; and a comment on addictions. Each of these topics merited mention in the research results, but did not warrant a separate theme.

In terms of perceptions about students, all of five non-Aboriginal teachers mentioned assessment. By contrast, assessment was commented on by two of the Aboriginal teachers. None of the non-Aboriginal teachers felt that there was a silver bullet in terms of one particular assessment that would identify children with FASD. Instead, there was a belief that testing might give a sense of what the student could do that day but, if the issues were behavioural in nature, standard cognitive assessments might not address those issues. Generally assessments that teachers conducted in their classrooms were thought better than formal assessments conducted outside the classroom by the Learning Assistance Teacher, for example. A better alternative was

the opportunity for teachers to “touch base” about a student on a regular basis, comparing their impressions about progress and challenges across a variety of subjects.

The teacher with the most years of teaching experience observed how teacher training has changed over the years, perhaps to the detriment of students with FASD. In his experience, there was previously more structure applied to teaching. He felt that newer methods encouraged discovery and changes within a lesson structure that were difficult for a student who was being over-stimulated or under-stimulated. With more routine and predictability, the student was able to follow where the teacher was going with the lesson.

A predisposition towards addictions in students with FASD was mentioned explicitly by one Aboriginal teacher. A number of teachers from both cultures mentioned the prevalence of alcohol in the community, but not in tandem with addictions. This teacher stated the predilection for addictions in students with FASD. These addictions were many, including drugs and alcohol, games, and the wrong kind of attention.

Summary

In the qualitative interviews, the participants shared their attitudes and beliefs about their students with FASD. These comments became consolidated themes which included family, life skills and life skills training, culture, location (both geography and economy), and teacher perceptions about their students and the education system. Teacher perceptions about students and the education system were identified most often by both groups, based on the combined frequency of codes which appeared in the

transcripts. Aboriginal teacher comments on this theme accounted for 38% of their overall comments and 43.3% of the non-Aboriginal teachers' overall comments.

Code frequency regarding Aboriginal teachers' perception of their students (n=47) was 1.6 times greater than the number of comments in the same theme by non-Aboriginal teachers (n=29). The other theme with a difference in the number of responses between the two groups was the theme of family. There were 33 family-related coded segments by Aboriginal teachers (17.6% overall), as compared with only 15 family-related coded segments by non-Aboriginal teachers (11.2% overall). These results will be discussed in Chapter 5.

Quantitative Research Findings

I analyzed the 13 vignettes from each of the 10 participants and assigned a numeric value using the original Kluckhohn and Strodtbeck (1961) approach. The methodology that I used to calculate these scores was outlined in Chapter 3.

I then calculated the summary of each orientation by combining the numeric value of each vignette into an overarching score for each orientation. For example, for the Aboriginal participants, I calculated a composite score for the Activity series by combining the scores for Vignettes 1, 6, and 10. It is important to note that these are empirical calculations, but not statistical calculations, given the size of the sample (n=10). Kluckhohn and Strodtbeck did use their numeric calculations statistically, but their sample size was considerably larger.

I conducted a detailed analysis of the variations within and between the four orientations for each of the two cultural groups. The results for each cultural group are presented in detail with supporting graphs.

Table 11

Summary of Aboriginal Teachers' Orientation Rankings by Vignette

Vignette	Preference
Activity Orientation	
1	doing > being
6	being > doing
10	doing > being
Man-Nature Relationship Orientation	
3	with > over > subj
11	with = over > subj
13	over > with > subj
Social Relations Orientation	
2	coll > lineal > indiv
7	indiv > coll > lineal
8	lineal > ind = coll
12	coll > lineal > indiv
Time Orientation	
4	pres > future > past
5	pres > past > future
9	future > pres > past

Note. subj=subject; pres=present; coll=collateral; ind=individual

The 13 vignettes were designed like stories to determine the teachers' opinions regarding the four value orientations. Teachers were asked to select their preferred response to each of the vignettes. Presented in Table 11 and Table 12 are the responses from each cultural group. The preferred response in the series is represented in **bold** type.

Table 12

Summary of Non-Aboriginal Teachers' Rankings by Vignette

Vignette	Preference
Activity Orientation	
1	being > doing
6	doing > being
10	doing > being
Man-Nature Orientation	
3	with > over > subj
11	with > over > subj
13	over > with > subj
Social Relations Orientation	
2	coll > lineal > indiv
7	coll = indiv > lineal
8	lineal > indiv > coll
12	coll > lineal > indiv
Time Orientation	
4	pres > future > past
5	pres > past > future
9	future > pres = past

Note. subj=subject; pres=present; coll=collateral; ind=individual

Value Orientation Composite Graphs

Using the method described by Kluckhohn and Strodtbeck (1961), I was able to plot three of the orientations on separate graphs which showed both of the cultural groups together. The calculation methods used for this graphic presentation of the data were described in the methodology section in Chapter 3; the actual figures, which summarize the results for each of the study groups, are presented in Appendix E as Figures 4, 5 and 6.

Social Relations orientation. There were four vignettes that comprised the Social Relations orientation in my study. A review of the graph in Figure 4 (Appendix E) indicates that the responses to R-1 (Vignette 2) and R-2 (Vignette 7) are close to

identical for both groups. R-3 (Vignette 8), relating to morning recess, showed a value orientation difference or variation between the two groups.

Within the Relational orientation, the only significant variation between the two groups was expressed in R-2 and R-3 (Vignettes 7 and 8). There was agreement of the dominant and variant orientations in the other two vignettes (R-1 and R-4); as such, they appear in the same section of the graph.

In R-2 (Vignette 7), which related to sending a student to a meeting in Terrace, the Aboriginal teachers slightly preferred as more individual approach as the dominant orientation. The non-Aboriginal preferred the collateral and individual approach almost equally.

In R-3 (Vignette 8), both groups preferred lineality as a dominant orientation. The Aboriginal teachers equally preferred individuality and collaterality as a variant orientation, whereas the non-Aboriginal participants were more individual. Note that this inclination in the non-Aboriginal participants was also more strongly indicated. Proximity of the data entry point to the centre of the graph indicates a reduced or less intense preference; conversely, points entered closer to the perimeter of the graph portray a stronger or more definite value orientation preference.

Time orientation. Within the Time orientation in Figure 5 (Appendix E), two of the three vignettes graphed out to almost equal points for each of the groups. In the non-Aboriginal participants, this was slightly more expressed. This is an indication that all of the 10 participants responded to two of three vignettes with a preference for the present orientation.

A variation between the two cultural groups was seen in the responses to T-3 (Vignette 9), relating to the allocation of resources. In this case, the non-Aboriginal participants indicated a preference more inclined towards a future orientation, while the Aboriginal participants were also future oriented, but this group showed a disposition to rank the present value orientation as a strong secondary value consideration.

Man-Nature Relationship orientation. There was considerable agreement between the two groups in the Man-Nature Relationship orientation as can be seen from the appropriate summary graph in Figure 6 (Appendix E). MN-2 and MN-3 (Vignettes 11 and 13) plotted identically for both Aboriginal and non-Aboriginal participants. MN-1 (Vignette 3) indicated a marginal difference in the preference between the groups. The Aboriginal participants indicated a modest tendency towards being more in harmony with nature and the non-Aboriginal participants showed a small increased tendency to think that they could achieve mastery over nature.

As noted in the methodology section, the number of participants in each group is too small to calculate the statistical significance of the differences observed.

Figures visually comparing the Aboriginal teachers' and the non-Aboriginal teachers' responses, based on the dominant variation are located in Appendix F (Figures 7-10). These bar graphs illustrate a more general approach to the data, presenting a composite score of the dominant orientations and showing that the teachers have strong similarities in their responses to the vignettes. There is no variant orientation shown in these graphs.

Value Consensus in Each Culture

I performed an assessment of values within each culture. The final query in the each of vignettes asked the participant to choose what other people in their cultural group would prefer in that particular situation. The purpose of this enquiry was to determine the degree of cultural fit that each person felt in relation to other members of their cultural group.

Unbiased consensus occurs when individuals correctly identify that they either share cultural values with others of their group, or that they differ from others in their group. I calculated it by determining the total number of times the participants in their group were able to correctly identify what most others preferred, regardless of whether it agreed with their choice. The composite figures for unbiased consensus were:

Aboriginal teachers – 42.1%

Non-Aboriginal teachers – 76.2%

Perceived consensus is the percentage of participant who felt—correctly or incorrectly—that most other members of their cultural group would prefer the same response that they preferred, whether or not that is actually the case. These results are displayed in Table 13.

True consensus is shown in Table 14 and indicates the percentage of participants whose one preferred choice was actually the most preferred choice of the group.

Table 15 indicates the tendency for a culture to overestimate or underestimate the responses of others in their group. Neither of the groups anticipated the response of others exactly; this discrepancy was calculated by subtracting the actual consensus

Table 13

Perceived Consensus Scores

Orientation	Aboriginal	Non-Aboriginal
Activity	40%	60%
Man-Nature	66.6%	53.4%
Relational	55%	90%
Time	40%	80%
Composite	50.4%	70.9%

Table 14

True Consensus Scores

Orientation	Aboriginal	Non-Aboriginal
Activity	30%	80%
Man-Nature	53.3%	73%
Relational	45%	60%
Time	33%	94%
Composite	40.3%	76.8%

Table 15

Tendency to Overestimate or Underestimate Consensus

Orientation	Aboriginal	Non-Aboriginal
Activity	Overestimate	Underestimate
Man-Nature	Overestimate	Underestimate
Relational	Overestimate	Overestimate
Time	Overestimate	Underestimate

from the perceived consensus.

Actual consensus – perceived consensus = overestimation or underestimation.

The discussion about these results will follow in the next chapter. Regardless of culture, the teachers were fairly similar in their responses to the Value Orientation Survey, as measured by the vignettes.

As noted in Table 15, the tendency to for non-Aboriginal teachers to underestimate consensus and the tendency for the Aboriginal teachers to overestimate consensus within their cultural group. Similar intracultural findings were not commented on extensively by Kluckhohn and Strodtbeck (1961) in their research, given the complexity of the analysis, the size of the sample, and the funds available.

Relationship between Interviews and Vignettes

I themed the qualitative interviews interpretively and the most prevalent themes were family, life skills and life skills training, culture, location (both geography and economy) and teacher perceptions about their students and the education system. The vignettes were interpreted using the Kluckhohn and Strodtbeck (1961) methodology and the results presented above. I then approached the interview data to identify instances where comments in the interviews explicitly described a value orientation. This was another form of interpretation, rather than another thematic category.

Examples of each value orientation were seen in the aggregate interview data. The comments were most prominently represented in the Social Relations orientation (n=6), followed by the Man-Nature Relationship orientation (n=3), the Activity orientation (n=1), and the Time orientation (n=1).

Examples of comments related to the Social Relations orientation were:

I think that ongoing assessments and meetings with teachers at the high school, each of those special ed. kids have four classes a day and they may have four different teachers. So when those teachers meet to discuss what they are seeing

in the classroom, I think that's the best assessment: getting four different views and four different subject areas. (*Collateral*; Non-Aboriginal teacher)

So if you asked me in terms of assessment, it should be done bottom up.

Elementary teachers, they are the first one who can get it done. They have a good idea, they having been doing it for 20 years. I am really confident, without even naming anyone, they are able, sitting together, that will be the most effective assessment. (*Collateral*; Non-Aboriginal teacher)

I never get parents from kids that have problems. I am trying to be positive and see if I have one. Maybe I have one. It would be just counting on the tip of my finger, when they actually come in and encourage their kids by being supportive. That's the first type of support and without that, the teacher effort is greatly diminished because, unless you work as a team, it will never work. (*Collateral*; Non-Aboriginal teacher)

I know that in our own family we have two children who were very chatty and seem to have good language skills and seem to be with it. The boy, in particular, who is our nephew, we put him in French immersion thinking that he is very clever and it's probably not going to be a problem for him to be... he will be well stimulated in this class of French immersion but it turned out that it was difficult – really difficult – and the grade one year was basically lost. Because it wasn't a good place for him. (*Collateral*; Aboriginal teacher)

They have to start finding out what is going on, what they can do at home to help.

I remember when the whole community helped with kids but just in the last 10 years, not allowed to talk to kids out there. Mind your own business. (*Collateral*; Aboriginal teacher)

And then the person above the learning assistance teacher will look at those scores and decide if they think the child should be further tested, if they think that there is enough discrepancy. (*Lineal*; Aboriginal teacher)

Examples of comments which can be related to a Man-Nature Relationship orientation were:

That's a good question because I had a student last year and I think that the attitude towards him was, "well he has FASD and of course, you cannot fix the problem. That's just the way that he is always going to be", but I don't know. (*Subject to Nature*; Non-Aboriginal teacher)

Just of people could kind of... if there was a way of changing behaviour around natal and pre-natal care. Just like, stay away from booze. If you think that you are pregnant. It's so totally predictable and it's so totally preventable. Just stay away from booze for nine months. Maybe that's asking a lot sometimes, depending on the circumstances, but it's so unnecessary. Just stay away. (*Control over Nature*; Non-Aboriginal teacher)

It seems accepted in the communities. It seems that people just go, that's just the way they are, so nobody reaches out and helps them because that's just the way

that they are. You know, you have an adult, from a kid to an adult, and the adult is acting like a 10-year old, you know, and thinking like a 10-year old and it's accepted where they say, that's just how it is. I think if they started looking at it realistically and saying, okay, this person was like this in school and now he is like this as an adult, nothing much has changed so, you know, I think community or maybe the health station should be helping those people and giving them lessons in cooking and baking and looking after their own kids. Giving them some skills to work with and not just accepting and saying that's just the way it is. It doesn't have to be that way. (*Control over Nature*; Aboriginal teacher)

A comment from an Activity orientation:

Having our children involved in activities when they are young so that they can learn things like music and they can do skating and gymnastics. We did a lot of hockey in our family but then we have two young grandchildren with us now who don't know how to skate. (*Doing orientation*; Aboriginal teacher)

A comment from the Time orientation:

I remember when the whole community helped with kids but just in the last 10 years, not allowed to talk to kids out there. Mind your own business. (*Past orientation*; Aboriginal teacher)

These relationships between these comments and the related Value Orientation Survey results will be discussed further in Chapter 5.

Chapter Summary

For this research study, I collected qualitative and quantitative data to ascertain the beliefs and attitudes of teachers towards students with FASD. These data were generated from semi-structured interviews with the teachers and contributed to answering the question, what are the differences in the attitudes and beliefs between Aboriginal and non-Aboriginal teachers with regards to students with fetal alcohol spectrum disorder (FASD)? Qualitative themes that emerged from the analysis of the semi-structured interviews were the importance of family, the value of life skills and life skills training, culture, location, and teacher perceptions. Location had two sub-themes related both to the local economy, as well as to geography. Teacher perceptions also had two sub-themes: perceptions about of the system and perceptions about the students. All participants spoke of prevalence and symptoms in response to questions they were asked directly by me.

Quantitative data were based on the responses to the vignettes, as outlined in detail in this chapter. The measurement of consensus of value orientations found within each of the two groups, calculated from the quantitative data, was of particular interest. These calculations were possible after considering responses to each of the orientations separately. A distinction was made between unbiased, perceived, and true consensus. *Unbiased consensus* occurred when participants correctly identified that they shared values with others in their group, or not. *Perceived consensus* occurred when participants felt that they shared value orientations with others in their group when they did not. *True consensus* occurred when a participant's preferred choice was the preference of the cultural group. The tendency for a group to over or underestimate was possible to calculate by subtracting perceived consensus from the actual

consensus. Without exception, Aboriginal participants overestimated consensus across all orientations. With the exception of the social relations orientation, non-Aboriginal participants underestimated consensus.

In the next chapter, the interpretation of these findings will be presented. As will be shown, the data have helped to answer my research question and have provided some valuable insights into the beliefs and attitudes of both Aboriginal and Non-Aboriginal teachers.

Chapter 5: Discussion

Chapter 1 introduced the research question, which was to explore what the differences were in the attitudes and beliefs of Aboriginal and non-Aboriginal teachers with regards to students with fetal alcohol spectrum disorder (FASD). Chapter 2 surveyed the existing professional literature on FASD, including its screening and diagnosis. I reviewed literature related to teachers and students with disabilities, including FASD, as well as issues related to cultural values and cultural variation in several settings. Chapter 3 outlined the research methodology, discussed ethnography, and concluded with an overview of the qualitative and quantitative research approaches. Chapter 4 reported the research findings. I gathered quantitative data through semi-structured interviews; I collected quantitative data through the administration and scoring of 13 vignettes related to teachers' experiences. The discussion in this chapter will be guided by the aforementioned research question and will be based on the results from the previous chapter.

I will discuss both sets of data and illustrate how they do—or do not—support and augment the existing professional literature. There were particular quotes from the interviews which exemplified specific value orientations, which I discovered when I analyzed further the qualitative data seeking those orientations specifically; this data interpretation was not an interpretive approach. An explanation of the links between the themes and the value orientations will follow at the end of the chapter, after the discussion of the qualitative interviews and the quantitative vignettes.

Overall Themes

I identified five themes in the qualitative data from the teachers and reported those themes in Chapter 4. None of the themes (responses) was limited entirely to one cultural group without being mentioned by members of the other cultural group. This finding was consistent with the results of the vignettes: there were many similarities between these two groups of teachers.

The themes of family, life skills and life skills training were mentioned more frequently by Aboriginal teachers than non-Aboriginal teachers. I will discuss these themes below and show their relationship to the literature reviewed in Chapter 2.

Family. Duquette et. al (2006a), Dybdhal & Ryan (2009), Leyser (1975), and Streissguth (1997) stated that family was critical to supporting children with FASD. The importance of family was most vigorously stated by one of the non-Aboriginal teachers who felt any success was less likely in cases when students had limited family support, particularly from parents. This teacher's frustration was palpable as he talked about the lack of parent attendance at parent teacher interviews or on the parent advisory committee. Equally frustrating to him was the list of ways that the school had tried to reach out to the parents, but almost always unsuccessfully.

This same teacher related a story to me about a young student being raised by his grandmother. It was not explained to me if this situation was temporary or permanent. While the grandmother was trying to raise the boy well, she established an expectation of financial rewards that she was unable to maintain in paying handsomely her grandson to complete his homework. Since she was unable to pay, the boy saw no

need to continue doing his homework. For the teacher, this story illustrated poor parenting skills.

Some of the teachers from each cultural group identified lack of parenting skills for the inability of parents to adequately support their children. This reason was also one of the explanations for the total absence of student support from parents.

Expectations for active parental participation were particularly pronounced in the field of special education (Leyser, 1985). Leyser established that parents were instrumental in teaching academic, language, social, motor and vocational skills, as well as managing children's behaviour. Leyser's research—almost 30 years ago—highlighted that the level of participation and involvement was low from the parents she surveyed. She found that parents did not express a desire to become more actively involved in the children's school lives, citing a lack of confidence for the reason in some cases.

Additional explanations for the present lack of involvement were considered, beyond poor parenting skills. Possibly the parents' previous experience with parent-teacher meetings—or school itself—were not positive. Issues with transportation and scheduling could be factors. Parents may have preferred to learn about their children through another form of communication, yet untried. All these issues were likely prevalent in our community and could be considered by teachers and the school administration.

Participants felt that many of the children with FASD in our community were vulnerable, and parental involvement may be low, because of instability within family homes. This instability took the form of care by foster families, intermittent parenting,

or other changes in environment, such as frequent moving from one dwelling to another. These ideas were supported by the findings of Dybdhal and Ryan (2009) who described in their study the vulnerability of young people with FASD in rural Alaska.

This experience of instability was exemplified in the words of one of the elementary school teachers in my study, who talked about “bingo babies”. These children were left at home as their parents went to the local “recreation”, often left without anyone to monitor the children’s routines and homework. Bingos were frequent events in this area, available most nights of the week. The expectation was always that this night will be the “big win”.

Still, Kalyanpur and Harry (2004) explained, even with dysfunction in families, most parents were dismayed to be faced with the fact that their children were not successful academically in school. This observation was made in relation to culturally-diverse families who had a child, or children, with learning disabilities. Teachers in my study reiterated this opinion in relation to their students’ families. They noted that parents of students with FASD were dismayed and disappointed by behavioural issues, in addition to the academic underperformance, in their children. As mentioned above, teachers felt the need to be “dishonestly positive” with parents when reporting on the progress of a problem child.

Duquette et al. (2006a) presented a stark contrast between those results and the positive, supportive experiences described in their study, where parents were integral, engaged advocates for their children. These research findings were supported by the comments of teachers in my study and Leyser (1985) regarding the importance of family and the presence of school-based supports. Sadly, many of the supports and

opportunities available to the families in Duquette et al.'s study were not available in this community. For instance, based on our small population size, parents in this area of BC had limited choices about the school or activities that they selected for their children.

Life skills and life skills training. Burgess and Streissguth (1992) and Harpur (2001) maintained the importance of life skills for students with FASD, as did the teachers who participated in my research. The responses of my participants were collected from the semi-structured interview topic related to school-based interventions to support students; eight of the teachers (80% of the sample) cited the importance of life skills and life skills training.

Teachers in my study taught different grades across the elementary–secondary school spectrum. Teachers discussed that life skills would have to be at a suitable level for the children's developmental levels. Two decades ago, Burgess and Streissguth (1992) talked about the importance of teaching functional skills, communication skills, and social skills in school. By functional skills, they meant the skills required for students to generalize what they learned beyond the walls of the school. The teachers in my study commented on assisting directly with the development of these necessary skills, including how to shop for groceries and how to manage money, in the case of high school students. For the younger students, skills, such as adopting an after-school routine, were cited. All the teachers who commented, indicated that there is not a "one-size-fits-all" curriculum to be applied across all ages and stages.

Streissguth (1992) found that teaching communication and social skills was important for students with FASD. I was surprised that the teachers in my study did

not cite the importance of teaching these particular skills to students with FASD. In fact, there was little mention by the participants of the distance between verbal performance on assessments and the ability to communicate effectively. One elementary school teacher, who also works as a Learning Assistance Teacher, mentioned the frequent inconsistency between math and English test scores. Another mentioned the chattiness of her nephew and how that masked other symptoms of FASD in the boy. Some of the high school teachers talked about lack of effective communication abilities in students, but did not link it explicitly to a need for communication skills training.

Although the need for social skills training was not explicitly mentioned, teachers shared anecdotes related to this specific issue. One of the elementary school teachers talked about children with FASD having difficulties with relationships. She was aware of young women who looked routinely for intimate relationships with unsuitable partners.

Location. Issues related to location were divided into two sub-categories: geography and economy. Comments related to geography tended to focus on our rural, remote location and access to services in relation to the size of our population. Ryan and Ferguson (2006) discussed similar issues in rural Alaska regarding access to diagnostic services, additional educational and medical supports, and the proximity to a major centre.

Chudley et al. (2005) suggested the potential of technological interventions easing the burden of obtaining a diagnosis of FASD, particularly in rural and remote locations. Teachers did not mention any awareness of screening, telehealth, or the possible impact of these information technologies on student outcomes, yet, according

to a local physician, health professionals are relying more on technology to support the needs of rural communities (G. Deagle, personal communication, November 29, 2012).

At present, the process of obtaining a diagnosis is cumbersome and intimidating for students and their families. Parents or caregivers with concerns about a child are likely to raise their concerns first with a family doctor. The physician refers the child to the Complex Development Behavioural Conditions (CDBC), through the Northern Health Assessment Network, based in Prince George, BC. The individual case is then referred to a key worker in Smithers, BC. At best, this process takes time. At worst, it is too complex a system for some families to contemplate because of travel arrangements, weather, distance to travel, and care of other children in the family.

I considered the local economy to be a sub-theme of location. Teachers tended to focus on the current economic situation, with limited recollection of the past situation. There were several hundred forestry jobs lost from the local area in the recent past. With that outflow of people, there was a general reduction in all types of services in the area and an elementary school closure. Yet the economy in the area has not been consistently robust for many years according to the local mayor (A. Maitland, personal communication, October 13, 2012) which was challenging for many families in the community. Many families were fractured, as an individual family member might leave to find work in another community that was often located hundreds of kilometers away.

There were myriad social issues described as a result of a weakened local economy. These complex social issues, related to the depressed economy, were referred to by two of the non-Aboriginal teachers. Comorbidity of FASD with other

issues was common (Timler & Olswang, 2001), as was the relationship between prenatal alcohol exposure, neglect, and adverse environments (Coggins et al., 2007; Hyter & Way, 2007). Non-Aboriginal teachers, in particular, noted these issues, which were highlighted previously in the literature review.

Teachers in both cultural groups valued knowing if a child had a diagnosis of FASD, but had concerns about labeling for the student because of the stigma attached. Yet diagnoses are rare. Through their CDBC programme, the Smithers Child Development Centre facilitates 12 diagnoses per year (L. Macknak, Smithers Key Worker – CDBC programme, personal communication, January 9, 2013), although their Keyworker Programme provides additional supports to families with children with FASD.

I considered Clarren et al.'s (2001) experience with school-based FASD screening in relation to the experiences of teachers in my study, who wanted an accurate diagnosis for their students. Clarren's concerns about school-based screening were significant: Were the systems in place in schools to ensure the confidentiality required for medical information? Did parents want the school system involved in their children's medical issues? And were there trained people in place who could assist with the screening in schools? Estimates from the Government of British Columbia (2003) indicate that each child affected by FASD may require one to two million dollars over the course of his or her lifetime to support remedial, medical, educational, and social costs. This point highlighted the potential benefit of funding the upfront costs (screening) versus facing the potentially higher long-term costs (remedial services),

and made it clear that financial investment related to FASD was almost certain at some point in the life trajectory of a child with FASD.

Other themes. The qualitative interviews identified three additional themes related to my research question that I did not find explicitly in the literature. They were *Aboriginal culture*, *beliefs about symptoms and prevalence of FASD*, and *overall teacher perceptions towards students with FASD*. Aboriginal culture included both cultural activities and band-related issues, such as band politics. Findings for each of the three themes were outlined in Chapter 4.

Primarily, Aboriginal participants mentioned the importance of First Nations cultural activities for children with FASD. I interpreted these comments to be reflective of the cultural composition of our community and the value these teachers placed on cultural activities and awareness. The four Aboriginal teachers who mentioned this observation were in two elementary schools: one band school and one publicly-funded school. Both of these two schools have strong cultural components with language classes, drumming and other cultural activities as a part of daily school life.

Participants from both cultural groups mentioned band politics. Three teachers—one Aboriginal and two non-Aboriginal—observed that there was little *equity between families on reserve*. *Families in power as a result of band elections* tended to benefit from jobs and other perquisites which might include financial support for high school students to attend international school trips, if students had family members in positions of power within the band.

It was impossible to make durable cultural distinctions about the prevalence rates and symptoms reported by the participants. As reported in Chapter 4, the

opinions about prevalence were varied, particularly within the Aboriginal group.

Variability regarding prevalence rates was congruous with the literature. The published prevalence figures varied depending on the date of the study, the community cited, the age group of the children, and whether the discussion related to FAS or FASD. Only one non-Aboriginal teacher addressed directly the question of prevalence; the others reserved specific comment on numbers, but shared anecdotes.

All teachers believed equally that that behaviour issues are a common challenge for students with FASD. Teachers, regardless of their cultural orientation, agreed that this symptom was an overriding one for affected students, followed by cognitive issues, and facial dysmorphism. These comments suggested a moderate lack of awareness about the spectrum of symptoms with FASD. Most of these comments related to FAS, rather than to an awareness of a spectrum disorder.

Values Orientation

The four value orientations that Kluckhohn and Strodtbeck (1961) utilized in their research were described in Chapter 3 and in the results section in Chapter 4. Also discussed in Chapter 3 were my predictions about cultural value orientations, which I made before undertaking the research. These predictions were noted in my research journal, but were not actively considered after noting them initially. It is only in presenting the results that I have reconsidered them.

The four basic concepts—or orientations—are reiterated briefly below:

- 1) What is man's relation to nature? (Man-Nature Relationship)
- 2) What is the temporal focus of life? (Time orientation)
- 3) What is the group's principal mode of activity? (Activity orientation)

4) What is the group's relationship to others? (Social Relations orientation)

I adapted the vignettes used in my study, but they were based on Kluckhohn and Strodtbeck's design and intention. I stayed true to the original format and language style, but changed the scenarios to be more applicable to an educational setting. It should be noted that this study employed slightly fewer vignettes than the original study. Carter (1991), Carter and Helms (1990), and Ortuno (1991) also utilized this approach to amendments with success.

Overall, the results to the value orientation survey differed from my initial predications. I expected more differences than similarities between the two participant groups. It is likely that there is a general inclination in people—especially graduate students undertaking their first significant research project or thesis—to look for differences between groups. It is my intuition that people spend far less time looking for the similarities between groups.

I considered that since all of these teachers have undertaken rigorous teacher training, they may be more similar because of their education. Carter (1991) and Carter and Helms (1990) suggested that differences between cultures can exist based on cultural or racial identity, but also that variations can exist as a result of acculturation, gender, education, and socio-economic status.

The notion of variation based on education was not widely represented in the literature. Mahalik (1992) undertook research in the counselling field where he hypothesized about an effect similar to an educational effect (or influence), based on counsellors' value orientations. His research hypothesis was that counselling practitioners would endorse alternatives within value orientations according to their

counselling orientation. Further, he thought that these practitioners, who shared a counselling orientation, would endorse certain value orientation alternatives over others. His research hypothesis was not supported which may—or may not—be the case with this sample of Aboriginal and non-Aboriginal teachers regarding their education. In general, value orientations are likely firmly established throughout one's childhood and they are likely quite durable, with only minor modification to the patterns of value orientations occurring in later life (Kluckhohn & Strodtbeck, 1961).

Still, the data presented in Chapter 4 provided evidence of differences in the dominant and variant orientation patterns between the Aboriginal teachers and the non-Aboriginal teachers. Similarity of responses was most obvious at the level of the dominant value orientation. In Figures 2.1-2.4 (Appendix F), I present four bar graphs that juxtapose the results for the dominant value orientation between the two participant groups studied within each of the four value orientation domains examined.

More apparent differences between the two cultural groups were seen within the variant orientations. The value orientation of an individual was an overall or composite pattern, with an influence of each part of the pattern apparent in any given situation. The dominant orientation was the most-preferred choice of the study participants. The next-most-preferred choice given by study participants in response to the vignettes was therefore an important part. These secondary, or tertiary, choices can be described as variant orientations. These value differences were more visible once I created the graphs, based on Kluckhohn and Strodtbeck's (1961) original method. Three graphs displaying summaries of three orientations (man-nature, social relations and time) are presented in Figures 4-6 (Appendix E). In these figures, I show the

response from each cultural group to each of questions, thereby showing the variant orientations.

Kluckhohn and Strodtbeck (1961) offered a useful analogy for understanding variant orientations in relation to dominant orientations. While there were a number of people who considered themselves middle class, there will be variations within the variant orientations that account for much of what people say and do. The variant orientations functioned as the nuances in behaviour. No dominantly-oriented group ever escaped the influence from the variantly-oriented individuals who surrounded it, and no variant group survived without numerous relationships with the dominantly-oriented individuals (Kluckhohn & Strodtbeck, 1961).

Kluckhohn and Strodtbeck (1961) described variations in value orientation as a factor in cultural change. The question they asked, and that relates to this research, is "How does change come about within value orientations?" Their contention was that the better integrated a value orientation was, the greater its power to resist the effects of impinging forces. If this contention was the case, the parts which were most susceptible to basic change in cultural values were the parts where there was the greatest proliferation of variant patterns (Kluckhohn & Strodtbeck, 1961).

Variant patterns are apparent in the graph related to the Social Relations orientation in Figure 4 (Appendix E). The non-Aboriginal participants were fairly equally balanced between being *collateral* and *lineal* in their social relations; they were not particularly *individual* in their responses. By contrast, the Aboriginal participants had responses which aligned with each of the three orientations, and suggested a much less well-defined, or unique, cultural integration. This random clustering of

orientations, with no clear or dominant value preferred, suggested a culture in transition. The implications of this finding are more apparent later in the discussion when the numeric value from each vignette is used to calculate the overestimation or underestimation of value consensus within each culture.

Using this instrument, it was not possible to determine statistically the validity of data describing intra-cultural variation. The instrument was not designed for this purpose, nor was the number of participants adequate for a statistical calculation. Yet, it was possible for me to assess the rate value consensus within each culture. These calculations were reported in Chapter 4.

The groups varied dramatically in their *unbiased consensus*, which was the ability to correctly identify what most others in their group would indicate as their *preferred* choice, whether or not it was their first choice. For Aboriginal teachers this was 42.1%, in contrast with 76.2% of non-Aboriginal teachers who correctly identified the other responses in their cultural group. These percentages comprised a composite of all four orientations.

This trend was also consistent within the areas of *perceived* and true *consensus*. Both terms were defined in Chapter 4 and the percentages were outlined there for both of the cultural groups, in each orientation (Tables 13 and 14).

Perceived consensus scores indicated what the research participants believed that others in their cultural group would prefer their response, even if this was not actually the case. The Aboriginal rates for perceived consensus were all below 66.6% and as low as 40%; non-Aboriginal rates were all below 90% and as low as 53.4%. Further, results indicated that the *highest* perceived consensus rate for Aboriginal

participants was within the Man-Nature orientation. For non-Aboriginal participants, the perceived consensus rate was highest within the Social Relations and Time orientation; perceived consensus rate was *lowest* in the Man-Nature orientation.

The *true* consensus scores indicated which of their preferred choices the other participants *actually* preferred. The Aboriginal participants' rates of identifying the actual preferred choice were all below 53.3% and as low as 30%; the non-Aboriginal rates were all below 90% and as low as 60%. As with the perceived consensus rate, the Aboriginal participants' true consensus rate was highest within the Man-Nature orientation, although it was lower than the perceived consensus rate in this same orientation. The non-Aboriginal participants had the highest true consensus rates in the Time and Activity orientations, which differed from their perceived consensus rates, which were highest in the Time and Social Relations orientations.

The true and perceived consensus scores were used to calculate the *overestimation or underestimation of consensus*. Non-Aboriginal teachers underestimated consensus in three of the four orientations. In other words, the non-Aboriginal teachers were generally more similar as a group than they thought, according to their responses to the vignettes. There are several implications from this underestimation including a perceived feeling of belonging and of being understood. For example, consider a situation where policy changes associated with accommodations for students with disabilities are being discussed. If one of the teachers raises a concern at a staff meeting, the tendency towards underestimation of consensus suggests that the teacher will likely be more supported in his or her opinion about the concern than they may have anticipated.

The exception in the tendency for the non-Aboriginal teachers to underestimate was within the Social Relations orientation, where they overestimated consensus. In this orientation, the non-Aboriginal teachers thought that their group would respond more similarly to them. In fact, the other teachers in their cultural group responded in a way that was less like their responses. Overall, these teachers were still fairly similar as a group. The implication of this value orientation difference could be felt in relation to how decisions are made, for example. In general, the group preferred *collaterality* > *lineality* > *individuality*. The tendency to overestimate could incline all non-Aboriginal teachers to think that the group would prefer collective decision making on an issue. In fact, some individuals might like a person in a position of authority—the principal, for example—to make the decision on a certain issue.

Within all four orientations, the Aboriginal teachers overestimated consensus: they thought other teachers within their cultural group were more like themselves than they actually were. There are a number of possible implications for this finding, including the inverse of the previous situation with non-Aboriginal teachers. In this second case, individual Aboriginal teachers may not feel that they have the support of their cultural peers when making decisions which could foster a climate of less risk taking, for example, if the pattern is that one's colleagues do not share the same viewpoint. Aboriginal teachers may be less likely to feel part of a team when the majority of their colleagues are Aboriginal, as they think that the others in their group are not like them. In a staff of Aboriginal and non-Aboriginal teachers, the Aboriginal teachers may feel more part of the team given the additional diversity, beyond their own cultural group.

Overestimation and underestimation of consensus also impacts parent-teacher interactions. For example, it may be easier for non-Aboriginal teachers to make recommendations to non-Aboriginal parents regarding students and to have those recommendations accepted positively which is explained by this cultural group's tendency to underestimate consensus: the non-Aboriginal teachers and parents may be more alike as a group than they thought, and share similar values.

The results suggested that the same does not hold true with the Aboriginal group. In this case, the Aboriginal teacher may make recommendations to an Aboriginal parent, but overestimate the potential for consensus. That is, the teachers may assume that their recommendations will be what the parent would expect to hear, when that belief might not be true. I considered this fact in light of the Aboriginal teacher who reported that she felt she had to be positive with parents, to the point of being untruthful, because, "that's what they want to hear". If she is true to the value orientation of her culture, and is overestimating consensus, the parents may not actually want to hear that dishonest news.

Overestimation or underestimation of consensus was the most significant value orientation calculation to me. The dominant orientations were similar between the two cultural groups, highlighting the commonalities in many areas. And while there were differences in the variant orientations, there were still many similarities. It was the area of intra-cultural variation where the research instrument showed significant applicability in terms of understanding the experiences of Aboriginal and non-Aboriginal teachers.

Value Orientations Shown in the Interviews

I was interested initially in exploring the value orientations of Aboriginal and non-Aboriginal teachers. The results of the quantitative research presented in Chapter 4 indicated that there were many similarities between the two cultural groups, particularly in their dominant value orientations. The qualitative interviews showed more variation between the groups, but still great similarity.

As a final point in the discussion, I evaluated the congruity between the interviews and the vignettes. I sought comments in the interviews that suggested specific value orientations. I then linked that individual's comment with the corresponding value orientations illustrated in the vignette. For example, if the comment related to child-rearing practices in the past, I considered the comment in relation to that participant's overall responses to the series of vignettes related to time.

Each of the four value orientations (Activity, Man-Nature, Social Relations, and Time) appeared as direct quotes in the interview transcripts. These quotes were made by the teachers in response to a question or as a thought in the interview. I isolated 10 comments for further analysis: six reflected a Social Relations orientation. That is, the comments related to the emphasis placed on the individual, on the group, or on lineal relationships within the culture.

Three of the Social Relations orientation quotes were from Aboriginal teachers and three were from non-Aboriginal teachers. Five of those quotes reflected a value orientation congruous with the composite patterning of responses for their particular cultural group. That is, five of the quotes indicated a preferred *Collateral* orientation, as did the responses in the vignettes. In this case, both groups preferred the *Collateral*

orientation over *Individual* or *Lineal*. The exception was a non-Aboriginal participant, whose quote reflected a preferred *Lineal* orientation, rather than a *Collateral* one. The quote, “and then the person above the Learning Assistance Teacher will look at those scores and decide if they think the child should be further tested, if they think that there is enough discrepancy” indicated a *Lineal* orientation, but is also reflective of the way that the education system is structured.

A quote related to an Activity orientation (from an Aboriginal teacher) was consistent with the composite patterning of responses in the vignettes from the Aboriginal teachers.

The interview responses indicating a Man-Nature orientation exhibited the least congruence with the vignettes. None of the three quotes cited in Chapter 4 paralleled the patterning of responses suggested in the vignettes. One possible explanation might be the inherent nature of teachers, regardless of cultural orientation. When I talked about this finding with a teacher, she suggested that she could not continue teaching without believing she could affect a child’s nature (S. Brown, personal communication, Dec. 5, 2012).

Overall, the majority of interview responses was consistent with the composite score of the Value Orientation vignettes for each cultural group. A stronger association might have been achieved if the sample size had been larger, or if the number of vignettes had been greater. Kluckhohn and Strodtbeck’s (1961) original instrument consisted of 22 vignettes, not 13 as in this study. Also, researchers since Kluckhohn and Strodtbeck have noted generational and gender differences within their samples

(Caudill & Starr, as cited in Carter, 1991). Consideration of other variables, not measured in this study, might have resulted in different findings or results.

Chapter Summary

I began the chapter by noting that this research study consisted of two separate—but related—research approaches. The qualitative portion consisted of the interviews with the teachers; the quantitative portion consisted of the Value Orientation Survey vignettes, based on Kluckhohn and Strodtbeck's (1961) classic approach.

The discussion related to the interviews confirmed a number of issues highlighted in the existing literature which included the importance of family, the value of life skills and life skills training, and the significance of many factors related to life in a rural and remote geographic location. These themes were identified by each of the participants to some extent.

All of the participants spoke about their opinions of prevalence rates and symptoms in response to questions that I asked. There was great variation in the impressions of FASD prevalence rates in this location. This observation was in accordance with the wide-spread variation in prevalence rates cited in the literature. While the teachers agreed unanimously about the symptoms they saw exhibited in students with FASD, it is my impression that they were not well informed about these symptoms.

Others research surveyed in the literature did not identify the importance of culture for students with FASD. Four of Aboriginal teachers noted that strong Aboriginal cultural identity was important for Aboriginal student well-being; cultural

identity was not mentioned by the non-Aboriginal teachers, but there was acknowledgment from this group of norms. Comments related to band politics were also included in this theme. Given the cultural composition of the local population, I interpreted the comment regarding Aboriginal students to reflect the cultural majority of the students. I did not interpret this response to mean the FASD is solely the purview of Aboriginal children, which it is not. The teachers were using the term *culture* in the sense of First Nations culture and referring to songs, dances, and other cultural activities.

The techniques used to score and graph these data were outlined in Chapter 3; the results were presented in the following chapter. Overall, the comments of both cultural groups were congruous with their dominant value orientations. Differences between the two groups were more apparent in the variant value orientations. Chapter 6, the final chapter, consists of concluding remarks and recommendations for future research.

Chapter 6: Concluding Remarks

Chapter 1 introduced the research question which was to examine what the differences were in the attitudes and beliefs of Aboriginal and non-Aboriginal teachers towards students with FASD. Chapter 2 surveyed the existing professional literature on FASD, its screening and diagnosis, particularly in relation to school-age children, followed by a review of studies related to teacher beliefs, cultural assessment, and the Kluckhohn and Strodtbeck's (1961) concepts. Chapter 3 outlined the research methodology, discussed ethnography, and concluded with an overview of the research instruments. Chapter 4 outlined the qualitative and quantitative data that were collected during the course of this research. Chapter 5 was a discussion of the results, guided by the research question and related to the existing literature. This final chapter presents a review of the purpose of the research, the possible implications for education, suggestions for future research, and concluding remarks.

Review of Purpose of the Research

The intent of this study was to explore what the differences were in the attitudes and beliefs of Aboriginal and non-Aboriginal teachers towards students with FASD. I first conducted a semi-structured interview with each participant. I followed this component by a series of 13 vignettes with each teacher, as utilized by Kluckhohn and Strodtbeck, American anthropologists, and discussed in their book (1961), *Variations in Value Orientation*. I determined the themes from the interviews based on systematic coding of the data (Saldaña, 2009). I scored the vignettes were scored according to Kluckhohn and Strodtbeck's prescribed method. I presented the research findings from each component in Chapter 4 and discussed them in Chapter 5.

The qualitative and quantitative data collected provided evidence that while there were differences between the teachers studied in each of the two cultural groups, there were many

similarities. In reviewing the qualitative data, the similarities were most obvious in the dominant value orientations. This orientation was determined by the participants' preferred choices in response to the vignettes. The subtle differences between the groups become apparent on assessing the variant orientations, which were the secondary and tertiary preferences of the participants. There were recurrent themes in the qualitative data collected from the interviews for both groups, including the importance of family, culture, life skills and life skills training, and location.

Participants also responded to the topics of prevalence and symptoms, about which they were asked directly. All of the teachers felt that they had children with special needs in their classrooms, but their responses were inconsistent about whether the prevalence of FASD was increasing or declining. Two of the Aboriginal teachers thought the prevalence rate was increasing, one thought it was declining, one thought it was about the same, and the other did not comment. Only one of the non-Aboriginal teachers thought that the prevalence rate was increasing; the other teachers in this culture group did not comment about this issue. All teachers, regardless of ethnicity, thought that there was more awareness about the harmful effects of drinking while pregnant. There was also a belief that this awareness of an issue did not necessarily result in a change in behaviour.

Limitations

There were some potential limitations to this study. It was possible that teachers could have different attitudes about their students with FASD depending on the ethnicity of the student. The vignettes required careful attention to the design, in order that the information collected was consistent with my research question, and that the content was valid for the study. Both the vignettes and the interviews were useful in revealing this potential bias in the teachers.

This research has provided insight into the beliefs and attitudes of a small sample of study participants, but it is not generalizable to the attitudes and beliefs of all Aboriginal and non-Aboriginal teachers in the northwest, or in British Columbia. Conceivably, this research will encourage others to replicate the research approach with a larger sample size in other communities, allowing broader and more definitive comment on the differences in attitudes and beliefs between Aboriginal and non-Aboriginal teachers on the specific issue of FASD or other exceptionalities presented by learners in the classrooms.

Because of the small sample size, it was not possible to calculate the statistical significance of the responses for each cultural group, when there were five participants in each of the two groups. Increasing the sample size to eight or more individuals in each cultural group would allow for that calculation to be carried out in the analysis of subsequent similar research projects (Kluckhohn & Strodtbeck, 1961). (Appendix G for a table illustrating the Value of S at .05 and .01 Levels of Significance Computed on the Basis of Kendall and Smith's z test with Continuity Corrections.)

Educational and Research Implications

From the outset, I indicated to participants that I hoped and anticipated there would be educational and research implications from this research. I stated this indication in the informed consent letter, signed by each participant, and reviewed with me. It had already been confirmed through the literature review that research akin to this study did not exist.

The results of this research were offered as a paper presentation at the *5th Annual International Conference on FASD (Research, Results and Relevance: Integrating Research Policy, and Promising Practice around the World)*, in Vancouver on March 2, 2013.

Educational implications. I suggest that the findings of this research could have implications for teacher education and for the allocation of resources to education within this geographic region and possibly for more extensive diagnosis of FASD.

The total number of children in the North Coast region (ages 0-19) was 14,960 (Statistics Canada, 2011). The number of diagnoses completed each year by Complex Development Behavioural Conditions (CDBC) through the Northern Health Assessment Network does approach the prevalence rate, if using the prevalence figures suggested by the Province of British Columbia of three affected children per 1,000 births (Government of British Columbia, 2003). Accordingly, 45 diagnoses would be confirmed for the geographic area from Smithers through to Haida Gwaii each year. Twelve are confirmed in Smithers annually (L. Macknak, Smithers Key Worker – CDBC programme, personal communication, Jan. 9, 2013). Yet study participants suggested that this prevalence rate is too low. Therefore, the diagnosis rate within the Northern Health Region does not reflect the true prevalence rate. As the published prevalence rate is tied to—and limited by—the number of diagnoses, the rate will stay low as long as the number of diagnoses is limited. By limiting access to diagnoses, the prevalence rate that is reported is almost certainly artificially low. If Dr. Robinson's (Robinson et al., 1987) prevalence rate for FAS/FAE² of 190 per 1,000 was utilized to calculate the number of diagnoses in the region, the number of cases might well be in the range of 2,850, acknowledging that there is variation in prevalence within certain geographic areas.

Regardless of the true prevalence rate, the existence of two separate educational systems (Band schools and provincially-funded schools) makes implementation of a comprehensive FASD strategy for the district/region challenging. There are obvious differences between which services were available on a regular basis in each system, including access to

² The term FASD was not in use when Dr. Robinson undertook this research

additional services including psychologists, speech and language pathologists, and occupational therapists.

Existing research indicated that screening and formal assessment of children potentially affected by FASD would both assist teachers in their jobs. While teachers are hesitant to assign labels to students, the published research (e.g., Clarren et al., 2001; Swain et al., 2012) indicated, and my own conversations with study participants support, the importance of targeting interventions appropriately towards students. This focus involves vigilance not to assume that a student has FASD based on the results of a screening without a medical diagnosis (Chudley et al., 2005). It is important to note that screening results, which may be available within the classroom setting or from a psycho-educational assessment, are not equivalent to a formal medical diagnosis, and so are of limited value by themselves. The serious dilemma facing teachers and the families of affected children, including the children themselves, is how to obtain the required medical diagnosis in a system that has very limited capacity to assess these cases.

The participants in this study were consistent in their shared belief, as reflected by their preference for a *Man with Nature* value orientation in the Man-Nature Relationship items, that they can make a difference in the lives of students. The teachers studied were neither fatalistic about the power of a student's inherent nature, nor about the inevitability of outcomes. The teachers believed in effective action to obtain results. In order to be successful, teachers need adequate information, which includes a realistic sense of the prevalence of students with FASD in their classrooms. With this in hand, teachers can understand the behaviour issues and implement appropriate interventions to support student learning. This understanding and action will improve teachers' sense of efficacy.

Further professional development opportunities related to FASD seem necessary. Eight of the teachers completed their university training over 15 years ago, when there was far less

awareness of FASD. Six of that group were general education teachers, not Learning Assistance teachers. All participants correctly identified disruptive student behaviour as a major symptom of FASD in a school or classroom setting. Most participants identified facial dysmorphism as the second most identifying symptom of FASD. While this feature is characteristic of a few cases of FAS, specifically those occurring due to alcohol exposure between days 17-32 of gestation (Sulik, 2011), most children will not exhibit severe facial dysmorphism, if the damaging alcohol exposure occurred outside of that narrow time period of the pregnancy. The incorrect response from participants regarding the second most characteristic symptom of FASD, suggests that teachers may not be thinking of FASD as a *spectrum* disorder. They may lack an understanding of the highly variable and complex presentations possible in affected individuals.

Brady and Woolfson (2008) noted that teacher efficacy is an important variable in teaching learners with learning support needs. Assuring the teachers have adequate, current information would support their efficacy in the classroom. In terms of teacher perceptions, many teachers voiced a level of frustration about their professional situation. Some of this frustration related to the education system, particularly in relation to time required to access psycho-educational assessments for students; this would not be solved by professional development opportunities. Additional training would address some of the daily issues for teachers in their support of students with FASD, possibly resulting in a reduction of frustration felt in other areas.

The importance of families in the lives of students with disabilities was confirmed in this study and in the literature (Duquette et al., 2007; Ryan & Ferguson, 2006). Implications from this research suggest the importance for teachers to continue to try to engage parents by whatever means possible. An effective approach may require a larger community-based strategy, developed in partnership with the Bands, for example.

It was also suggested in the literature that technology could be used more adroitly in the improving the opportunities for children with FASD. Chudley et al. (2005) alluded to the burgeoning use of telehealth for FASD diagnoses in rural, remote locations, though details about how this approach could be implemented were not readily available. An adequate assessment of the use of telehealth to expedite this process would be beneficial to individuals with undiagnosed FASD. At the recent FASD conference in Vancouver, Astley (2013) described sophisticated computer software which can be easily used in any clinical setting to support the *4-Digit Diagnostic Code* (2004).

Diagnoses are currently time consuming to obtain, in part because of the multi-member team required, not all of whom practice in one locale consistently. Study participants repeatedly expressed frustration on behalf of parents about the process required to secure a diagnosis for their children. Consideration of alternatives could relieve some of this pressure for teachers.

Research implications. Research using a Value Orientation approach to ascertain teacher beliefs and attitudes regarding students with FASD did not exist prior to this study. From that perspective, this study deepens the understanding of the importance teachers' attitudes and beliefs with regards to students with FASD. The potential of gaining new knowledge was suggested in the informed consent letter to the participants at the outset of the research. As mentioned in Chapter 5, the new knowledge includes an awareness of the similarities between teachers within their dominant value orientations, with differences within their variant value orientations. Also, there is a new-found awareness of the tendency for Aboriginal teachers to overestimate consensus within their cultural group, and for non-Aboriginal teachers to underestimate consensus within their cultural group. The research establishes that Aboriginal teachers value significantly the role of parents in the lives of their students with FASD; this was more obvious than the value placed by the non-Aboriginal teachers. All the participants wish for their students with FASD to live independent lives.

Recommendations for Future Research

There would be value in replicating this approach in another location with Aboriginal and non-Aboriginal teachers, based on the research findings of Ball and Janyst (2008), who stated that there is no “pan-Aboriginal” system of beliefs. For example, Aboriginal teachers in the Okanagan might respond differently to the vignettes and the interviews than Aboriginal teachers in northwestern British Columbia. Testing this assumption might reveal valuable results for their particular school district or within a small cluster of schools. Again, this information could be used to similar purposes: to inform decisions about professional development and training, to improve communication between individuals through a greater awareness of each other’s values, and to improve communication between teachers, students and their families.

Kluckhohn and Strodtbeck’s (1961) tool was not designed explicitly to measure intra-cultural variation, or the variations within cultures. It would be interesting to devise a method to explore this variation further, particularly in relation to the degree of acculturation experienced by a group. There was significant variation in the responses from the Aboriginal teachers and less internal consensus within that group. As noted above, and in greater detail in the research findings in Chapter 4, the internal consensus for the Aboriginal teachers was 40.3% whereas the non-Aboriginal teachers exhibited an internal consensus of 76.8%. This finding is suggestive of a culture in transition, as explained by Kluckhohn and Strodtbeck’s (1961) research, and another researcher might be interested in pursuing that line of thinking.

This research, and the literature review, affirmed the importance of parents in the lives of students with disabilities, including FASD. Aboriginal teachers were especially aware of the role of families. Some of the teachers mentioned how difficult it is to solicit the active involvement of parents in the lives of their students and the school in general. Another future research avenue would be to consider which approaches could be most successful with parents

in this geographic area to forge stronger parent-teacher relationships. This research could be conducted with the assistance of modern information technology, or perhaps even social media.

And finally, I noted in Chapter 3 that I did not set out to ascertain the cultural values of the schools. I was apprehensive of this result as I considered interviewing teachers in on-reserve school and off-reserve schools. Instead, I chose to consider the ethnicity of the teachers. Having completed the research, and read extensively on the topic, I now think that it might be worthwhile to explore the cultural values of institutions. This was not what Kluckhohn and Strodtbeck (1961) originally intended with their research, but others have explored the idea using the value orientation approach, including Chapman (1981), who was particularly interested in the area of counselling. The assumption that she makes is that an institution also has value orientation patterns that direct its development and expansion. Assessing the value orientations of on-reserve and off-reserve schools is a technique that could be used to consider the school's approach to students with disabilities, for example. The required information could be determined in part by items such as policies, correspondence, school newsletters, and interactions with families.

Concluding Remarks

The reflective process of conducting research to answer a specific question often leads to the discovery of new questions, rather than profound new knowledge that answers the question at hand. I found conducting this research was a thought-provoking exercise throughout. The teachers involved in the study indicated the same personal experience. Several of the teachers commented on the value of reflecting on issues related to their professional practice, both through the interview and the subsequent discussion process. The reflective journal, which I kept during the study period, was useful in my own professional life and I will continue to use it, even without a research project actively underway.

It is also worth noting that I was regularly impressed with the thoughtfulness of the teachers and their overriding concern for their students. They are doing their very best with the system and the students that they are presented with each day. I am grateful for their attention and interest in my research.

To this end, I would encourage other new researchers to “do it in a good way” (Ball & Janyst, 2008, p. 48), but also to believe that others will help and support you if they believe in the value of what you are undertaking.

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Appendix A
Research Vignettes

Vignette #1: There were two high school teachers talking about how students with FASD (either formally diagnosed or not) should spend their time outside of school.

(A) One said that she liked her students to have time in the day that was largely unstructured, without plans or activities. There is enough structure in the scheduled class time; she discourages the students from doing extra work after class.

(B) One said that she liked her students to complete additional assignments outside of class or undertake additional activities for extra credit.

Which of these ways do you think it is usually better for teachers to be with their students?

Vignette #2: A teacher had a particularly challenging class one year. Let's say she/he had 6 children in the class who had behavioural issues out of a class of 24 students. There are different ways of getting help.

(A) Would it be best if she asked for support from her/his co-workers, the speech language pathologist and/or other support staff?

(B) Would it be best for her/him to try to support the student on her own, figuring which interventions are appropriate for each student?

(C) Would it be best for her/him to go to her principal or to an older teacher who is used to managing these sorts of situations, and ask them to help figure out the next steps with the students?

Which approach do you think would usually be best?

Which approach do you think is the next best?

Which way do you think most other teachers in your cultural group would think best?

Vignette #3: Three teachers from three different areas were talking about the things that control student behaviour and learning, regardless of their diagnosis of FASD. Here is what each of them said.

(A) One teacher said: Teachers have never controlled the behaviour of students or influenced their school outcomes and probably never will. There have always been students who will succeed and students who struggle. That is the way that it is, and you are wise if you take it as it comes and do the best that you can.

(B) The second teacher said: I believe that it's a teacher's job to find ways to change student behaviours and attitudes just as teachers have changed many other things in the school setting. I believe that teachers can succeed in doing this and may even be successful in changing student behaviours and attitudes in the long term, not just for this school year.

(C) The third teacher said: I believe that I help students by working closely with them, staying abreast of the nuances of their behaviours, listening, watching and caring for the whole child. By being attentive to the whole child, and working

with their nature, I will have successes that will affect their behaviours and attitudes.

Which teacher do you think had the best idea?

Which of the other two teachers do you think had the better idea?

Which of the three teachers do you think most other teachers in your cultural group would think had the best idea?

Vignette #4: People often have very different ideas about what has gone before and what we can expect in life. Here are three ways of thinking about these things.

(A) Some people believe it best to give the most attention to what is happening now in the present. They say that the past has gone and the future is much too uncertain to count on. Things do change, but it is sometimes for the better and sometimes for the worse, so in the long run it is about the same. These people believe the best way to live is to keep the old ways that one can – or that one likes – but be ready to accept the new ways which will help to make life easier and better as we live from year to year.

(B) Some people think that the ways of the past (ways of the old people or traditional ways) were the most right and the best, and as changes come, things get worse. These people think the best way to live is to work hard and to keep up the old ways and try to bring them back when they are lost.

(C) Some people believe that it is almost always the ways of the future – the ways that are still to come – which will be the best and they say that even though there are sometimes small setbacks, change brings improvements in the long run.

These people think the best way to live is to look at the time ahead, work hard and give up many things now so that the future will be better.

Which of these ways of thinking about life do you think is best from your perspective as a teacher?

Which of the other ways of thinking about things do you think is better?

Which of the three ways of looking at life do you think that most people in your cultural group would say is best?

Vignette #5: Some people were talking about the way children should be brought up.

Here are three different ideas.

(A) Some people say that children should always be taught the traditions of the past.

They believe that the old ways are best, and that it is when the children do not follow them too much that things go wrong.

(B) Some people say that children should be taught some of the old traditions, but

that it is wrong to insist that they stick to these ways. These people believe that it is necessary for children always to learn about and take on whatever of the new ways will best help them to get along in the world today.

(C) Some people say that children should be taught none of the old traditions at all,

except as an interesting story of what has gone before. These people believe that the world goes along best when children are taught the things that will make them want to find out for themselves new ways of doing things that will replace the old.

Which of these people had the best ideas about how children should be taught?

Which of the other two people had the better idea?

Considering all three ideas, which people would most other people in your cultural group say had the better idea?

Vignette #6: There were two teachers talking about their expectations for a student with a diagnosis of FASD. They had different ideas.

(A) One said: What I care about most is that the students accomplish something at school. I want them to get things done just as the other students are expected to get things done. I like to see results and think that they are worth working for.

(B) The other said: What I care about most is that the student has a chance to act in the way that best suits them. If they don't always get much done, but enjoy life as they go along, that is the best way.

Which of these two people do you think has the better way of thinking?

Which of the two do you think that you are more like?

Which do you think most other teachers in your cultural group would say was a better outcome for their students?

Vignette #7: A school like yours is to send a student – a representative – to a student orientation weekend at the community college in Terrace. How will this student be chosen?

(A) Is it best that a meeting be called and everyone, including students, discuss things until almost everyone agrees so that when a vote is taken almost all people agree on the same person?

(B) Is it best that the principal take the main responsibility for deciding who should represent the students since they are the one who have had long experience in such matters?

(C) Is it best that a meeting should be called for staff and students, names be put up, a vote be taken, then send the student who gets the majority of the votes, even if there are some teachers or students who do not support the choice?

Which of these ways of choosing is usually best in a case like this?

Which of the other two ways are usually better?

Which would most other teachers in your cultural group say is usually better?

Vignette #8: Morning recess has just begun. An elementary school student displaying the characteristic symptoms of FASD is outside in the playground with the other students from his or her class. The teacher on supervision is watching the students, but notices that this particular student seems to be talking loudly and aggressively towards the main group of students. It appears that the child would like to join with the group, but is being rather aggressive in their approach. As a result, the main group of children is largely ignoring the student who wants to join in.

(A) One teacher approached the group of students, to make an opening for the one disruptive child.

(B) Another teacher let the situation play out, letting the children solve their own difficulties.

(C) Another teacher communicated with the children, encouraging them to resolve their issues as a group.

Which way do you think is usually the best response?

Which of the other two ways do you think is best?

Which way of all three ways do you think most other teachers in your cultural group would usually think is best?

Vignette #9: The government is going to help a community like yours get more supports for exceptional children. The community consists of a number of schools. The government officials suggest the teachers should have a plan for dividing the resources but don't say what kind of plan is required. Since the amount of extra resources that may come in is not known, people in the various schools feel differently about planning.

(A) Some say that whatever resources come in should be divided just like the resources were divided in the past, when there were more resources for exceptional children.

(B) Other teachers want to work out a really good plan ahead of time for dividing whatever additional resources come in.

(C) Still others want to just wait until the resources come in before deciding on how they should be divided.

Which of these ways do you think is usually best in cases like this?

Which of the other two ways do you think is best?

Which of the ways do you think that most of the teachers in your cultural group would think is best?

Vignette #10: There were two teachers. Both taught differently.

(A) One teacher worked with her students well, but didn't work any harder than she had to. The teacher wanted to have extra time to visit with friends, go on trips and enjoy life. This was the way the teacher liked it best.

(B) One teacher liked to work with her students and was always putting in extra time, doing work after school and researching other approaches. Because she did this extra work, she did not have time left to be with friends, to go on trips and to enjoy herself in other ways. But this was the way that she really liked best.

Which of these approaches do you think is best?

Which of these ways would most other teachers in your cultural group think is usually best?

Vignette #11: There were three teachers who had students in their classrooms with a diagnosis of FASD. The three teachers had quite different ways of teaching and working with those students.

(A) One teacher assessed their students at the beginning of the year. The teacher worked hard and also set themselves to living properly. They felt that it is the way that a teacher worked and tries to keep themselves in harmony with the nature of the children that has the most effect on the outcomes for the children.

(B) One teacher assessed their students at the beginning of the year. Afterwards, they worked sufficiently hard, but did not do more than was necessary to keep them coming along. They felt that it was mainly dependent on the nature of the

child how they would turn out, and that nothing extra that people do could change things very much.

(C) One teacher assessed their students at the beginning of the year and then worked with them intensively and made use of the new approaches, ideas and methods that they were able to research. They felt that by doing this, they would be able to prevent or remediate learning difficulties or exceptionalities in the children.

Which of these ways do you believe is usually best?

Which of the other two ways do you believe is better?

Which of the ways would most other teachers in your cultural group think is best?

Vignette #12: I am going to tell you about three different ways families can arrange work; assume the family has a child with a diagnosis of FASD and that their work is about how to function as a family.

(A) In some communities it is usually expected that each of the separate families will look after its own business separate from all others and not be responsible for other families.

(B) In some communities it is usually expected that close relatives in the families will work together and talk over among themselves the way to take care of whatever problems come up. When a boss is needed, they usually choose one person, not necessarily the oldest able person, to manage things.

(C) In some communities it is usually expected that the families which are closely related to each other will work together and have the oldest able person be responsible for and take charge of most important things.

Which of the ways do you think is usually best in most cases?

Which of the other two ways do you think is better?

Which of all the ways do you think most other people in your cultural group would think is usually best?

Vignette # 13: Three teachers were talking about whether people can alter the behaviour of mothers who drink during their pregnancy.

(A) One said: It is true that people like doctors and public health campaigns are raising people's awareness to the issue of drinking during pregnancy. If people will pay attention to this advice, they will almost always realize that drinking during pregnancy can affect the baby and will limit their consumption of alcohol.

(B) The second one said: I really do not believe that there is much that anyone can do to change the behaviours of others. It is my belief that every person has a life to live and the decisions they make are their own. If there are outcomes like children born with FASD, it just happens.

(C) The third one said: I believe that there is a plan to life which keeps all living things moving together, and if a person lives their life in accordance with that plan, they will likely make the right decisions, whatever the outcome.

Which of the three teachers said nearly what you think is right?

Which of the other two is more right?

Which of the three would you say other people in your cultural group would say is the best?

Appendix B

Interview Protocol

1. How many years have you been teaching? What grade(s) are currently teaching?
2. In how many schools have you taught over your career?
3. Do you believe that you currently have children in your class with special educational needs?
4. Do any of them have a formal medical diagnosis of which you are aware?
5. Do you currently have children in your classroom who you think present with symptoms of fetal alcohol spectrum disorder (FASD), whether it's formally diagnosed by a doctor or not?
6. Do you have a sense that there are currently more or less children with FASD in your classroom than in previous years?
7. What do you think are the most obvious symptoms? And what are the less obvious ones?
8. Do you think about the label for the diagnosis, or do you think more about the way that the child presents?
9. Do you think certain assessments are more valuable than others for children presenting with the symptoms of FASD? Who should coordinate or advocate for those to happen?
10. What school or community-based supports do you think make the greatest difference for children impacted by FASD while in school?
11. What is your hope or expectation for these children during their school career?
12. What do you think can be expected to come of their lives, once they leave school?
13. Is there anything else that I should know or consider?

Appendix C

Informed Consent Letter

Study Title: Building Alliances to Understanding and Working with Students Affected by fetal alcohol spectrum disorder (FASD)

Researcher: Sarah Deagle

I am a graduate student under the direction of Dr. Andrew Kitchenham, Professor in the School of Education at the University of Northern British Columbia and I live in Hazelton. I am conducting research to document the attitudes and beliefs of ten (10) Aboriginal and non-Aboriginal teachers with regards to students with a diagnosis of FASD. The purpose of this study is to explore potential differences and similarities with the expectation that this information could have the following effects and benefits:

- Implications for teacher education (formal university-based training as well as professional development opportunities);
- Implications for the allocation of resources within this geographic region for education and possibly for more extensive diagnosis of FASD;
- Additionally, the research will become part of the extant literature and may be pursued by other researchers at a later date.

I am requesting your participation, which will involve a 1 – 2 hour commitment at your convenience during September – October 2012. There may be brief follow up required later in the fall for you to review the data collected during your interview and my interpretation of it.

Before agreeing to participate in this research, I strongly encourage you to read the following explanation of this action research study. Also described is your right to withdraw from the study at any time. This study has been reviewed by the UNBC Research Ethics Board for approval prior to the start date of September 2012.

Explanation of Procedures

To conduct this study, I will interview each participant at a location of his or her choosing, likely outside of school time. Additionally, I will ask each participant to complete a 13-item questionnaire during the same interview period. These two activities are not planned to exceed 1 – 2 hours.

Risks and Discomforts

There are no known risks or discomforts that are anticipated from your participation in this study.

Benefits

The anticipated benefit to this study is that there will be a greater understanding of potential differences between the beliefs and attitudes of Aboriginal and non-Aboriginal teachers towards their students with a diagnosis of FASD. In its entirety, the research may inform education policy or access to FASD diagnosis in the future. On an individual level, it will be an opportunity for participant teachers to reflect on their own teaching practices and beliefs.

Confidentiality

The information gathered during this study will remain confidential. Only the researcher and graduate programme supervisor will have access to the study data and information. There will not be any identifying names on surveys or interview transcripts. All interviews will be transcribed by me, Sarah Deagle. Your names and any other identifying details will never be revealed in the publication of the results of this study. The results of this research will be presented in the form of a research paper and may be presented at professional meetings or published in a professional journal. The knowledge obtained from this study will be of great value in guiding administrators, and district professionals to be more effective supporters of teachers who are working with students with a diagnosis of FASD. All printed data will be kept in a locked filing cabinet in my college office and all electronic data will be stored on my password-protected laptop.

Withdraw without Prejudice

Participation in this study is voluntary; refusal to participate will involve no penalty. You are free to withdraw consent and discontinue participation in this project at any time without prejudice or penalty. You are also free to refuse to answer any questions that may be asked. Should you withdraw from this study; all data will be destroyed through shredding or file deletion.

Further Questions and Follow-Up

If you have other questions or concerns about the study please contact me at (250) 842-8725 (cell) or deagles@unbc.ca or Dr. Andrew Kitchenham, Programme Supervisor of the School of Education at the University of Northern British Columbia at (250) 960-6707 and kitchena@unbc.ca. Any complaints about the research project can be directed to the Office of Research (reb@unbc.ca or (250) 960-6735).

I _____, (name; please print clearly), have read the above information. I freely agree to participate in this study. I understand that I am free to refuse to answer any questions and to withdraw for the study at any time. I understand that my responses will be kept anonymous.

(print name)

(signature)

(date)

Appendix D

Example of an Original Kluckhohn Vignette versus a Revised Vignette

[KLUCKHOHN] A group like yours (community like yours) is to send a delegate – a representative – to a meeting away from here (this can be any sort of meeting). How will this delegate be chosen?

- (A) Is it best that a meeting be called and everyone discuss things until almost everyone agrees so that when a vote is taken almost all people would be agreed on the same person?
- (B) Is it best that the older, important leaders take the main responsibility for deciding who should represent the people since they are the ones who have had the long experience in such matters?
- (C) Is it best that a meeting be called, names be put up, a vote taken then send the man who gets the majority of the votes, even if there are many people who are still against this man?

Which of these ways of choosing is usually best in cases like this?

Which of the other two ways is usually better?

Which would most other people in _____ say is usually better?

[REVISED] A school like yours is to send a student – a representative – to a student orientation weekend at the community college in Terrace. How will this student be chosen?

- (D) Is it best that a meeting be called and everyone, including students, discuss things until almost everyone agrees so that when a vote is taken almost all people agree on the same person?
- (E) Is it best that the principal take the main responsibility for deciding who should represent the students since they are the one who have had long experience in such matters?
- (F) Is it best that a meeting should be called for staff and students, names be put up, a vote be taken, then send the student who gets the majority of the votes, even if there are some teachers or students who do not support the choice?

Which of these ways of choosing is usually best in a case like this?

Which of the other two ways are usually better?

Which would most other teachers in your cultural group say is usually better?

Appendix E

Composite Graphs

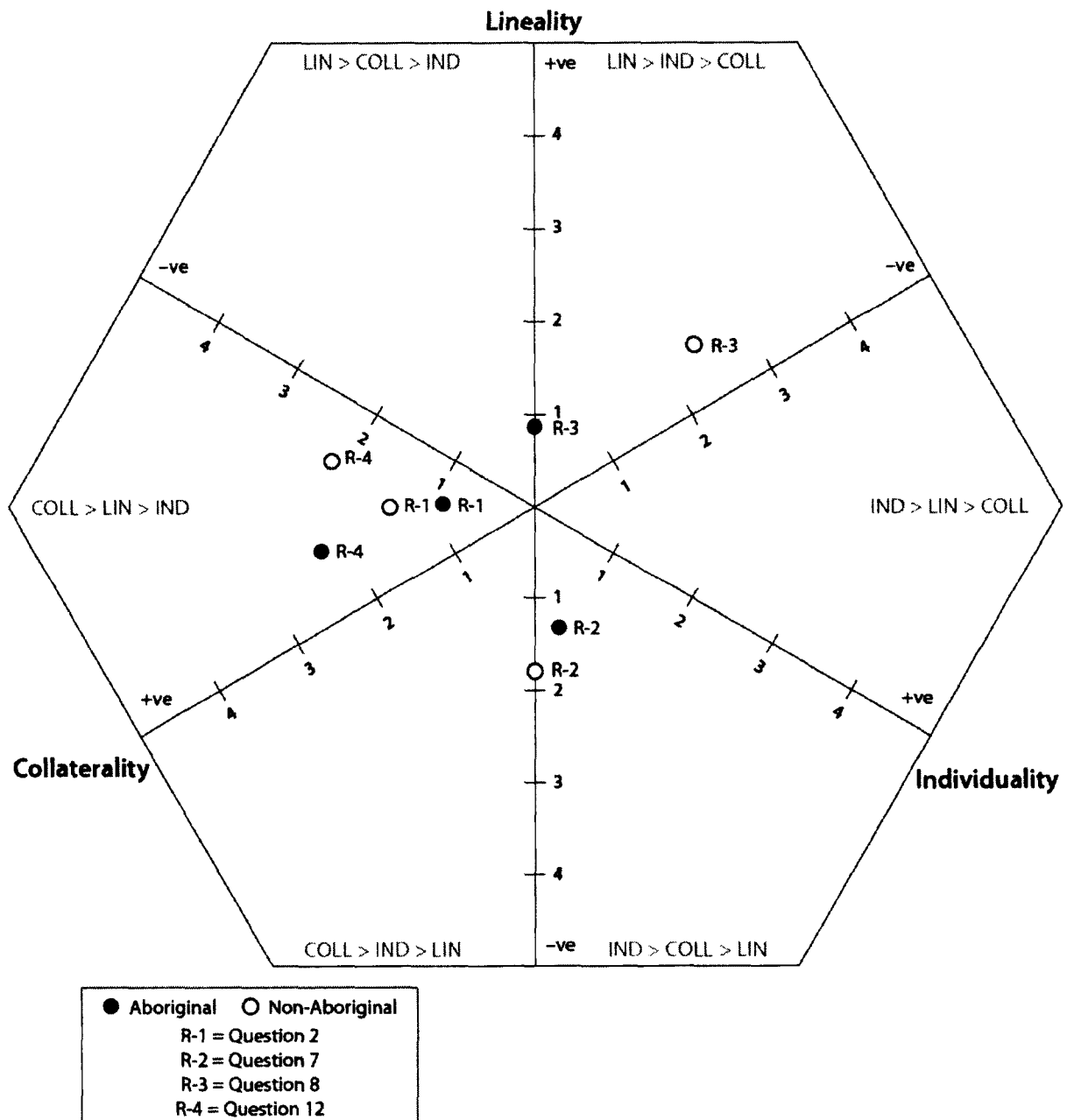


Figure 4. Composite graph incorporating Aboriginal and non-Aboriginal responses to the series of vignettes within the Social Relations Orientation. Three questions from this orientation are plotted, identified as R1, R2, R3, and R4, with the corresponding vignette number identified in the legend.

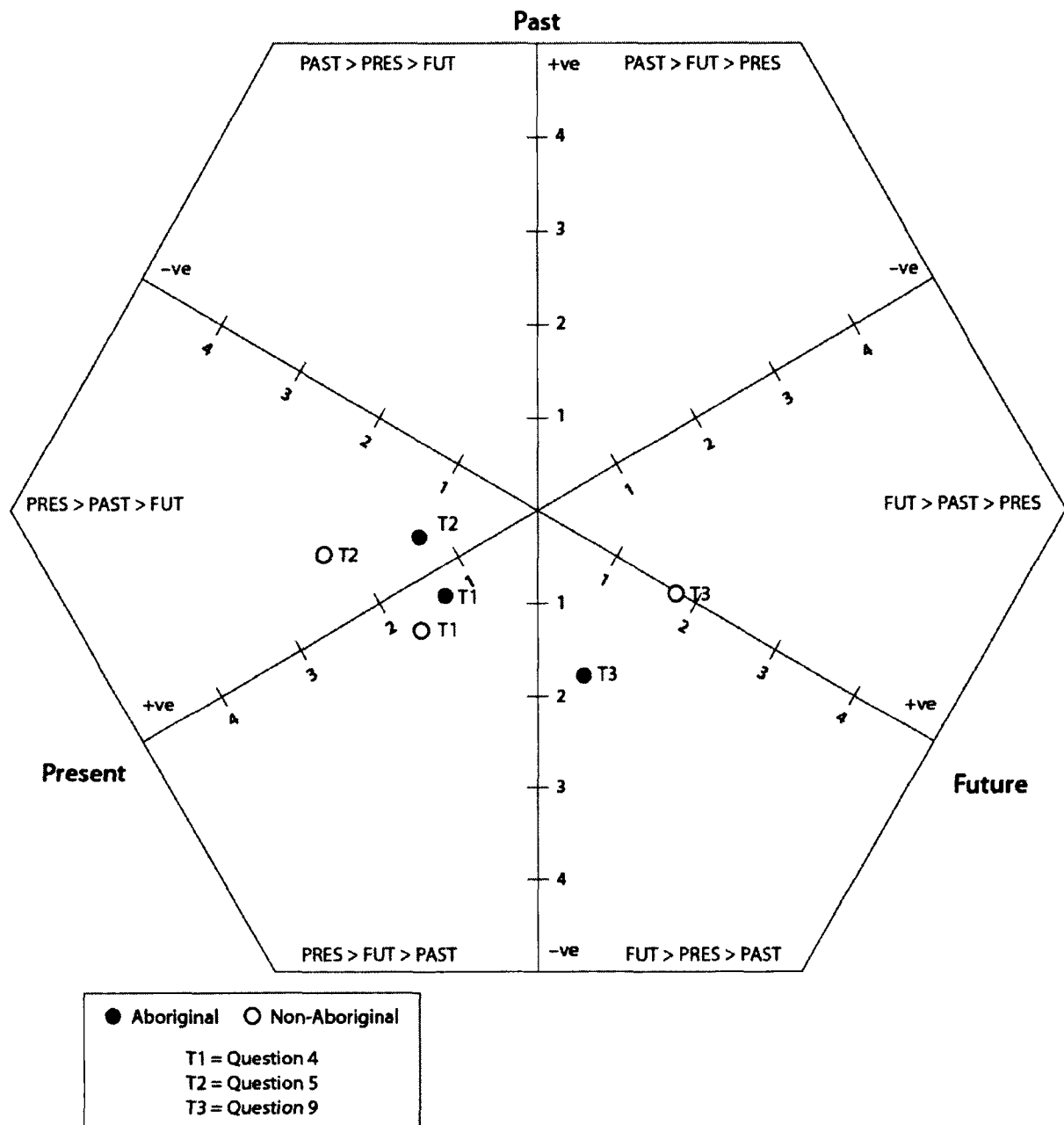


Figure 5. Composite graph incorporating Aboriginal and non-Aboriginal responses to the series of vignettes within the Time Orientation. Three questions from this orientation are plotted, identified as T1, T2, and T3, with the corresponding vignette number identified in the legend.

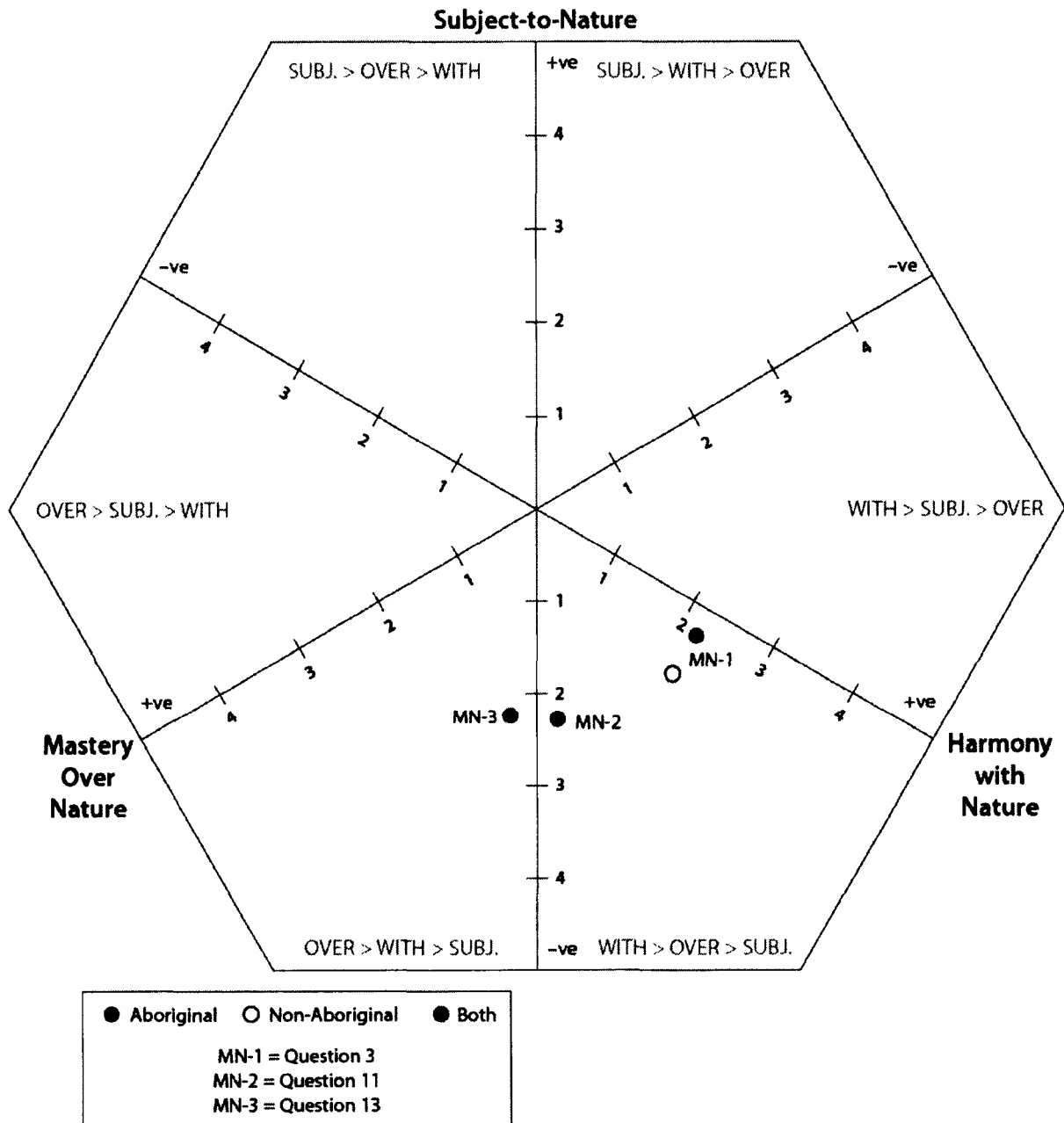


Figure 6. Composite graph incorporating Aboriginal and non-Aboriginal responses to the series of vignettes within the Man-Nature Relationship Orientation. Three questions from this orientation are plotted, identified as MN-1, MN-2, and MN-3, with the corresponding vignette number identified in the legend.

Appendix F

Figures Illustrating Teachers' Responses to Vignettes

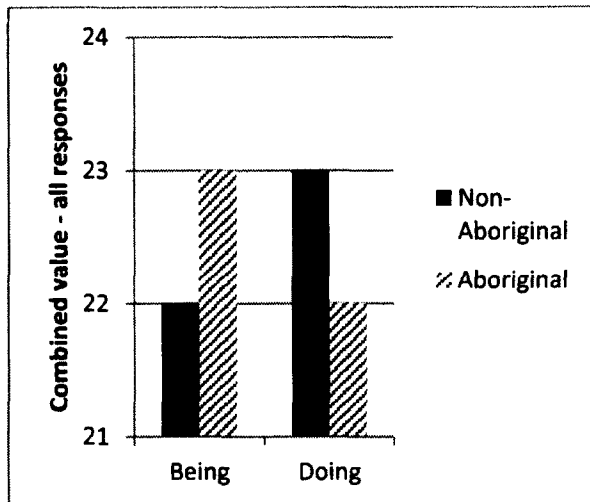


Figure 7. Activity orientation: A comparison of dominant values of Aboriginal and non-Aboriginal teachers. The combined numbers are a composite of all the responses in an orientation; a lower score indicates a preference. (i.e.) Non-Aboriginal teachers showed a preference for being over doing; the opposite is true for the Aboriginal teachers.

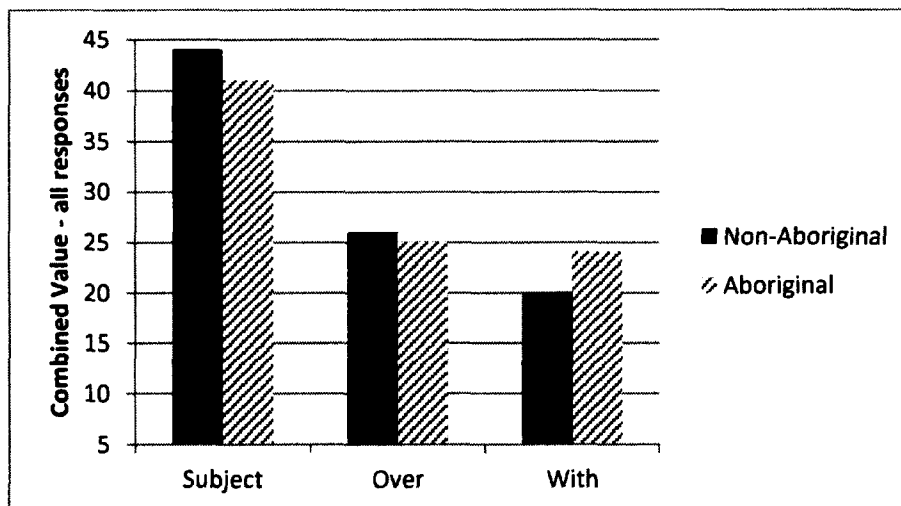


Figure 8. Man-Nature Relationship orientation: A comparison of dominant values of Aboriginal and non-Aboriginal teachers. The combined numbers are a composite of all the responses in an orientation; a lower score indicates a preference.

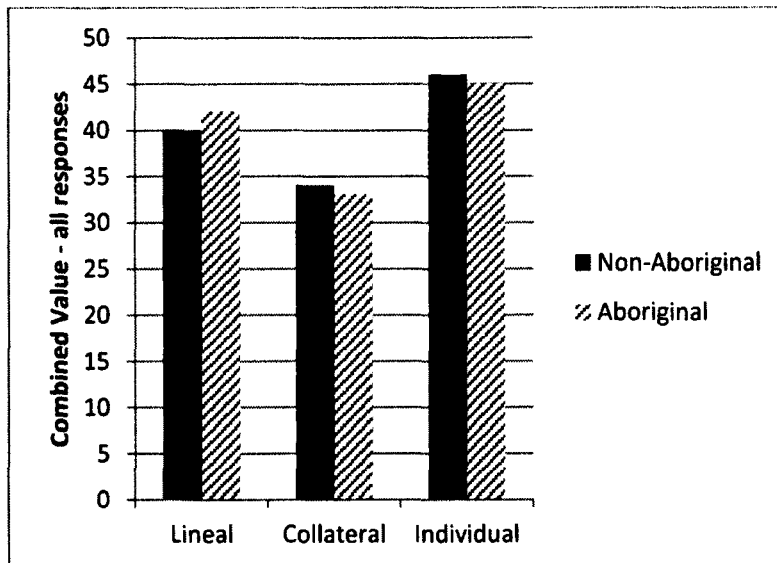


Figure 9. Social Relations orientation: A comparison of dominant values of Aboriginal and non-Aboriginal teachers. The combined numbers are a composite of all the responses in an orientation; a lower score indicates a preference.

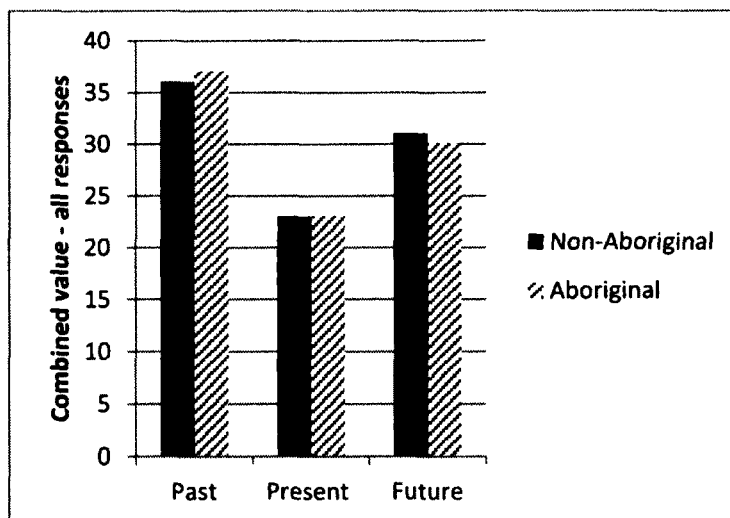


Figure 10. Time orientation: A comparison of dominant values of Aboriginal and non-Aboriginal teachers. The combined numbers are a composite of all the responses in an orientation; a lower score indicates a preference.

Appendix G

<i>m</i>	<i>n</i>					Additional values for <i>n</i> = 3	
	3	4	5	6	7	<i>m</i>	<i>S</i>
Values at .05 Level of Significance							
3			64.4	103.9	157.3	9	54.0
4		49.5	88.4	143.3	217.0	12	71.9
5		62.6	112.3	182.4	276.2	14	83.8
6		75.7	136.1	221.4	335.2	16	95.8
8	48.1	101.7	183.7	299.0	453.1	18	107.7
10	60.0	127.8	231.2	376.7	571.0		
15	89.8	192.9	349.8	570.5	864.9		
20	119.7	258.0	468.5	764.4	1,158.7		
Values at .01 Level of Significance							
3			75.6	122.8	185.6	9	75.9
4		61.4	109.3	176.2	265.0	12	103.5
5		80.5	142.8	229.4	343.8	14	121.9
6		99.5	176.1	282.4	422.6	16	140.2
8	66.8	137.4	242.7	388.3	579.9	18	158.6
10	85.1	175.3	309.1	494.0	737.0		
15	131.0	269.8	475.2	758.2	1,129.5		
20	177.0	364.2	641.2	1,022.2	1,521.9		

Fig. 11. Value of *S* at .05 and .01 Levels of Significance Computed on the Basis of Kendall and Smith's *z* test with Continuity Corrections. Adapted from, "A comparison of alternative tests of significance for the problem of *m* rankings" by Milton Friedman, 1940, *The Annals of Mathematical Science*, 11(1), p. 86-92.