PSYCHOEDUCATIONAL ASSESSMENT OF NATIVE STUDENTS: A NATIVE PERSPECTIVE

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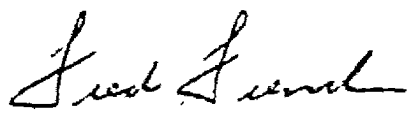

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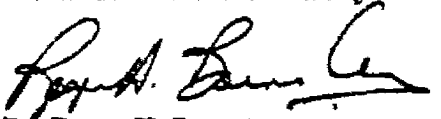

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Dedication

Ula wi'katiknn kisewigmag ugjit nen'gigug nujjewitjij, Lisal aqq Lestel Sansn tlai Potloteg, Unamagi. Giju, mesgeg mu ges eimun tan tujiw mesnem agnutmagan tan telgegnutmasit gatu etisk ngamlamun migwitetm tan tlwel'tasin amgwesewei mesnem sagpequniet nisiagel. Gil. tata telisag nagtmin ula setgamu nesisgag aqq l'luignegipungeg kesnaglininen.

Gil gisitunin awtiget uggit tan telginamasuti ges nu nagtmog ma setgamu. Apjejiteg tan gogwei ge jitu tanji pisqwaleg nuji-ginamuoguom, nege gisgug la pegisulg na tan eim, aqq mset gogwei tan welalioq aqq tan wel-gnutmagiog ula nege gisgug gilowewei nawi'katiknn ewigigeg.

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ABSTRACT

PSYCHOEDUCATIONAL ASSESSMENT OF NATIVE STUDENTS: A NATIVE PERSPECTIVE

This thesis describes the issues surrounding the education and psychoeducational assessment of Native children. It reviews literature on the nature of intelligence, its assessment and the problem of bias. A discussion about Native learning styles and childrearing practices within a Native social context is reviewed. Based on the review of literature, a model was developed to illustrate the various factors involved in Native childrearing. While this model is not final nor meant to encompass all childrearing practices it exposes a new area of exploration in Native education, particularly for considering the potential and actual incongruenciesof psychoeducational assessment of Native children. Conclusions and recommendations are provided so that examiners and teachers involved in Native psychoeducational assessment might become more sensitive in accommodating to specific situations.

Barbara M. Johnson
June 19, 1992

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The present text evolved over a period of twenty years after my initiation to University life. Throughout this period numerous academic papers were compiled for various university courses. My interest has been endemic toward the Native ecosystem. This endemic has allowed me to explore publications on Native life in general. It has been my impetus throughout.

In order for me to strive for the pinnacle of education a number of people have guided me through my endeavours. First and foremost are my parents, Richard Johnson (deceased) and my mother Esther Johnson. They brought me up within the realms of Native society. Without this, I would not have envisioned the nature of Native childrearing.

I have been extremely fortunate in obtaining entrance to St. Mary's University for completion of not only this thesis to fulfill requirements for a Master of Arts in Education but for prior entry and completion of Master of Education. For this, I am eternally grateful to the Dean of Education, Dr. Roger Barnsley, who had more confidence in me than I at times, and for urging me forward when I lacked that confidence.

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CHAPTER 1

INTRODUCTION

THE ISSUES SURROUNDING THE EDUCATION AND ASSESSMENT OF NATIVE CHILDREN

Educational assessment of students is an activity that, while held to be an essential feature of formal education, also has lifelong consequences. Education is both a learning process and a teaching process but because it has a social role in the sense of "licensing" its graduates to fulfill roles in society, educational assessment becomes an integral part of a process. Peters (1976) regards the processes of education as tasks relative to achievements which must be measured.

Tasks relative to Native culture are typically absent in formal psychoeducational assessment. Further, in terms of educational achievement for Native students, Rohner (1968) contends that the cultural background of the children and the teachers' attitude toward and relationships with members of the community are prime factors in poor academic performance. This dilemma is evident in formal education and in the work sector (DIAND, 1988; Statistics Canada, 1984).

An excerpt from a presentation made at a conference on racial issues at the Cole Harbour High School on February 9, 1990 depicts the relationships that exist between school systems and Native students. It relates to one Native person's high school experience. It states:

> "When I was in the latter part of Grade 9, the school guidance counselor met with me and the other Grade 9 students to discuss future high school expectations. The guidance counselor advised me to take a general program from Grade 10 because she felt that I would not be able to handle the Academic program. ..." The following Fall, I decided to go to a different High School. There, I was advised to take the Academic program by the guidance counsellor. All during my High School years, I stuck out the Academic program and graduated from High School. I even went on to University and graduated." 1.

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1. Excerpt from a presentation made at the Cole Harbour High School racial conference: February 12, 1990.

One of the lifelong consequences for the Native child includes early school leaving [drop-out] (DIAND,1980; DIAND, 1990; Rodrigues, 1986; Comeau & Santin,1990; Larose, 1991). This early school leaving [as early as grade five and six] affects further learning in all aspects, preconditions for unemployment, and provides potential for numerous social problems such as alcoholism and drug abuse (Comeau and Santin, 1990; Emerson, 1987). Also, the inability to cope within the Native and non-Native societies, family problems and consequences, and much more, are part of the outcome from an educational system that does not have first understanding of the needs of Native education (Murdoch,1981; Emerson, 1987; Dawson, 1988).

A review conducted by Glenda Redden (1981) provides a brief history on the devolution of Native education. In this context, devolution meant giving back control of some aspects of education to the Native people. She mentions that Native parents became actively involved with their children's education in the 1960's. The reasons cited above, such as early school leaving, were the prime factors for parental interest. Hence, Native input is a relatively recent phenomenon in the field of education.

Within the realm of the educational system, Natives as with all children have been subject to assessment to determine their learning potential, their achievement, and their strengths and needs. While this was intended as a positive process for all children, it has resulted in severe consequences such as the labelling of children (Turnbull & Schultz, 1979; Nuttall, Landurand, and Goldman, 1984; Rodrigues 1984; Sawyer, 1991). For the Native child, the consequences have been greater.

The decade of the 1980's had been enlightening for both the Native and the Non-Native alike in terms of Native psychological testing. This decade has brought about educational writings by Native educators and psychologists. Some of these writers include Clare Brandt, E. Brandt, Roland Chrisjohn, Larry Emerson, and Verna Kirkness.

Chapter 2 will examine some of the specific issues in the assessment of Native children, for now an overview of some of these issues will be provided to introduce the reader to the topic.

Historically, the psychoeducational assessment of Native students was not subjected to any type of scrutiny by Native educators let alone by Native psychologists.

Prior to the 1970's, few Native people were in the teaching profession in Canada (Kirkness, 1985). Chrisjohn & Lanigan's (1985) presentation of problems associated with research on Native intelligence questioned the validity of conclusions and recommendations based on the results of standardized intelligence tests established for the predominantly white society.

Chrisjohn (1988) stated that public disagreement was relatively uncommon in Native educational research. This is presumed to include psychoeducational assessment, for there has been limited research conducted by Natives in this field. Chrisjohn (1988) further noted that it is discourteous to criticize in the Native society. Ethics and principles within the Native circles of life restrain the First Nations from making any derogatory or critical comments. Hence, the silence has continued for so long. Whyte (1986) stated, "The distortions of history and a lack of printed information on their (Native) traditions and lifestyles has helped to perpetuate poverty, discrimination, and institutional neglect.

One of the arguments that had been debated in regard to the intellectual capacity of Native children was the notion that Native students were without educational experience. "Mind is not lacking among the Savages of Canada, [only] education and instruction," (Thwaites, 1896-1901). Havighurst (1970), in citing a number of studies, concluded that Native children do not differ in their inherited intellectual ability from other groups of children. He went on to state that their differences in school achievement must be due to some combination of their homes and the schools.

The other arguments represented in studies by Turner & Penfold, 1952; Knowles & Boersma, 1968; Bowd,1972; Schubert & Cropley, 1972; however, indicated that Native students were lacking in verbal skills and experience. Jensen (1969), Gue (1971), John (1972), and Kaulback (1984) mentioned that educators are convinced that Native students severely lack intelligence. The latter is derived from incorrect conclusions through the assessment of the Native children's poor performance on the verbal scales of psychoeducational batteries. Common and Frost (1986) in their review of a number of inquiries found methodological and sampling errors which could be contrived to illustrate the above. They concur with Chrisjohn and Lanigan's views on research on Native

intelligence. For example, Frost and Common found that in a study by Scaldwell, Frame and Cookson that 18 Native students were part of a study on Native intelligence, but they came from Special Education and had learning difficulties. These students were known to be functioning differently from their peers, yet conclusions were drawn about their ability and generalized to all Natives.

Common & Frost's (1988) historical review of Native intelligence states that tests developed for the White culture are in appropriate for use with Natives. Native students do differ significantly from Anglo students in regard to socialization, lifestyles and up bringing. This will be discussed and demonstrated by a figure depicting factors of childrearing in Chapter Three. Native children's upbringing is usually free of any parental restraint; hence, complete autonomy exists in contrast to the childrearing practices in the rest of society. Permissiveness sometimes borders on neglect (Rohner, 1964).

Native children also differ in respect to language. The structure, grammar, vocabulary and process of Native languages cannot be paralleled with any other language. The Canadian Gazetter (1968) identifies 10 major Native linguistic groups in Canada. Within those groups there are 54 related languages. No indication is given of the number of different dialects or language variations. In addition, there were no written forms of Native languages when the Europeans came to North America. Most of these oral traditions still exist today. Despite this background, the English language is generally utilized during the psychoeducational assessment of Native children. It is likely that throughout the assessment the Native child experiences various feelings such as fear, intimidation, embarrassment, being out of place, communication difficulties, and the inability to relate to the situation.

A report by the National Indian Brotherhood (1972) stated that before a Native child is thrust into a new and strange environment, he/she needs preparation and orientation. Some characterizations mentioned in this report, which emphasize the Native child's personal adjustment during integration with the white community, include: rejection, inferiority, alienation, hostility, depression, and frustration.

The issue of whether or not assessment batteries measure intelligence or the lack

of intelligence among the Native students has been debated by Chrisjohn and Peters (1986). They point out that Natives perform differently on the WISC-R scales because the tests do not measure intelligence in the "Indian" sense. They justify this by referring to Berry's 1974 and 1981 studies on cultural relativism. They advise that Natives perform well on the performance tests because these relate to tasks which have been fostered and valued in Native society. Kaulback (1984) advises that the Illinois Test of Psycholinguistic Abilities (IPTA) is more a measure of one's receptive and expressive knowledge of the English language rather than one's ability to handle auditory information.

Whyte (1986) stated that intelligence tests do no more than measure the degree of acculturation to Western culture. Chrisjohn and Lanigan (1985) indicated that the WISC-R may indeed measure intelligence in non-Native populations but fail to measure it in Native groups. Schubert and Cropley (1972) declared that the resulting difference in IQ scores between the White and Native students on the WISC-R are due to culture and in the processes of intellectual development. The studies mentioned above confirm Bowd's (1972) views that vocabulary appears to be the prime determinant of grade level. Also, the lack of development of English language skills penalizes a Native child in grade advancement.

Beyond the issues of Native intelligence that pertain to the nature and structural aspects of intelligence, and the issues of the constructs of the tests themselves, and as previously noted, much if not all of the research on the psychoeducational assessment of Native students has been conducted by non-Native psychologists. These psychologists do not know or understand either the languages or the intricacies of Native societies. Yet, they continue to assess Native children, despite the fact that recommendations to the contrary exist in their own standard of practice for psychology.

Inferences or conclusions based on inaccurate information create more problems than any benefits that could be derived from psychoeducational testing. A majority of the research is flawed with overgeneralizations, small sample sizes, use of improper instruments, lack of fundamental psychometric research, and lack of theory as evidenced by West & MacArthur, 1964; Dumont, 1972; Downing, Ollila & Oliver, 1975; Seyfort,

Spreen, Lahmer, 1980; Chrisjohn and Lanigan, 1985; Chrisjohn and Peters, 1986; Common and Frost, 1988; Chrisjohn, 1988.

The nature of learning and assessment in the Native culture has differed from that of the non-Native. Early education of Native children was conducted by elders within their communities. It was based on survival. The form of testing conducted by Native elders of their young community members was not by any means formal, either in the form of written, spatial, verbal or non-verbal scales or subtests. It was, and is still, based on 'hands on experience'. Kaulback (1984) attested that Native children may be handicapped in their ability to succeed in formal schools due to the fact that schools and teaching methods are different from skills learned within the familial contextual referents. As a result, use of standardized assessments may be inappropriate for use with Native students and may indicate lower abilities.

Another difficulty associated with the assessment of Native students is the notion that being culturally and linguistically different is to be culturally deprived or to exhibit discrepancies in growth and development. No matter what terminology is used, a label is a label and it tends to isolate individuals. Turnbull and Schultz (1979) state that labels can have disastrous academic and social implications. The frivolous use of phrases, such as drop-out, as labelling devices embraced by any formal system, suggested Rodrigues (1986), in his exploration of noncriminal deviance, is misplaced and counter-productive. Nuttall, Landurand and Goldman (1984) stated that it is the culturally and linguistically different students who are most affected by the process of standardized testing. They further stated that the label 'mentally retarded' traditionally arrived at through intelligence tests, is a very misused classification with linguistic, cultural, and racial minority students.

The factors which are the most important during the process of testing and evaluation are 1) the tester; 2) the test; 3) the testee. Of these three, the superlative is the testee. The reason is that the bicultural and bilingual nature of the Native student brings a wealth of cultural values, norms, and behavioural interactions which are vastly different from the tester and the test. While the tests are normed on the majority population, for the Native child these tests are improperly standardized and contain item bias (Chrisjohn

& Lanigan, 1985; West & MacArthur, 1964).

In addition, the interpretation by the tester frequently leads to incorrect reasoning as to why the students have low scores. As a result, generalizations made across the board on Native education in respect to biological, physiological, neuro-psychological and psychological characteristics are flawed, especially when information has been obtained from previously diagnosed Native children. Some of these children may have been incorrectly labelled learning disabled and/or developmentally delayed (Chrisjohn and Lanigan, 1985).

The relevance of learning styles and child-rearing practices have not been explored or bridged with Native child psychoeducational assessment or classroom interactions. This connection is very important for a more comprehensive understanding of the educational needs of the Native child.

This present analysis introduces and addresses some of the issues of intelligence testing, learning styles, and attempts to demonstrate that if educators expect to impart change, a more critical aspect in Native education, that of childrearing practices, needs exploration. A review of literature in learning styles, psychoeducational assessment, child-rearing practices and classroom interactions will follow.

There is a dearth of literature on childrearing practices within the Native society. Also, the majority of literature on Native psychoeducational assessment is mainly descriptive in nature and implicit. Furthermore, the dearth of information is compounded by the need for Native educators to contribute toward new writings or to respond to and query articles in various literary works.

This text will review the issue of intellectual assessment and the problems of bias in Chapter 2. In Chapter 3 learning styles and Native childrearing practices will be discussed along with Native culture, and education. The incongruity of tests to learning styles and Native ethics will be covered in Chapter 4. The thesis will conclude with Chapter 5 where implications and recommendations for the assessment ofNative student students are provided.

CHAPTER 2

NATURE OF INTELLIGENCE AND ITS ASSESSMENT

While formal intelligence testing dates back to1905 when Binet and his colleagues produced the Binet-Simon Scale (Anastasi, 1982), even earlier accounts of attempts to measure ability exist. Binet's 1905 scale was developed under a perceived need to separate students into mentally retarded and non-mentally retarded groupings for the purpose of determining who might benefit from schooling.

Galloway (1976) described how even earlier ancient Egyptians were tested on competency of whether or not they could manage their personal affairs by a water jar and a reed. He states that the concepts in the Egyptian test are relative to present-day testing procedures. According to Galloway (1976) performance of tasks are generally measured with formal methods of assessment which are conducted by one person on others. How they perform is used as a basis for making judgements and making decisions about the test-takers various aspects of life (Galloway, 1976).

Sattler (1982) stated that Alfred Binet, the father of formal intelligence testing , formulated the very first definition for intelligence. This contradicts a notion put forth by Galloway (1976), that it was Galton who first defined intelligence and formulated tests to measure it.

Galloway stated that there never has been an agreement as to what is the real definition of intelligence. Sattler (1982) supports him on this view. A clear operational definition for intelligence within the dominant North American society, where it has been most extensively used, has not been readily agreed upon by educators and psychologists. What has been agreed to, according to an Alberta Government (1981) study, are three general points on the nature of intelligence. In general, intelligence is seen as being culturally relative; it is seen as being influenced by factors such as fatigue, motivation and task familiarity; and, intelligence is frequently conceived of as being a fixed

immovable state.

Sattler (1982) stated that intelligence has its roots in general psychology and measurement. Wesman (1968) held that intelligence is a reified hypothetical construct which is subject to error on measurement devices. The existence of intelligence as a substance or as an entity is doubtful due to the fact that only aspects of this construct are capable of measurement (Alberta Government report, 1981). Intelligence is inferred from scores on intelligence tests.

In Sattler's description of Binet's ideas on intelligence, he noted that Binet linked intelligence with perception. This link involved a stage-like perception of the external world giving way to memory storage and then mediation.

Since Binet's time a number of theories have been formulated that attempt to denote the "nature" of intelligence. Sattler's chronicle on the nature of intelligence details various approaches that have been derived by theorists. He described the factor analytic theories of intelligence and its proponents. He mentioned Galton's general theory of intelligence. Galloway (1976) stated that Galton believed that intelligence was a result of one's sensory capabilities and these were inherited.

A number of theories about the nature of intelligence have been postulated by various authors Terman (1921), Spearman (1927), Thorndike (1927), Thurstone (1938), Luria (1961), Vernon (1961), Cattelland Horn (1967), Wesman (1968), Galloway (1976) and Feuerstein (1979).

Luria (1961) exhorted on the notion that intelligence is primarily the ability to process information in abstract terms. As well, Luria asserted that the appropriate verbal skills which constitute intelligence are acquired by children through social interactions with adults. Luria (1961) suggested that assessment of intelligence can best be determined by how well a child can utilize the help which was provided by an adult and to apply that acquired knowledge to a new situation.

Other theorists such as Wesman (1968), have concluded that intelligence is a representation of what has been learned. Feuerstein (1979) also claimed that intelligence tests only provide the examiner with information on what has been previously learned.

Sattler presents eight definitions of intelligence as defined by theorists. Some

definitions include these aspects of intelligence: innate capacity, behaviour, achievement on verbal and non-verbal scales, others relate to phenotypic forms. Galloway (1976) mentioned that others describe intelligence as a general ability to learn, reason, grasp concepts and to work with abstractions. Terman (1921) defined intelligence as the capability to think abstractly.

Another approach that was developed by Thorndike (1927) and Thurstone (1938) is the faculty theory. They asserted that intellect is constituted of independent faculties, such as verbal, mechanical and mathematical faculties. Spearman (1927) applied statistical techniques to test the faculty and general intelligence theories. He developed a two-factor theory of intelligence, incorporating the g (general) and s (specific) factors. With the aid of factor analysis Thurstone (1941) isolated several specific factors referred to as primary mental abilities and developed a test to measure six of them (Biehler, 1974). However, the test was not successful for it seemed to be measuring the g factor (Anastasi, 1968).

A theory which falls in the factor analytic approach has been suggested by Cattell and Horn (1967). The Cattell and Horn theory has two types of intelligence - fluid and crystallized. The fluid type refers to less-verbal and visual performance tasks; whereas, the crystallized relates to learned skills and knowledge that are culturally based. Crystallized intelligence reflects cultural assimilation, being heavily influenced by formal and informal educational factors through the life span. Indeed, crystallized intelligence is argued to develop through fluid intelligence. Sattler (1982) stated that the WISC-R contains both measures of fluid and crystallized intelligence.

During a review of Native psychoeducational assessment, it has been found that the most widely used intelligence test for Native subjects is the WISC-R(Chrisjohn & Lanigan, 1985; Common & Frost, 1988).

NATIVE INTELLIGENCE

While the Binet Scale is noted as the first formal intelligence test an historical

account of Native intelligence by Common and Frost (1988) indicated that the earliest effort to measure Native intelligence was in the mid 1800's by Samuel Morton. Apparently, Morton assumed that the volume of a skull was a direct measure of the intellectual capacity of the brain. Common and Frost stated that Morton deliberately adjusted his data to prove his own perceptions about racial origin and intelligence. They also stated that the assessment of Native intelligence was off to a less than an illustrious start due to the use of a vehicle for the perpetration of bias and prejudice.

A number of authors have conducted research comparing the cranial shapes of Natives to those ofCaucasians (Ross, 1982; McShane, 1983; McShane, 1984; McShane, Risse, & Rubens, 1984). Frost and Common (1988) discount this research as reductionist and simplistic. They also state that to suggest the shape of the head as being related to the complex working of the human brain is to ignore all that the fields of cognitive science and neuropsychology contributed in the past 150 years. This supports the ideas which have been developed by Chrisjohn & Lanigan (1985), Chrisjohn and Peters (1986), Chrisjohn (1988). Schubert and Cropley (1972) stated that the fact that Native children score differently from white children on standard intelligence tests is well known. Similar to the Western society, it is apparent that no definition exists on intelligence as it applies to the Native populace. There has been a fair amount of hypotheses put forth by a number of authors to delineate the various reasons as to why Native students perform the way they do on various psychometric tests purporting to measure intelligence. Among these reasons include: 1) language handicap (Jamieson & Sandiford, 1928; Schubert & Cropley, 1972; St. John & Krichev, 1976; Wilgosh, Mulcahy & Watters, 1986); 2) environmental factors (Jamieson & Sandiford, 1928; Wilson, 1973); 3) brain hemispheric theory (McShane & Plas, 1982, 1984); and 4) blood quantum (Jamieson & Sandiford, 1928).

Chrisjohn and Lanigan (1985) stated that there is a lack of a theory on Native intelligence. This is an interesting point for if there is no theory of Native intelligence then questions arise in regard to the reliability and validity of any intelligence test purported to measure that construct. Chrisjohn and Lanigan contend that a working model depicting Native intellect is required. Secondly, that in a construct-oriented

approach of psychology as suggested by Jackson (1971), on a priori definition describing the psychometric/experimental procedures is necessary to measure the construct. Lastly, statistical analysis of research results which test the theory are necessary. Chrisjohn and Lanigan (1985) further state, that there are no Native-specific or Native-generated models of intelligence but theories and issues are adopted wholesale from non-Native theorists.

Test validity concerns the appropriateness of the inference that can be made on the basis of test results (Salvia/Ysseldyke, 1985). Salvia and Ysseldyke went on to state that one has to define the trait to be measured and then select items to measure it. They also mentioned that a test's validity for various uses is judged on a wide array of information including its reliability and the adequacy of its norms. Numerous authors (Cress, 1974; Dana, 1984; Chrisjohn and Lanigan 1985; Persi & Brunatti, 1987; Common and Frost, 1988) query the use of standardized tests as psychometric devices for Natives when they have been normed with non-Natives.

Chrisjohn and Lanigan (1985) stated that tests like the WISC-R are biased to an undetermined degree against Natives in general and against specific subgroups. However, he has formulated only minor linkages with Native culture, and no linkages with either childrearing practices, or learning styles as to why the conclusions and recommendations derived from the literature do not have a substantive basis.

Specific ways of analyzing profiles of test scores have been developed, particularly for examining the pattern of scores on the WISC-R. Brandt (1984) and, Chrisjohn and Lanigan (1985) advised that one such way of examining the WISC-R profile developed by Bannatyne (1968, 1974) does not apply to Natives as suggested by McShane and Plas (1982, 1988). Matheson (1983), in a factor analytic study of the WISC-R rejected the Bannatyne model for every age with an Inuit group. Chrisjohn and Peters (1986) further stated that Bannatyne's approach for analyzing the WISC and the WISC-R has no empirical basis. The only apparent approach to examining the WISC-R with reliability is the Verbal-Performance discrepancy in Native groups (Kaufman1971; Schubert & Cropley 1972; St. John & Krichev, 1976; Wilgosh, Mulcahy & Watters, 1986).

Emerson (1987) suggests that a promise exists in addressing the apparent

discrepancy between theories of intelligence and cultural issues through the work of individuals such as Feuerstein's Mediated Learning Experience and Cognitive Modifiability Theory and by utilizing the concept of the Zone of Proximal Development described by Vygotsky (1976).

Emerson writes that the three stages put forth by Feuerstein and others, including input, elaboration and output, are analogous to a computer and to an information processing model of intelligence. Feuerstein et al (1979) states that the information processing model as used in his own Learning PotentialAssessment Devise and the Zone of Proximal Development permits an assessment of the child's capacity to learn rather than providing a measure of what the child knows.

Another view of intelligence is that of Sternberg (1984). Frost and Common (1988), in providing an overview of Sternberg's work, identified a number of metacomponents essential to learning. These metacomponents provide a useful basis of thinking about intelligence and may provide a more workable view of intelligence that is less problematic in conceptualizing how individuals learn and what can be done to assist their learning. The metacomponents include:

1. recognizing the existence and nature of a problem;
2. deciding on the processes need to solve the problem;
3. deciding on a strategy into which to combine these processes;
4. deciding on a mental representation on which the processes and strategy will act;
5. allocating processing resources in an efficacious way;
6. monitoring one's place in problem solving
7. being sensitive to the nature and existence of feedback;
8. knowing what to do in response to this feedback;
9. actually acting on the feedback.

Frost and Common (1988) mentioned that Sternberg stated that there are probably no differences across cultures in cognitive processes, strategies, and other components of

what he calls the software of cognitive functioning. They suggested further research be conducted into the components of Native intelligence according to Sternberg's formulation of metacomponents.

The derivation of the concept of intelligence from statistics has become deified according to an Alberta Government report (1981). In a sense, the WISC-R has fallen into this deified state when and where it has been applied to Native students.

Although, having Native people directly involved in conducting and evaluating intelligence testing is fairly recent, the Native experience of psychometric testing is not. The lack of input in the development of education programming for themselves has probably led to diverse complications within and without Native communities. Considering the dearth of literature generated by Native educators it is not surprising that various forms of bias have evolved.

THE PROBLEM OF BIAS

The problems of bias are multifaceted. Wilgosh, Mulcahy and Watters (1986) mentioned three major reasons for the concern of bias, namely, that the United States society evaluates a person's worth in terms of presumed intelligence; secondly, that different racial groups achieve different average intelligence test scores, and thirdly, there is a disproportionate minority student representation in special education classes. Interpretations of the WISC-R scores may lead one to believe that solutions may be found by placing greater emphasis on English. Wilgosh, Mulcahy and Watters (1986) suggested that this will limit the local cultural context with the result that culturally meaningful assessment, as an educational goal, will be of a low priority. They suggested the need for further study on the establishment of culturally meaningful educational priorities. Although, they are referring to the United States, it does not preclude Canada as having a society which evaluates a person's worth by presumed intelligence.

McLoughlin and Lewis (1986) stated that minority students perform poorly on standardized tests due to various reasons. These reasons include lack of experience with testing materials, inadequate adaptation to the situation, and emotional reactions of suspicion or aggression.

Wilgosh, Mulcahy and Watters (1986) quote Ysseldyke and Algozzine, "It is readily apparent that major measurement experts have been unable to agree on a definition of a fair test let alone a test that is fair for members of different groups".

The oral tradition among the Natives has probably led to the inaccurate printing of information as it relates historically. It has only been the last two decades that Native writers have emerged to affect printed materials. The utilization of printed media was never a strong point for dissemination of information within and without the Native society. Another possibility is the reluctance of Natives to release the correct information due to fear of exploitation. These, in fact, have created more problems, for the people publishing the materials are generally non-Native. With today's encounters in Native education, it is enlightening to read materials developed from a Native perspective.

Although Native intelligence has been a debate for the past few decades, there have been no models or theory developed (Chrisjohn, R.D. & Lanigan, C.B., 1985). Another problem probably stems from the lack of Native educational psychologists prior to the 1980's. Three major areas have been identified in literature in which the intelligence tests have been identified to be biased with Native populations. These fall under the categories of cultural bias, sampling bias and examiner bias.

CULTURAL BIAS. In reviewing the literature which relates to the use of the WISC-R as an instrument for psychological assessment, Matheson (1984) found that the majority of published research has been carried out in Arizona on the Navajo and Papago communities. He indicated that this research has discredited the WISC-R as a psychological assessment instrument for children in those communities and schools. The trustworthiness of a test decreases when the test's standardization sample differs substantially from the sample being tested (Oakland, 1980). Test content or item bias had been identified as one of the key factors in cultural bias of the WISC-R (Sandoval, 1979; Seyfort, Spreen & Lahner,1980; Mishra, 1982).

Items of the Verbal Scale of the WISC-R have been found to be problematic for Native Children (Turner & Penfold, 1952; Knowles & Boersma, 1968; Bowd, 1972; Schubert & Cropley, 1972). Mishra (1982) found 19% or 15 items of the 79 of the three selected subtests from the Verbal scale to be biased or more difficult for the Navajo

subjects. In Seyfort's study, she and her colleagues found abrupt changes in the difficulty levels of the majority of the subtests. Wilgosh, Mulcahy and Watters (1986) suggested that Seyfort et al.'s study may have identified lack of internal consistency for many WISC-R subtests. There was an indication of strong discriminatory power in a number of items. The structure of items on a test, whether they be typed, their placement, their language plays a role on how well the students perform on standardized tests (Mirshra,1982).

EXAMINER BIAS. Major bias is also possible when professionals interpret and apply test results. A variety of studies (Ysseldyke, Algozzine, Regan, &McGue, 1981) have reported that professionals tend to use the student's gender, socioeconomic status or physical appearance as basis for placement in special education.

A document produced by the Alberta Government (1981) stated, that due to the lack of consensus on the nature of intelligence, implications exist for the users of intelligence test data. Psychologists have defined specific reasons for utilization of intelligence testing among the dominant society. Among these are: 1) evaluation of student progress: 2) program planning; 3) screening; 4) classification; 5) referrals to other agencies; 6) placement. These reasons differ somewhat within the realms of Native intelligence testing.

A number of researchers (Oakland, 1984; Reschly, 1981; McShane & Plas, 1984) express that the prime reasons for Native testing are 1) high drop out rates; 2) achievement lags; 3) educational failure; 4) academic and behavioural problems. If one critically analyzed the two sets of reasons, both sets can be equally applied to each of the societies in question. However, one needs to wonder about the motivation in utilizing the more negatively worded reasons for testing Native persons. There could be so many reasons why a person drops out of school that are not necessarily based on intelligence. The same goes for achievement lags.

Redden (1981) noted that culturally biased tests have been utilized in the past to infer that Native children are intellectually inferior when in reality their basis of understanding was merely different. Oakland (1980) delineated the conditions before, during and after assessment which may be biased. He cites referral of students by

teachers as academic problems who do not have low academic standing in class but have disturbing behavioural problems.

Some studies (Brandt, 1984; Chrisjohn & Lanigan, 1985; Chrisjohn & Peters, 1986) reported that there have been numerous conjectures, innuendoes, assumptions and overgeneralizations in the literature in relation to intelligence testing of the Natives. McShane and Plas (1982) have labelled as "Indian" a pattern identified by Gutkin in 1979, which is based on Bannatyane's recategorization scheme of the learning disabled. Brandt (1984) indicated this as being falsified by the author's use of cited materials.

Misinterpretation of information on the WISC-R has led to biased conclusions as those reported by Scaldwell, Frame and Cookson (1985). Generalizations have been extended from previously identified learning disabled Native subjects to the overall Native population. One of the studies uses the discrepancy process of one out of seven academic areas for identification of learning disabled Native children.

Persons/examiners who do not comprehend the culture and language of culturally different children do not have the ability to draw out a performance level that reflects the child's underlying competence accurately (McLoughlin and Lewis, 1986). The notion of homogeneity of classroom groups severely limits educational opportunity and upward mobility. Contributions to a self-fulfilling prophecy may be fostered by expectations and may lend rigid curricula and restrict educational change (McLoughlin & Lewis, 1986). A number of researchers (Ross, 1982; McShane & Plas, 1984; Browne, 1990) have concluded that Natives are right-brained. The basis for this stems from Sperry's study of the surgical disconnection of the two hemispheres by cutting the corpus callosum on adults (Buros, 1985). Witt, (in Buros) in his review, affirms that the WISC-R has been bastardized into a test of neurophysiological functioning by those who see it as a perfect instrument for dichotomization of right and left brain performance. The current proponents of the right-brained Native are critiqued by Chrisjohn & Peters, (1986).

McShane & Plas (1984) seem to have left their mark on neuropsychology of the Native and now have embarked on 'factors influencing Indian performances'. Brandt (1984), in a review of their article, found overgeneralizations and avoidance of obvious conclusions on cited literature. A few of the articles reviewed by McShane and Plas

declared that the WISC-R should not be used for interpretation of performance profiles on Native subjects (Seyfort, Spreen, & Lahmer, 1980; Teeter, More, & Peterson, 1982).

One of the major problems associated with the WISC-R is the language appropriateness of the examiner. Many studies (Scaldwell, Frame and Cookson, 1985; Brandt, 1984; Naglieri, 1982; Seyfort, Spreen, & Lahmer, 1980) have related the low Verbal scores as indicators of English language proficiency, not an indication of low intelligence. In reference to perceptual skills, Kaulback (1984) referred to minimal research which indicates that Native students have difficulty in comprehending and conceptualizing through the English language. He provides no citations on this remark.

Nagelieri (1982) makes an analogy of using the English based psychometric tests to Native speaking students with the original (French) Binet being used on English children, then categorized into special education. If English speakers were unable to be tested in the French language then why is it that Native students are being tested in English? After all English is a foreign language for the majority of Native students as previously reported by Burnaby (1984). If we accept Luria's (1961) assumption that the ability to use verbal concepts in a learning situation is a major criterion of intelligence, then "What about Native language verbal regulations? Are Natives rendered to be non-intelligent because they cannot express themselves in English?" One assumes not. This in effect reinforces the notion, which Chrisjohn and Lanigan (1985) exemplified as the need of intelligence theory development with Native perspectives

SAMPLING BIAS. Gay, (1981) defined sampling bias as systematic sampling error. Two major sources of sampling error occur when volunteers are used or when existing groups are utilized. The problem with these is that the samples are not selected from any larger group. There is also no assurance the these samples are representative of the larger group. Also, there were no random sampling of subjects and the sample sizes may be too small to be generalized.

The bulk of the studies reviewed exhibited most if not all of the above. The two following studies are presented to illustrate sampling bias. A study conducted by Scaldwell, Frame, and Cookson (1982) and reviewed by Common & Frost (1988) apparently violated the basic principles of experimental design in sample selection.

Furthermore, the generalized statements made in the report as they relate to Native functioning have no validity (Common & Frost, 1988).

A study by Persi and Brunatti (1987) made similar generalizations. This study is more dangerous than the previous one due to the fact that the sample size consisted of eight Native students who were referred for psychological testing. Caution is elucidated after conclusions and generalizations are made across the board to Native populations. What is interesting is the random sampling of the matched eight from an original referred group of 240 non-Natives.

The question of sampling bias has been raised by a number researchers (Chrisjohn & Lanigan, 1985; Brandt, 1984; Naglieri, 1982). Improper norms along with the use of outdated information or data have been another source of sampling bias. Inference of homogeneity to all Native tribes within North America, while similar to a reference of homogeneity to all Anglo-Saxons, is more serious due to the variety of Native languages.

The most disturbing finding was the lack of fundamental psychometric research and the inclusion of outdated empirical information or data. A 1984 study referred to material which was dated by twenty years. There has been a lot of change in recent years in terms of education in general, but the biggest change occurred within the Native educational systems. In Canada, prior to 1972, there was no input from within the Native communities in the creation, development and maintenance of educational programming (Comeau & Santon, 1990; Penner Report, 1983). Hence, referral to outdated information by McShane & Plas (1984) about Native culture as a means to justify ends is not enough.

IMPLICATIONS OF INTELLIGENCE TESTS ON NATIVE POPULATIONS

In regard to intelligence testing, a number of implications exist for the Native child. Since the most commonly used intelligence test is the WISC-R (Chrisjohn and Lanigan 1985; Frost and Common, 1988) implications emanating from this test should be scrutinized. The Alberta Government (1981) report stated that the WISC-R is a content-based test which assesses intelligence on the basis of language, problem solving

ability and acquired knowledge. The report also claimed that it is a diagnostic device. It is probably during this diagnosis, and because of the nature of the WISC-R, that the implications arose.

LANGUAGE. It was postulated by Sheridan (1991) that schooling contributed to a priority of the legitimacy of literacy. Furthermore, this denies the legitimacy of experience, which is essential for learning. Sheridan stated that writing about the cognitive complexities of oral cultures glosses over and ignores what the alphabet on the page cannot communicate. Burnaby (1984) mentioned the need to maintain Native languages because if they are not preserved or developed, no source exists anywhere other than the Native communities.

Given this belief in maintaining Native languages, the risk is that interpretations of the WISC-R scores may lead one to believe that solutions may be found by placing greater emphasis on English. Wilgosh, Mulcahy and Watters (1986) suggested that this would limit local cultural context and an educational goal would be of low priority. They suggest the need for further study on the establishment of culturally meaningful educational priorities.

LABELLING. Culturally deprived, low verbal, right-brained, drop-out, mentally-retarded are but a few labels that have been put forth to describe Native students (McShane and Plas, 1982; Chrisjohn & Peters, 1986; Chrisjohn and Lanigan, 1985).

Labels are often interpreted incorrectly by students and parents, and are considered inaccurate and humiliating by those who are categorized (MacMillan, 1977). Relative to the inaccuracy of labelling, this statement seems to be wrong according to a document obtained at the 1985 CITEP (Canadian Indian Teacher Education Program) as it applies to the Native student. The Native student, according to this document, accepts labels to be accurate and consequently they destroy their self-esteem. It stated, the social experience of most Native students has been negative. It mentioned that a lack of self-esteem has been created by years of discrimination and institutional racism by the dominant society, and by textbooks which characterize Native people as savages, "second class" citizens and caricatures of Hollywood's Indians. It also stated that a relationship exists between self-concept and school achievement. This document underlines the

difficulties that a Native student experiences when first exposed to university.

The following chapter will examine the learning styles and effects of childrearing practices on intelligence for Native children.

CHAPTER 3

LEARNING STYLES OR
EFFECTS OF CHILDREARING PRACTICES

NATIVE CULTURE

The Collin's dictionary defines culture as "the total of the inherited ideas, beliefs, values and knowledge, which constitute the shared bases of social action". Thomas & Anderson (1982) define culture as "the way of life - the shared, learned behaviour - of a people".

Reference material available for this section is fairly sparse. In a review of the literature, it was found that a void exists for current or contemporary information on Native cultures. Most of the information contained in recent publications is very negative and relates mostly to severe social problems. Also, what has been cited relates to Natives reclaiming the past and incorporating this into a renewed interest in Native culture. The trend of the 1980's for Native literature seemed to have been in constitutional affairs, health, Native foods and treaty rights.

In any society, food is part of the culture. A special report on Micmac hunting in the Atlantic Insight (1989) quotes William Herney. It states, "The moosehunt is more than just a harvest, it's a ritual. Years ago boys and young men wouldn't enter manhood without the hunt". Another food related belief is mentioned in this article. It adjuncts longevity with the drinking of juices from a partridge. Micmac people generally make stews with various wild game. It is the drinking of the liquid from this stew to which reference was made.

Traditionally, there were demarcations in the socialization of Native children. Native women were responsible for the rearing of all children until they reached puberty. The boys were then taken over by the Native men whilst their rites of passage to

manhood were tested.

Whyte (1986) stated, "In many Indian societies youth were lectured on the moral rules and magic, religious, and important beliefs of the group. Rules of conduct, the traditions of the Indian, and exploits of outstanding personalities were all passed on in a rich oral tradition". Loridas (1988) stated that Native children are unique: their frame of reference, life experiences, peer groups, language patterns, organization and value systems may be contrasted to that of non-Native children.

The relationship between traditional Native Indian cultures and contemporary Native Indian cultures is complex. Contemporary Native Indian cultures do not duplicate traditional cultures, but they draw extensively from tradition (More, 1987). In a 1989 article on the value orientation of the Inuit, authors Roberts, Clifton and Wiseman found that Inuit students are members of an unassimilated ethnic community.

Gloria Snively (1990) describes the oral tradition, traditional beliefs, values and ideas as existing among the West coast Natives. One has to recall that their encounter with the European-settler societies are as recent as 70 years in comparison with the East coast Natives of 400 or more years. Larose (1991) reports a similar retention of tradition by stating that a lot of elders still trap among the Northwestern Quebec Algonquin bands.

During the 1970's Native education was viewed as alien to Native culture. In a film entitled "Cold Journey" by the National Film Board of Canada parts of the script refer to the education of a Native person an becoming a "White Man". Historically, it was difficult to envision Native people reaching university, let alone graduating. The best most could achieve was completion of grade school and this still occurs on unspecified isolated reserves (Comeau P. & Santin A., 1990). In Nova Scotia what has been occurring in recent years, is that the Micmac students have been dropping out at the junior high level (DIAND, 1990).

During the 1970's there has been a movement for Native control of education. Redden (1981) refers to this as the devolution of Native education. This term has been used by various government agencies while returning control of programs to the Native people during the 1980's. Among these are health and welfare, family and children's services, and education.

Chrisjohn and Peters (1986) determined that the available non-Native school systems have not served Natives well. Joe Miskokomon, a Grand Chief of the Union of Ontario Indians reported to Comeau and Santin (1990), that "the province sets all the curriculum and Indian people write all the pay cheques and that's about the extent of [our] involvement in education". What he in effect stated is that the Native people are only paying for an educational service and have no say in the content of the curriculum, cultural or otherwise. The Penner Report (1983) states that external control of education of Native children has been destructive of Native culture.

Joe Miskokomon says, "We're not talking about reducing quality of education but enriching it by putting in cultural components that we feel are important, like our language. We are not talking of eliminating the sciences, the math and English. The [Indian] people who are going to compete in the world have to have those things but, at the same time, they shouldn't lose where they've come from. They should have the understanding and the foundation of where they've come from and why they are here."

A point could be made here for justifying the maintaining of IQ tests to test competencies relating to the modern world. The irony here is that the National Indian Brotherhood (1972) recommended the elimination of IQ and standardized tests for Native children. The report advised that these tests do not truly reflect the intelligence of children belonging to minority, ethnic or other cultural backgrounds. This probably goes in hand with Emerson's (1987) recommendation that a Native philosophy of education needs to be identified for cultural reconstruction.

Another point that could be made in the desire to maintain IQ testing, is that science, math and English may need to be tested. The nature of Native English is described by Whyte (1986). Emerson (1987) has developed a Navajo-oriented graphic which illustrates Cognitive-Culture Relationship. It has been noted by Snively (1990) that a Native approach to science exists. It is probably safe to state that Native aspects in math are present. This may in fact justify the need of Native psychologists as envisioned by Chrisjohn and Lanigan(1985).

Although, generalizations are derived to encompass Native societies as a whole, it is hoped that the reader will be prudent in applying these principles as 'possibly relevant'

to the specific Native group not with Native society as a whole. Generalizations made across the board on homogeneity between one Native nation to another are amiss. 2.

LEARNING STYLES. The teaching methodology used within a classroom environment is tenacious at times for any child but more so for the Native child. Native students differ significantly in acculturation and background experience, consequently their social interaction differs within a classroom environment. This difference in classroom interaction has an effect on how and what they learn during a formal educational setting.

Numerous authors (Kaulback, 1984; More, 1984; More, 1987; Ross, 1985; Tamaoka, 1986) have described four major learning styles of Native students; albeit, each author utilized their own terminology. These styles can be categorized as: 1) Listening vs Note-taking; 2) Demonstration vs Instruction; 3) Modelling vs Shaping; 4) Practice vs Theory. The former in each category is said to be preferred by Native students.

The learning style theory for Native students is drawn from various ethnographical sources and from a host of intelligence tests, according to Whyte (1986). Whyte (1986) stated that various studies "...have led researchers to conclude the cognitive style of Indian peoples is perceptual, figural, spacial, and visual". Whyte went on to state, "There is serious controversy over this position...".

Whyte probably relates this to issues raised by Chrisjohn et al., in a number of studies that he and his colleagues have conducted. There seems to be an implicit belief about how low Verbal scores on the WISC-R leads one to believe that Native children have limited cognitive abilities, and can only relate concretely to their environment. The controversial position, that Whyte seems to be referring to, is the deficit model of Native intelligence.

As early as 1930, the family atmosphere, family constellation and the child's outer environment were recognized to have an effect on a child's learning (Adler, 1930).

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2. For an insight on different Native cultures, a suggestion is made to read Dawson (1988), Emerson (1987), Kaulback (1984), Larose (1991), Snively (1990), Whyte (1986), Wyatt.

Cazden and John (1968) indicated that the learning styles utilized by Indian childrenwithin the home differed markedly from those in the classroom. According to More (1976), the study of learning styles emanated from studies on individual differences. In 1976, Berry identified learning style as one of the sources of cultural and individual differences.

Arthur More (1987) defined learning style as the characteristic or usual strategy of acquiring knowledge, skills and understanding by an individual. According to More, learning style includes sensory mode, the physical environment, and internal and external cognitive processes. In effect, it is an holistic approach for it encompasses every aspect of the learning situation.

More's (1987) definition makes it possible to separate preference and effectiveness. More refers to preference as the student's preferred mode of learning or the usual strategies by which a student learns. The ability to learn is affected by the chosen mode and whether it is effective or not. The importance of preference and effectiveness cannot be understated due to the Native child's upbringing. Native childrearing practices such as modelling, non-interference,striving for excellence, conservation/withdrawal reaction and not showing anger were discussed by Dr.Clare Brandt at a Canadian Psychiatric Association section on Native Mental Health (1983). Brandt notes that each Native childrearing practice leaves certain traits which affect schooling.

CHILDREARING PRACTICES. Some research (Philips,1972; Shipman and Shipman, 1985) has eluded to the belief that a relationship exists between Native childrearing practices and the schooling of Native students. However, prior research has not identified the attributes or factors of childrearing practices that are affecting Native child learning outcomes.

Traditionally, education of the Native child was conducted by the elders of the Native communities. The teaching method used was demonstration and the learning style was observation. There were no lectures. This is not to say that verbalization did not occur. Native people have a strong oral tradition and are culturally rich in legends. The

child observed the elders until such time as he/she felt confident enough to master a skill. It was only when the person was confident of achieving excellence that he/she embarked upon performing the task. Within this context, the traditional Native strived for excellence.

The lack of understanding of Native culture often leads to misconceptions and stereotyping as evidenced in Dumont (1972). Dumont stated that during teacher orientation, teachers were informed about the shyness, fear, indifference, stoicism, unwillingness to compete, and withdrawal of Native children. A statement by John (1972) that, "Children whose language is dramatically different from that of their teachers are believed to suffer from deficits of thought as well as communication", is probably erroneous. It would probably be more correct to state that a language barrier exists rather than lack of thought. Native people, after all, do think and communicate in their own language. Even though the Native student may not speak the Native language, the Native American language influences the student's speech and thought patterns (Loridas, 1988). She also stated that grandparents influence the student's speech and thought patterns directly.

Traditionally, the North American Native way of life (lifestyle) was based on total respect for the environment with strong systems of spirituality, judicial, beliefs and education. The traditional Native ideology was buttressed on the following ethical principles: family solidarity, stability, a sense of community and place, egalitarianism, cooperation, non-assertiveness, conflict avoidance, tradition, mutual aid and sharing, non-interference, and stewardship over natural resources which are available to the society [conservation] (Usher, 1981).

The Native ideology of today, in essence, has not departed too far from the traditional ideology. In fact, it weaves in and out of this ideology when the need is required or perceived. This weaving in and out is evidenced in More's (1987) research. More states,"Contemporary Native Indian cultures do not duplicate traditional cultures, but they draw extensively from tradition." Este (1984) dubs this as adaptive culture. This is most evident during the childrearing and socialization practices of the Native family.

One cannot assume that all Natives maintain the same values, beliefs, attitudes, behaviours, characteristics and attributes. One has to be careful about applying generalizations on the ethics and principles presented here for they vary from one Native nation to another (Brandt, 1983). For example, Tamaoka (1986) found a significant difference in learning style among the Cree, Dene and Metis. He concluded that not all Native students share the same preferences in learning style.

The following descriptors of Native child-rearing practices are expansions of principles developed primarily by Brandt (1982). The intention is to illustrate a relationship between learning styles and Native childrearing practices and classroom behaviour.

1. The non-interference ethic in Native childrearing practices originates from voluntary cooperation for group survival. It entails the principle that one Native will not tell another Native what to do. It is considered rude or bad manners to give orders to another person. Children have equal personage and hence have complete autonomy.

2. The anger not shown ethic taught children at a very early age never to display angry behaviour. The principle is that one is never sure to whom this anger is demonstrated, therefore; it was suppressed to ensure survival of the group. It originates from aboriginal society when shamans and witches were predominant. Itwas not possible to tell a good shaman/witch from a bad one. Anger was something which provoked them and threatened the survival of the group.

3. The concept of time ethic for a Native person is that time must be used and enjoyed. It originates from the Native seasonal cycles of the sun and the moon, also from the migrating birds and animals. The principle entails doing things when the time is right. A Native person does not leave something unfinished to embark on other project. A Native child does not have a predesignated bed-time but goes to sleep when he/she is ready. He may fall asleep in the midst of an activity and the parent will either cover him/her up or take her/him up to bed.

4. The generosity/sharing/cooperation ethic is such that all the assets and resources of a community or a family are enjoyed by all. To take more than one's fair share from the environment than he/she actually needs is considered greedy and wasteful. The principle is survival of the whole group over individual prosperity and success. A Native child learns early in life to share in all aspects of life.

5. The gratitude ethic among the Native people is rarely shown. A Native child is not rewarded for doing a task that he is expected to do and expected to do it well. The

principle is doing a good job has its own intrinsic reward and expressing gratitude is superfluous. Within the Native society one does not seek praise but eventually attains it intrinsically when a person becomes an elder within his/her community and is then regarded as a wise and venerable person. This is the greatest reward of all.

6. The protocol ethic encompasses the unstated prescribed rules and regulations of social behaviour among Native groups and they vary from tribe to tribe and also are adapted locally. A Native child learns early in life how to conduct himself\herself within their own community in regard to matters of social conduct. The underlying principle is the unwritten and non-articulated code of behaviour and ways of doing things among the Native people.

7. Modelling ethic is the traditional way of teaching in Native communities. It has been the only learning style for Native children for centuries. The children watch, observe and listen to the elders as they carry on with their tasks. This may occur for days, weeks, months or years depending on the task being performed before a child is competent to do the task himself.

8. The conservation/withdrawal reaction ethic among Natives constitutes both the physical and psychic components in terms of stress reduction. The principle is to conserve energy or withdraw and recoup until one is able to respond correctly to the stress. Native people react to stress by becoming more quiet by slowing down physically or emotionally; or, by removing themselves from stressful situations. This is an inurinsic withdrawal reaction which has been equated to hibernation. Native children have learned to utilize this technique to overcome stress within their communities and in school.

9. The ethic of striving for excellence emanates from the various sectors of the Native society. The principle is that a Native child does not embark on a new task until certain that when complete, it is completed with perfection. This is particularly true in regard to moving on and performing a task in the modeling ethic.

10. Dependence/Independence ethic relates to group dependence and individual independence. A Native child learns to make his/her own decisions at a very early age on whether or not to partake in certain community activities. The dependence factor relates to the individual's dependence upon the group and the group's survival on the individual.

11. The consensus ethic relates to group decision-making. It demands time and one individual cannot impose his/her wishes upon another. The principle is that all things are discussed until such time that everyone is in agreement. A Native child learns early in life the inherent value of how consensus eliminates cause for destructive intra-tribal quarrels.

12. The egalitarian ethic considers each and every Native individual to be equal in all regards. There are no designated male/female roles. It's principle comes from the ethic of sharing for group survival. The necessities of a group's survival require more than the

fundamental sharing of resources. Work involved in the preparation of these resources is also shared across the gender. Native children learn early in life to contribute within the work process.

13. The non-competitiveness/conflict avoidance ethic repressed Native intragroup rivalry that could prove disastrous for a small group. Intragroup competitiveness or conflict would run counter to the non-interference ethic and the generosity/sharing cooperative ethic. In order for the Native society to function, the freedom of the individual is second to the survival of the group. That is the underlying principle.

CLASSROOM IMPLICATIONS OF LEARNING STYLES AND CHILD-REARING PRACTICES

Kaulback (1984) noted an element of universality in learning among all children to be that of observation and imitation. This technique of learning varies in Native childrearing practices. In comparison with Western society, there is a strong non-verbal interaction in modelling within the Native societies.

Kroeber (1970) stated that informal learning is non-verbal among Native societies, the work of Kroeber was later confirmed by Kaulback (1984). This non-verbal interaction is probably an attribute which has led to incorrect conclusions about Native students being shy, passive, quiet, and withdrawn. Silence within the school is an indicator of the interaction between the Native student and the non-Native teacher. It is a form of student control. The conservation/withdrawal reaction can virtually shut down further learning in a classroom. Non-verbal communication through gestures and silent cues among the students could form a consensus as to what will happen next (Dumont, 1972).

Research conducted by Scollon and Scollon (1979) found that Native children reserve questioning for school only. The protocol ethic probably plays a major role here. The Native child varies his/her social interaction for either the school or the community environment. Philips (1972) explains this as the collapse of Indian acquisition of knowledge and demonstration of knowledge. In others words, the concept of modelling was not completely explored within the Native context; that is, the Native child was notable to strive for excellence or have the opportunity to practice since communication

was verbal rather than non-verbal.

Havinghurst (1970) and Kleinfeld (1970) view the mismatch between learning style and instruction as a prime cause for Native children's school failure. Kleinfeld (1970) found that Inuit children possess unusual perceptual strengths which are seldom utilized or recognized by school systems. Is it the teaching method or child's cultural upbringing which are at play?

If the Native child is not ready to learn, no matter what teaching method the teacher utilizes it would be of no avail. The concept of time and the Native child's autonomous upbringing (non-interference ethic) will affect the learning situation.

Brown (1979) and LeBrasseur & Freark (1982) both reported cooperation and non-competitiveness in their studies. In this context, various Native ethics and principles are in operation. They include non-interference, the generosity group, conservation/withdrawal-reaction, striving for excellence, and conflict avoidance. It is difficult for Native students to be competitive when Native children are taught to help one another by sharing and cooperating while striving for excellence. Schools today are more student-centered and perhaps more cooperation exists or will exist should this trend continue in North American culture. This may have a positive effect on Native Education.

Brown (1979), also noted strong peer pressure. This stems from both the dependence-independence ethic and the consensus ethic of maintaining group solidarity. One may also note that there is no gender division here. Pressure will come to bear on both male and female alike. Group conformity will always be maintained. The egalitarian [belief in equality for humans] ethic does not neglect anyone that needs to be scrutinized. Shaming and ostracism often occur to maintain conformity.

Of the various class implications noted here, the modelling concept is likely to be the most impractical due to the length of time it takes to learn in this mode. Larose (1991) illustrates this when she shows the disparity in years in the acquisition of skills in a bush-oriented Native society [residing in the wilderness areas].

The conservation/withdrawal reaction [psychological apostasy] ethic is just as impractical as modelling, because it is too easy to abdicate responsibility. When a

student withdraws psychologically from the classroom, how is she/he expected to learn?

Brandt (1983) questioned the value of these practices in the rearing of Native children. He further questioned whether this is a mere abdication of parental responsibility as opposed to Native rules of conduct and ethics. He stated that these factors impart confusion and frustration for Native youngsters who are expected to straddle two cultures, the Native and White.

The following figure will attempt to identify and expand upon some of the issues encountered by educators with the Native student. Figure 3-1 depicts Native child-rearing practices and portrays personality-like development model. Personality is developed during the interaction of the organism with its physical, social and psychological environments (Mussen, et al 1963). A Native child who is thought to be autonomous, self-determined but group oriented emanates from this model.

Illustrated in Figure 3-1 are factors which influence a Native child during childrearing and his/her interaction with peripheral environments. Dotted lines represent constant free-flowing interaction of influencing factors between the child and the external environments. The solid line of the external circle exemplifies the totality of an enclosed environment. It is postulated that this figure could be taken and applied to any regional, provincial, national or global setting where Native societies exist. Areas associated in this concept of Native childrearing include the following:

I. The inner circle depicts a typical Native child and it is intended to epitomize an introspective component of some factors which may affect a Native child as he/she matures to adulthood from within their own psyche. Within this component, the various aspects may include the following:

A. The language used by the child;

B. The nature of communication, both verbal and non-verbal between the child and significant others;

C. The distinctive Native culture of the child;

D. The role of significant others.

Influencing Factors in Native Child-Rearing
Figure 3-1

II. The second circle is comprised of the 13 ethics of Native childrearing practices. Depending in which Native cultural milieu a Native child exists, be it Cree or Micmac, not necessarily all or any set number of these ethics may be present. Brant (1982) stated that variations exist under specified conditions within the Native tribes. For example, Brant (1982) pointed out the divergence of the protocol ethic among a number of Tribes such as, the Micmac, Cree and Mohawk. Some dimensions of Native cultural influences may include the following:

A. Identification with a particular Native populace;

B. The cultural traits (includes beliefs, actions and tools specific to own Native population);

C. Culture complexes (these involve interrelations of traits with beliefs, actions and tools);

D. Culture patterns (these are combinations of culture complexes which relate to such aspects as family life, education and religion).

III. The outer circle characterizes the interactions and orientations of the Native child toward others. These others may reside within the same community as the Native child, or might emanate from other locales or regions. A possibility of sequencing outwardly from the Native community exists depending upon how the socialization process is utilized by the Native child's significant others. A number of features which may be evident within the child's Native community may include the following:

A. Description of community members, extended family members, parents (e.g. education, economic status, childhood experiences);

B. Nature of relationships with non-Native communities (e.g. educators, doctors, school administrators);

C. Type of neighbourhood including economic and educational means;

D. Patterns of communications and language within the home and

community;

E. Language of resource materials in the home and community.

IV. Orientations and interactions within the non-Native community environment may differ vastly from the Native community depending on the following:

A. Perception of Natives as a whole;
B. Language and communicative patterns toward the Native;
C. Availability and type of goods and services for Native access.

V. The interaction and orientation patterns within the school environment will most likely diverge either with great separation from the other environments experienced by the Native child or there may be extensive intermingling of the community and school.This separation or intermingling would probably be dependent upon where the school is located, on or off reserve, along with the type of personnel, Native or non-Native. Some of the elements may contain the following:

A. Teacher's and administration's relationship to the Native community and especially toward the Native child;

B. Patterns of school enrollment which include attendance, distance travelled, number of years in school, early school leavings;

C. School's perception and accommodation of Native students including such aspects as percentage in school, number of Native personnel, language programs in school, curriculum.

VI. The church environment could affect the Native child in an almost similar fashion as the school. This effect would probably be dependent upon the location of the church and participation practices of particular churches. The following factors may influence the types of interactions and orientations of the Native child:

A. Relationship with Native community (whether within or outside Native community);

B. The perception of Natives by church members;

C. Interaction with church members (language and communication styles).

VII. The work-place environment may not affect the Native child until he/she has matured to adulthood. A possibility exists that within some Native communities due to isolation that interaction and orientation may not occur within a work-place environment. Also, thepossibility exists where the Native child may be exposed to this environment at an early age. The quality and quantity of orientations and interactions may probably be dependent upon the following conditions:

A. Description of working environment (education of Native and co-workers, socio-economic status, location, language, patterns of communications, etc.);

B. Perception of Natives if outside Native community;

C. Nature of relationships and interactions with fellow workers.

The Native child's interactions with the various environments are important components for effective classroom management. Dr. Clare Brant (1983) stated that if it were possible to form a link between what happens to those Native people who run into difficulty during adolescence and how they were raised, there may be a cause and effect relationship.

In consideration of items I, II, and II; it can be postulated that children growing up in families where little or no English is spoken will produce children's cognitive abilities based on their first language. It is also postulated that interactions in Items IV, V, VI and VII would be greatly affected by this lack of English or language diversification which has been compounded with the absence of reading materials.

The National Indian Brotherhood's (1972) philosophy of education relates to pride in one's self, understanding one's fellow person and living in harmony with nature. Accompanying this philosophy is a statement of values. It states, "We want education to provide the setting in which our children can develop the fundamental attitudes and values which have an honoured place in Indian tradition and culture. The values which we want to pass on to our children, values which make our people a great race, are not written in any book. They are found in our history, in our legends and in the culture".

Two factors that are related to the failure of the educational system which were identified by The Honourable Jean Chretien (1972) in his address to the Council of Ministers of Education were: 1) integration and, 2) curriculum. He stated that integration, interpreted as a unilateral change, is unacceptable to the Native people. He further stated:

> "If it is of the whitewash variety, it is one of the factors which accounts for poor achievement. The school can serve no purpose in the child's world. Rather it alienates him from his own people. When this alienation becomes intolerable, the child leaves school."

In relation to the curriculum, he states:

> "Another factor in failure can be found in the curriculum. In the past years there has been very little recognition of the importance of cultural heritage in the learning process. This was largely due to lack of scientific information. Children, nevertheless, had to endure a cookie-cutter education from well-intended teachers, who were determined to turn out functional and identical Canadians. Today we have the benefit of research, and we know that value differences, language differences and cultural differences - all make a difference in the learning habits and goals of children of native Canadian descent. We know now that it is desirable to foster these differences and to create a classroom climate in which the unique potential in each child will have the chance to emerge and develop."

This chapter and the previous chapters have discussed a number of issues and problems associated with the various aspects of psychometric evaluation and education of Native students. The following chapter will formulate incongruencies as they relate to the previously described issues and problems.

CHAPTER 4

INCONGRUENCIES OF PSYCHOMETRIC TESTING WITH LEARNING STYLES AND ETHICS

Quite a number of articles have been published which relate to Native intelligence. According to Chrisjohn [a Mohawk psychologist] and Lanigan (1985) a fair amount of these articles do not have an empirical basis. They raise a number of questions in regard to the WISC-R and query the conclusions and recommendations which appear in the literature as they pertain to Native intelligence. Chrisjohn and Lanigan (1985) stated,"Despite this interest, it is our opinion that the research extant reveals little, if anything, about intelligence in Indians." No major links have been formulated by Chrisjohn et al. between child rearing/practices or learning styles and their queries.

This chapter will examine linkages in the incongruency of psychometric testing as represented through the WISC-R as an intelligence construct for Native students. Rodrigues (1986) pointed out that expectations and requirements of the formal educational system may be incompatible with some cultural preferences. There are quite a number of incongruencies. Some of these include the lack of Native identity, language, traditions, psychology, culture, history and the lack of drawing of test items from the world of the Native child. Among these include learning styles, childrearing practices, traditional beliefs, values, and ideas which have been taught to the Native child through their parents, grandparents and other members of the extended family. Discussion will focus on childrearing practices and learning styles.

The most paramount for conflict of the 13 ethical principles presented and described in Chapter 3 with intelligence testing are: the concept of time, modelling, conservation/withdrawal reaction, and dependence/independence ethics. A string of scenerios are utilized to demonstrate what could transpire within a classroom environment when these ethics come in conflict.

When the concept of time is considered within the Native society, it is considered in relation to when one is ready to attend to a task. The commencement of a task is embarked upon only when the person is ready. This conflict most likely occurs within the school system when testing times are designated by non-Native personnel who are unfamiliar with Native concept of time. The resultant could be either the conservation/ withdrawal reaction or the dependence/independence ethics. The student may avoid the testing situation altogether by deciding to exercise his/her independence for they may feel compelled to do something that they are not ready to do. Another possibility that might occur is that the student might psychologically withdraw from the situation, whereby the products of testing will not reflect his/her true potential.

The modelling ethic could be incongruent in a number of ways. It could be incongruent when the educator mistakenly takes the Native student's quietness while he/she is watching, observing, and listening as being shy, non-verbal, or stoicism. Furthermore, within the modelling concept there will be a reservation of questioning due to the Native child reverence of the elders.

In terms of the conflict between learning styles and test-taking, the Native child does not have an opportunity to strive for excellence because the opportunity to practice is lacking. McLoughlin andLewis (1986) identified the latter as a condition of low achievement in testing. Further incongruence is exhibited in the mode of communication. Not only is the predominant use of the English language a conflict but nonverbal forms of communication such as silence are not considered. Furthermore, incongruency exists with the lack of consideration by school systems on perceptual strengths of Native students, their cooperation and non-competitiveness within a classroom environment.

A number of authors (Kaulback, 1984; Larose 1991; Pepper & Henry, 1986) contend that Native learning styles emanate from childrearing. Extended members ofthe family such as grandparents, uncles, and aunts have a paramount role in childrearing within the Native society. George and Bernice Desnomie (1982) described Native childrearing as a community event, community problem, or a community involvement They advised that traditionally, everybody had a hand in everybody's children (Canadian Psychiatric Assn. 1982 proceedings). This is still occurring in Native societies today, but

in varying degrees depending on location - be it rural, urban or total isolation from Western society. It is likely the belief that this predisposes a Native child's cultural-cognitive framework which is incongruent not only to classroom learning, but with psychometric testing. A report from the 1985 CITEP conference states that cultural identity is perhaps the most important correlate to bring about a positive self-concept in the Native student.

In the socialization process of any human child the parents are the primary catalysts in child development (Papalia, D.E. and Olds, S. W.; 1978). Papalia and Olds relate childrearing practices to personality development. They declare that traits such as aggression, passivity, dependence and independence are molded by the certain ways parents deal with their children. McShane's (1986) review of literature on Ojibwa adult-child interactions cites numerous studies on the theories of personality development. He cites Boggs (1954, 1956) who in turn uses James' (1954) approach on personality development to postulate that personality formation is determined by the culture of a group as it is presented to the child through group agents, especially parents and other family members. Cooley (1977) stated that culture is generally defined as the traditions, customs, and values of a given group of people. Traits, habits, and personality types are developed by the culture.

Implications for testing lie in whether the child is ready or prepared to be tested. Oftentimes, it is the school system which determines, by referral, when the child should be tested. The testing, particularly intelligence testing, isolates an individual child from his peer group due to assessment procedures. Consequently, the Native child would probably not do well for various reasons as suggested by McLoughlin and Lewis (1986).

The ultimate implications for testing may lie in the individualized nature of psychoeducational testing. Also, the child who is autonomous and self-determined will resist compliance and may resort to the safety feature of silence. Coupled with the conservation/withdrawal reaction the child could move into an intrinsic mode, that is the Native child's psyche will be the only factor that would be operational. He/she will completely ignore any external environments and completely withdraw psychologically. This in effect may shut off further learning or testing until the child is ready to continue.

In Dumont's (1972) study on the language of silence he found that silence was a retreat from the word with the intention of severing communication. It also served as a strategy in a network of student defense which was required in dealing with conflicts emanating from cultural differences. Dumont(1972) describes this use of silence as: "It is as total a breakdown of education as can take place without the school's closing".

While a Native child undergoes all the physical, psychological, perceptual, and motor developments as any other human child, the Native child draws on a fund of knowledge that is very different from children of European descent. It is this difference that imparts on the measurement of intellectual function in the Native child. The following is an example of this difference.

Gloria Snively (1990) corroborates that there is a difference between traditional Native beliefs, cultural values and Western scientific views of science. She taps into a repository of rare information about the inner world of Native beliefs and spirituality. This is a rarity for Native people generally do not allow such close personal interaction with a non-Native.

Larose (1991) mentions that there might be different interactional patterns valued at school. She discusses how a formal school transmission of knowledge to a bush-oriented society is inappropriate. The determination by a child of whether ice on a lake is safe by trial and error would be dangerous, labourious and a potentially harmful method of learning. The WISC-R operates on a system of trial and error. This trial and error method is incongruent with testing of ice conditions or any other aspects of life in a bush-oriented society.

Larose (1990) in her description of school, social behaviour and traditional enculturative patterns acknowledges that there might be interactional patterns valued at school which are scientifically based. According to her, a problem lies with the data for it is restrictive and no long-term follow-up studies were conducted. She stated that the same problem lies with the reference to a number of studies conducted during the decades of the 50's through the 70's to specific visuospatial abilities and cognitive patterns. She contended that these abilities are related to economic survival as hunters and hunter-gatherers. Larose further stated, "Such specific abilities must have been

developed and reinforced through early childrearing practices".

Larose was in effect stating that visuospatial abilities and cognitive patterns no longer apply due to cultural change. Hence, incongruency exists with the visuospatial and cognitive patterns with Natives who depend on the fruits of nature through hunting, fishing, and trapping. "Children from isolated Native settlements are forced to learn new cultural content as well as oral language and reading skills when they encounter stories that include city transportation, public parks and so on" (Barnaby, 1984).

During a review of the WISC-R manual (Wechsler, 1974), a number of points stated by Wechsler are problems for not only the Native student being tested but for the examiner as well. Some of these points include the structured delivery of the WISC-R, its time constraints, absence of the parent in testing situation, recording of a 0 score if child does not respond within an appropriate interval, and the verbal responses [in English] required for Similarities, Vocabulary, and Comprehension. These are all part of the standardization that enable normative comparisons. The problem is not only that these values are inappropriate to the Native culture, but also that the standards are established so as to make comparisons not with the Native community, but to non-Native society.

They are problematic not only due to the need for optimal communication but by the subjective, not objective, scoring rules for the examiner's judgement.

George Guilmet's (1976) review of literature cites two perspectives - learning style and interference theories as issues of communication within a classroom setting. Wyatt (1978) and Whyte (1986) describe learning style theory by contrasting how the Native students behave in school and at home. Whyte claims that interference theorists argue that Native students are quiet due to the structure of the classroom situation whereby the Native students cannot display their existing verbal competence. Supposedly, one can assume that this relates to the predominant use of the English language in classrooms. Secondly, Native children have been socialized in participant structure that encourages autonomy and self-determination as demonstrated by Figure 3-1. The implications for psychoeducational assessment for the Native child are when constraints are imposed upon the person which are contrary to his/her self-concept and

self-esteem. This universal psychological correlation has tremendous implications for developments in Native education (CITEPReport, 1985). This report further states that cross-cultural studies on self-concept indicate that regardless of race or nationality, children who affirmed more positive self-concepts achieved higher academic standing.

In addition to the points mentioned above, an interesting confound was identified to have been introduced during the standardization of the WISC-R scale. During the standardization procedure Weschler characterized Puerto Rican and Chicanos as white or non-white by physical characteristics. He in effect is saying 'blond haired and blue-eyed Puerto Rican andChicanos' are white.

There are a vast number of Native North Americans that are blond and blue-eyed. Does this imply that they are White? This concept was debated in the letters to the editor of the Micmac News after the Canadian Indian Act was amended in 1985 (Micmac News, 1985). These blue-eyed and blond haired Natives proved that they were at times more Native than the Natives with the proper physical characteristics. The majority of these blue-eye blonds were fluent in the Native tongue; whereas, those with the proper physical attributes did not understand the Micmac language.

Three points within Wechler's rationale of theWISC-R need deliberation.

1) "Intelligence is the overall capacity of an individual to understand and cope with the world around him." ..."One can infer an individual's intelligence from how he thinks, talks, moves and almost from any of the many ways he reacts to stimuli of one kind or another." (p. 5)

The Native child's physical and psyche world differs markedly from a child of the dominant society upon delivery at birth. Consequently, in order to comply with the above quoted statement in the WISC-R manual, items need to be relevant to the world of the Native child. It has been demonstrated by various authors how the WISC-R could be accommodating for the Canadian child. Why not do the same for the Native child? Figure 3-1 presents the various agents which play a role in molding a Native child's personality, character, and how they interact with the Native as well as the non-Native

societies.

The child is the core and the broken lines and circles depict the infusion of or influence by the ethics which form interrelationships between the child and the different environments. The different environments of the Native community, the non-Native community, school, church and work place interact with the Native child differently. They are separate and apart from the child's psyche. Within the Native community the behaviour of the child is independent and in the child's control. The Native child has no control outside the Native community; furthermore, he/she is in conflict within the environments of church, school, workplace and the non-Native community. A quote here by Purkey (1970) cannot overstate the above.

> "The world of the self may appear to the outsider to be subjective and hypothetical, but to the experiencing individual, it has the feeling of absolute reality."

Due to the nature of the Native child's inner and outer worlds of existence, it would most likely be very difficult, if not impossible, to conduct formative testing let alone intelligence testing without having an examiner who has intricate knowledge of Native societies. He/she, in effect, would have to be Native but the instrument would still be incongruent. Take for example the following:

A recent study (Snively, G; 1990) has demonstrated that there is a definite Native spiritual orientation to the seashore within the context of science. The spiritual interaction of Mother Earth and Father Sky is unique within the Native Societies. There is an ecosystem relationship between the Native human with nature. Each Native society has their own special ways, metaphors, and oral traditions that are utilized to convey mores, values, beliefs and attitudes to theNative child (McShane, 1986; Seton, n.d.; Whyte, note 11986).

2) "...communicate meaningfully with the examiner." (p. 5).

Native students will have major difficulty in communicating meaningfully with the examiner when the principal language is English or when the English dialect varies

immensely. Leap (1982) describes Native English as having phonemic patterning and phonological constraints, grammatical rules, word formation, and sentence formation processes as being indicative of the community's traditional Native language. Native students who do not and cannot communicate meaningfully with the examiner will naturally perform lower on the Verbal Scale. Penfold and Turner (1952) stated that the verbal factor in intelligence tests handicaps the Native children. Wilgosh, Mulcahy & Watters (1986) found that the Verbal and Full Scale norms for the WISC-R do result in misclassification of Inuit children as "retarded". The results of their study support the notion that a major factor in misclassification of vast numbers of the sample by Wechsler's norms is due to lack of English comprehension. Support for this is found in Meuller et al.'s and St. John & Krichev's (1976) study.

In 1980, more than half of Native peoples lived in isolated 'Native only' communities (DIANAD, 1980). Barbara Burnaby's article in Networks (1984) advises that teaching English as a foreign language is more appropriate than teaching English as a second language in an isolated Native community. She noted that native children unlike many immigrants who live in urban and multicultural settings will not hear either of the official Canadian languages very often.

Native students who view and hear the test items in English will visualize or conceptualize in their language then try to articulate in English for an answer. During the translation process the Native child will have difficulty with semantics. Whyte (1986) advised that the information noted on language and language learning has some powerful implications. The notion that the problem does not lie in the students, but that most research focuses on the search for incapacities or deficiencies is brought forward by Whyte. What one gathers from this is that we as teachers, examiners and the like need to redirect academic research toward the strengths of the Native students and away from their weaknesses.

3) "Of equal importance is the examiner's awareness of the degree to which a subject's responses may be influenced or conditioned by his cultural and socioeconomic background" (p. 7).

It has been demonstrated by a number of authors (Chrisjohn, 1985; Emerson, 1987; Kaulback 1984; Whyte,1986) that there has been a lack of the examiner's awareness of the amount of influence that Native culture and socioeconomic background have on the Native child's response to the items of the WISC-R. Whyte (1986) contends that intelligence tests do nothing more than measure the amplitude of acculturation into Western cultural knowledge and western cultural formality of imparting knowledge.

The imparting of knowledge to the Native students has been associated with theories which have been derived from various psychometric tests. The literature has demonstrated that incongruencies exist between learning styles and psychometric testing. A number of articles (Wyatt, 1978; Kaulback 1984; Whyte, 1986; Emerson, 1987) also mention the incongruency between learning styles and instructional styles of teachers, both Native and non-Native alike. Larose (1990) stated that, "if there are any behavioural learning styles related to specific Native enculturative patterns, they vary at the individual and group level". One has to be careful in the blanket application of specific learnings styles as being appropriate to Native students so that stereotyping does not occur.

Knowles and Boersma (1968) justified attrition to the lack of development of symbolic thought which is necessary for school tasks. There is inherent danger when statements are made that relate to Natives as having no symbolic thought. Kolers (1968) indicated that a bilingual person in fact uses two distinct symbols. Vocate (1984) states that it is not sensible to compare results of bilingual students with speakers of exclusively one language.

This chapter has reported incongruencies as they relate between psychometric testing and Native culture. The use of the term Native culture entails all aspects within the culture including learning styles, child-rearing practices, language, ethics and principles, and more. The next chapter will focus on conclusions and recommendations which have been derived from this and previous chapters.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

This thesis has addressed some of the issues about the education and assessment of Native children. The relationship between intelligence testing and the problem of bias were elaborated. The incongruency of Native learning styles and childrearing practices as it pertains to intelligence testing and its implications within a classroom environment were formulated. A model representing factors of influence in Native childrearing was developed. The incompatibility of psychometric testing was addressed in terms of Native cultural components such as language, Native ethics. A brief account of the nature of intelligence was discussed and its significance to the Native society addressed. The following conclusions and recommendations were derived from the literature.

The most obvious conclusion that could be made probably relates to the use of the WISC-R. It has been demonstrated that it's main function seems to lie in the field of intelligence testing and in separation of normal and mentally handicapped children. It is then maintained that it not be used solely to assess intelligence of Native students. It most certainly should be used with caution with Native students for it is incongruent with most aspects of Native life as demonstrated in Figure 3-1.

In terms of what has been said in the literature about Native intelligence, learning styles, and childrearing practices, it is disheartening that many researchers still impart erroneous conclusions. For example, as early as 1952 a study by Turner and Penfold identified environmental factors such as language, socio-economic conditions, traditional attitudes and other cultural characteristics to have an effect on scholastic aptitude. Instead of taking impetus from this study and other studies like it, the majority of literature has overlooked the importance of these suggestions. While numerous studies such as Frost and Common (1988) have proven this to be a fact, the bulk of research has omitted or circumvented these issues.

A comment, by Cooley (1977), is worth repeating, "Knowledge of particular values is important because expectations for performance in a bicultural classroom requires Indian children to adapt to cultural and education references that do not coincide with their own". A number of psychometric batteries including the WISC-R fall within this frame of reference.

Given that the WISC-R is the most widely utilized test for assessing intelligence within North America and given the evidence to indicate the limitations of the WISC-R for use with Native children, precautions should be taken on placement decisions based on the Verbal score which is 20 or 30 points below the White child. Bilingualism and information processing need to be extensively deliberated prior to designating a Native child as mentally deficient, learning disabled, right/left brained, gifted, normal or average.

Frost and Common (1986) suggest that before the WISC-R or any other intelligence test, normed on the dominant society, can be employed with confidence in testing Natives, cognitive processing must be demonstrated to be same as, or equal to, those of the White society. Wilgosh, Mulcahy and Watters (1986) supported this view. These writers view their suggestion of renorming of tests as being problematic. They stress a need for longitudinal research on information-processing strategies.

RECOMMENDATIONS RELATED TO PSYCHOEDUCATIONAL TESTING:

That a data base on Native children be developed to explore feelings such as fear, intimidation, embarrassment, being out of place, communication difficulties, and the inability to relate to the testing situation be established by interviewing a number of Native students.

That research be conducted on Native intelligence for definition into metacomponents as suggested by Sternberg (1984) or Feuerstein.

That when adequate information is obtained on the nature of intelligence among Natives, a decision be made as to which test/tests are the most appropriate or what tests need to be developed.

That the most logical course of action would be to construct a test of intelligence for use with Natives that would be valid, reliable and has predictive ability for real life

achievement of the individuals within the Native culture.

That abandoning intellectual assessment for Natives is most appealing considering the overwhelming array of erroneous conclusions that have been formed.

That the WISC-R in its present form and with its present standardization be withdrawn as an instrument in measuring Native intelligence for it is incongruent to Native life and leads to misclassification.

That a comprehensive search be undertaken in regard to bilingualism instead of concentrating on remedial action to overcome deficiencies.

That the assumption that Native students are disadvantaged or have deficits be discarded and that differences be celebrated as unique opportunities.

That assessors depart from predetermined mind-set (self-fulfilling prophecy) when conducting assessments. That an alternate way of further study of Native intelligence testing resulting in a more comprehensive approach be developed.

GENERAL RECOMMENDATIONS:

That the First Nations's strategy of placing education into culture instead of placing culture into education be implemented.

That learning be associated with spiritual, physical, and emotional growth, as well as academic growth.

That traditional First Nations teaching and learning strategies be considered as part of Western education, especially where Native student populations warrant.

That curriculum and programs should not be oriented to abolish cultural beliefs, values, experiences, childrearing practices or customs, but they should build on the positive elements of the Native child's background and experience.

That counselors abandon the policy of advising Native students toward vocational and non-academic subjects.

That a study be conducted to explore the nature, extent and influence of residual traditional Native child childrearing practices on schooling.

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