

Yatta Kanu
University of Manitoba

In Their Own Voices: First Nations Students Identify Some Cultural Mediators of Their Learning in the Formal School System

Theories of cognition argue that children develop thinking, communication, learning, and motivational styles consistent with the culture into which they are socialized. Cultural socialization, therefore, influences how students learn, particularly how students mediate, negotiate, and respond to curriculum materials, instructional strategies, learning tasks, and communication patterns in the classroom. But what specific aspects of culture influence the learning of a particular group of students? The author set out to answer this question in relation to First Nations students by conducting research among First Nations students in a Winnipeg high school. Five culturally relevant themes were identified that provide insights into the development of appropriate instruction for preservice teachers for the enhancement of cross-cultural communication, the design and implementation of assessment strategies, and the creation of effective instructional materials. These are traditional Aboriginal approaches to learning, patterns of oral interaction, concepts of self, curriculum relevance, and the educator's interpersonal style.

Selon les théories sur la cognition, les enfants développent des structures de raisonnement, de communication et d'apprentissage ainsi que des schèmes motivationnels qui correspondent à la culture dans laquelle ils sont socialisés. La socialisation culturelle influencerait donc l'apprentissage des élèves, surtout la façon dont ils abordent et manipulent la matière, les stratégies d'enseignement, les activités d'apprentissage et les modèles de communication dans la salle de classe. La question qui se pose est donc la suivante: quels sont les aspects culturels qui agissent sur l'apprentissage d'un groupe donné d'élèves? L'auteur a voulu répondre à cette question par rapport aux élèves des Premières Nations en étudiant des Autochtones fréquentant une école secondaire à Winnipeg. On a identifié cinq thèmes culturellement significatifs susceptibles de guider la formation des stagiaires dans le but d'enrichir la communication interculturelle, améliorer la conception et la mise en oeuvre de méthodes d'évaluation et encourager la création de matériel didactique efficace. Il s'agit là d'approches autochtones traditionnelles à l'apprentissage, aux modèles d'interaction orale, aux concepts du moi, à la pertinence du programme d'études et au style de l'enseignant en relations humaines.

Introduction

The overall goal of the research reported in this article was the achievement of inclusivity in the classroom, more precisely how an improved understanding of the influence of culture on Aboriginal students' learning could result in more inclusive teaching and, therefore, higher academic achievement and school retention rates among Aboriginal students. The major premise undergirding the conceptual framework for this research was provided by sociocultural theories of cognition that link the development of children's thinking, communication, learning, and motivational styles with the culture into which they are

Yatta Kanu is an associate professor in the Faculty of Education. Her areas of research interest include culture and student learning, teacher education, and curriculum.

socialized and that argue that an intricate connection exists between culture and students' learning (Ramirez & Castañeda, 1974; Vygotsky, 1981; Wertsch, 1991; Winzer & Mazurek, 1998). According to Wertsch, for example, all forms of cognition are socially situated in the contexts of small groups and in the broader social and institutional settings, and cultural mediation constitutes one way by which cognitive processes become contextualized. Vygotsky asserts that various semiotic systems are used to negotiate meaning between individuals and to mediate higher mental functions. These systems develop in specific ways in different cultures and act as negotiators of meaning and as agents that transform mental functions. Winzer and Mazurek echo these claims in their argument that children's conceptual framework—their learning and thinking processes—are deeply embedded in their own cultures and that difficulties in classroom learning and interactions arise when there is a mismatch between a child's culture and all the intricate subsets of that culture and the culture of the teacher and the classroom, setting up that child for failure if the school or the teacher is not sensitive to his or her special needs. Cultural socialization, therefore, influences how students learn, particularly how they mediate, negotiate, and respond to curriculum materials, instructional strategies, learning tasks, and communication patterns in the classroom.

Although the link between cultural socialization and students' learning has been fairly well established in the academic literature, there is a dearth of research knowledge on the specific aspects or areas of culture that consistently mediate or influence the thought processes and learning of particular groups of students and that might provide insights for developing more appropriate instruction for preservice teachers for the enhancement of cross-cultural communication, the design and implementation of assessment strategies, and the creation of effective instructional materials. Winzer and Mazurek (1998) have suggested that for investigating cultural differences in learning, three aspects of learning are especially significant: cognitive or learning style, communication style, and language differences.

Abundant empirical knowledge exists on how the outward manifestations of culture such as the customs, traditions, and behavior codes of particular cultures affect the learning-teaching processes. Cultural variables such as the conception of time and how this affects teachers' assessment and evaluation of students' performance (Hamayan & Damico, 1991; Samuda, 1989), norms regarding competition and interdependence (Philips, 1983), proximity (Shade & New, 1993), nonverbal norms of communication as they assist teachers in comprehending the intended meanings of students (First, 1988; Yao, 1988), notions of fate and how this determines achievement (Lee & Krugly-Smolka, 1999), visual cues, ways of responding to persons in authority, and differences in the extent to which students are brought up to accomplish things on their own and arrive at their own independent opinions and decisions (Dao, 1991; Grossman, 1995) have all been identified as variables that must be understood by teachers. However, studies on cultural knowledge involving the understanding of the tacit variables that underlie these outward manifestations and that are seen to affect human cognition, identity, and people's modes of perception (Lee & Krugly-Smolka) are sparse. Notable among studies in this latter category found in the literature review are Kleinfeld and Nelson's (1991) study,

which found no empirical support for the common conclusion that adapting instruction to Native Americans' learning styles—defined in terms of visual cognitive abilities—will increase academic achievement, and Kanu's (2001) more recent study that identified five cultural mediators of teacher learning in South Asia.

In Canada, a pluralistic and multicultural country with enormous diversity, this dearth of research-based knowledge to help teachers and teacher educators in their effort to achieve more culturally appropriate teaching has sometimes resulted in teachers' use of curriculum materials, teaching strategies, and learning tasks "intended to include all students," but which in fact inhibit participation and conceptual understanding for some students (Manitoba Teachers' Society, 1998), thereby excluding or marginalizing those students and hence severely curtailing their opportunities in life.

This study was undertaken in order to address this knowledge gap by investigating the influence of cultural socialization on the classroom learning of a particular group of students—students of Aboriginal ancestry—consistently perceived as failing in the high school classroom because of cultural differences between them and the formal school system.

The Research Problem

Beginning with the Hawthorn report (1966/67) and its claim that 97% of Indian [sic] children dropped out of the public school system, research and other reports have consistently pointed out that public education has continued to fail Aboriginal youth. They leave the school system without the requisite skills to participate in the economic life of their communities and Canadian society, without the language and cultural knowledge of their people, with their identities and self-worth eroded, and without realizing the Aboriginal vision of culturally and linguistically competent youths ready to assume the responsibilities of their nations (Canadian Communication Group [CCG], 1996). This failure has been largely explained in terms of the rupture between the home culture of Aboriginal students and the processes and environments of the formal school system. The Royal Commission on Aboriginal Peoples (RCAP) reports that the efforts of Aboriginal educators and communities are currently directed toward restoring continuity between the home culture and the school, and significant strides in this area are reported. For example, First Nations Tribal Councils and locally elected school committees that have assumed local control and leadership of band-controlled schools; Aboriginal first language instruction and the teaching of Aboriginal languages; the staffing of schools with Aboriginal teachers; the inclusion of Aboriginal elders as teachers; and the development of curriculum grounded in the values, history, and traditions of Aboriginal peoples are all attempts to reduce the cultural discontinuity experienced by Aboriginal students in the formal education system (CCG, 1996). Provincial governments and school boards have also put many initiatives in place to create positive learning environments for Aboriginal students. For example, schools have hired Aboriginal teachers and Aboriginal support staff, and curriculum has been reviewed to eliminate obvious racism.

What are the overall results of all these efforts? According to the RCAP (CCG, 1996), gains have been modest, and much more needs to be done. Most success has been noticed in band-controlled schools that are located on reser-

ves and that serve more homogeneous groups of students in terms of linguistic and cultural heritage (Haig-Brown, Hodgson-Smith, Regnier, & Archibald, 1997). According to Brady (1995), these schools often experience greater autonomy in responding to students' needs than schools in urban and rural settings where control remains in the hands of "paternalistic" bureaucracies (Corson, 1992). In provincial schools where most Aboriginal students outside of the territories attend school (Department of Indian Affairs and Northern Development [DIAND], 1994), parents and Aboriginal community members have little direct access to decision-making (Brady, 1995); no special effort is made to make them feel part of the life of the school, and the vast majority of teachers in these schools belong to the dominant mainstream culture. The lack of Aboriginal cultural knowledge among these teachers has generally resulted in pedagogical and interaction patterns that have resulted in negative learning experiences for Aboriginal students.

Since the 1960s Aboriginal people have responded by lobbying for programs that would bring Aboriginal teachers into public school classrooms. However, although there are many more Aboriginal teachers in Aboriginal and non-Aboriginal school systems and many more Aboriginal teacher education programs than a decade ago, the numbers remain far too low relative to current and projected needs (CCG, 1996). For the foreseeable future, therefore, efforts need to be made to infuse the preparation of teachers from mainstream culture with the history, languages, and pedagogical traditions of Aboriginal peoples, especially in provinces such as Manitoba where it is reported that the Aboriginal population has increased by 19%, that Winnipeg has the highest concentration of Aboriginal persons in an urban area in Canada, and that Aboriginal youths make up a large proportion of the school-aged population in Winnipeg (Manitoba Bureau of Statistics).

The inspiration for this study arose from my experience as a teacher educator consistently observing preservice teachers from dominant Euro-Canadian culture in high school classrooms in Winnipeg using teaching processes and curriculum materials that either ignored the Aboriginal students in their classrooms or elicited minimal participation from them. From conversations with a number of these preservice teachers, I learned that they did not possess the cultural knowledge needed to adapt classroom materials and processes to ensure meaningful participation for the Aboriginal students in their classrooms.

It has been suggested that it is incumbent on teacher education programs to provide the sort of preparation that teachers need in order to work successfully with Aboriginal students in Canada's public schools (CCG, 1996). This research was premised on the belief that the beginning point for such teacher preparation is the interface between culture and students' learning.

The research had two specific purposes. The first was to identify specific aspects of Aboriginal cultural socialization that consistently influenced or mediated the way the Aboriginal students in the study received, negotiated, and responded to curriculum materials, teaching strategies, and learning tasks in their high school classrooms, specifically social studies classrooms. Knowledge of some cultural mediators of the learning of these Aboriginal students is critical to our understanding of how teachers could best adapt classroom

materials and processes to enable similar groups of students to have generous and positive access to their heritage culture while also acquiring knowledge of, and confidence with, the content and codes of mainstream culture (Ellis, 1999).

A second purpose was to develop recommendations for teaching and teacher education that have the potential to provide the cultural support needed by Aboriginal students to succeed in their learning in the high school classroom.

For this study, culture was defined as those shared beliefs, values, and meanings that inform the educator about a learner's culturally determined learning and thought processes. As the process of the production of meaning on which different groups draw to make sense of their world, culture is socially and historically located (Kanu, 2001). Because economic status affects the influence of culture on cognition and learning, it is important to point out that all the students in the study came from low-income backgrounds, a factor that could account for any mismatch between their cognitive and learning experiences and the content and processes of the formal school system.

In line with Statistics Canada's (1996) definition, the term *Aboriginal* was used in this study to mean students of First Nations, Metis, and Cree ancestry. The Aboriginal students who participated in the study identified themselves as First Nations Ojibway, Cree, and Metis.

Research Questions

The following questions guided the study:

1. What are some of the curriculum materials, learning tasks and teaching strategies currently used by teachers who have been identified as successful with, and committed to, inclusivity in high school social studies classrooms with Aboriginal students? (Data collection method for this question consisted of classroom observations).
2. What learning goals do teachers wish to achieve by using these materials, strategies, and learning tasks? (Data collection method: research conversations with teachers).
3. How do these materials, strategies, and learning tasks facilitate class participation and conceptual understanding for Aboriginal students? (Data collection methods: research conversations with Aboriginal students; Aboriginal students' journals).
4. What aspects of Aboriginal cultural socialization contribute to enhance or inhibit Aboriginal student participation and understanding when these materials, strategies, and learning tasks are used in the social studies classroom? (Data collection methods: research conversations with Aboriginal students; Aboriginal students' journals).
5. What are the preferred classroom teaching and learning strategies of Aboriginal students? (Data collection method: research conversations with Aboriginal students).
6. How are such classroom methods or strategies similar to or different from the dominant methods through which Aboriginal children learn in indigenous Aboriginal culture? (Data collection methods: research conversations with Aboriginal students; Aboriginal students' journals).
7. What cultural support systems are teachers providing, and could provide, to enhance participation and conceptual understanding for Aboriginal stu-

dents in the high school social studies classroom? (Information for this question came from the overall data collected during the research).

Research Procedures and Methods

The site for this study was an inner-city high school in urban Winnipeg, selected because of its high Aboriginal student population and its interest in working with the Faculty of Education at the University of Manitoba to find teaching methods, processes, and curriculum materials that reach all students in the classroom. According to the vice-principal, the school is one of the toughest schools in the inner city. Every year over 600 students register, but only 300 complete the school year. Most of the students are teenage parents on welfare. Seventy-nine percent of the students' parents are unemployed, and many of the students have experienced little success in their lives and need to be persuaded to come to school. In a school like this, courses are used more to improve the quality of students' lives than to transmit purely academic knowledge.

Data for the study were collected between April and June 2000 in an integrated grade 9 social studies classroom with 80% Aboriginal students and teachers who had been identified as successful teachers of Aboriginal students and who had expressed a willingness to enhance their understanding of cross-cultural instruction.

There were three reasons for selecting a social studies classroom for this study. First, social studies in one form or the other is a required course in all high school grades and was, therefore, likely to have a fair mix of Aboriginal and non-Aboriginal students in the classes. Second, I am a social studies instructor and was, therefore, more likely to understand the goals, concepts, and teaching processes targeted in these classrooms. Third, because social studies derives its subject matter from the social science disciplines, it offers opportunities for the use of a variety of curriculum materials, teaching strategies, and learning tasks that apply across a large number of subject areas.

Research participants for the study included 10 students of Aboriginal ancestry (7 Ojibway, 2 Cree, and 1 Metis) in a grade 9 social studies class and two teachers from the classroom involved in the study. One teacher was Caucasian and had taught grade 9 social studies for 23 years. The other was a Black (African Canadian) teacher who taught mainly science but provided support through individualized instruction during social studies lessons.

The total number of participants in the research was 12, selected on the basis of their willingness to participate in the study. Because the research involved extensive intrusion into the classroom of the teachers and the lives of the students participating in the study, a great deal of sensitivity was brought to the research process. In line with Archibald's (1993) call to conduct research with mutual respect, trusting relationships were built between me (the researcher) and the research participants long before the research began. Entry into the school and the social studies classroom was negotiated through the help of the vice-principal (a Metis), who introduced me and my research intent to the teachers and students of the grade 9 social studies class. This introduction was followed by several visits to their classroom, first simply as a visitor sitting in on their classes. My intent was to make the students and the teachers feel comfortable with my presence in the class and for the teachers to realize

that I was not there to be critical of their work or devalue what they were doing in their classroom. Rather, the intent was for us to work together as educators to find ways of arriving at more inclusive classroom teaching. Free and informed written consent of the teachers, students, and the parents of the students was obtained before starting the research, and research participants were given the option to withdraw from the study at any time.

This was an ethnographic study for which multiple data collection methods such as classroom observations, research conversations, and students' journals, were used. According to Bogden and Biklen (1998), multiple data collection strategies lend credibility to a study because when data from multiple sources are triangulated, they increase the validity and reliability of results. The ethnographic method also offered me enhanced opportunities to understand the research participants in their own context and the reasons behind the data generated. In addition, ethnography offered the flexibility to follow and document events as they arose during the research, and provided substantially more complete and complex data on the questions under investigation (Cohen & Manion, 1985). Data collection methods for the study are described below.

Classroom observations. Classroom observations of curriculum materials, teaching strategies, and learning tasks used in the social studies classroom under study were carried out. There were 10 one-hour classroom observations. Data collected through this means were later used as material for research conversations with participants.

Research conversations. Two sets of research conversations (each lasting one hour) were held with Aboriginal students in the study. The first set of conversations was intended to obtain participants' initial responses to the research questions and to the data from the classroom observations. The second set provided me with the opportunity to probe specific responses in more detail and explore any new questions and ideas that emerged. Research conversations were selected because, according to Gadamer (1984), such conversations have no predetermined answers and, therefore, offer the openness occasioned by the desire of the researcher and the research participant to know about a topic of mutual interest to them. "It is only during genuine conversation that the subject matter of the topic begins to emerge and take on recognizable meaning and adequate intelligibility. In this sense, conversation is not simply an incidental condition of inquiry, but ... it is the very life of inquiry, discovery and truth itself" (p. 33).

Students' journals. Aboriginal students participating in the study were asked to maintain a journal where they documented the cultural experiences that influenced or mediated how they received, negotiated, and responded to curriculum materials, teaching strategies, and learning tasks in the social studies classroom.

The research conversations were audio-recorded, and field notes were written during classroom observations. Research conversations were transcribed verbatim, viewed, and returned to the participants for "member checks" (Lincoln & Guba, 1985) before being analyzed. Important sections of data collected from the multiple sources described above were highlighted and summarized. Doing so enabled me to gain an overview of what they offered concerning the research questions. As well, I was able to see whether the data gave rise to any

new questions, points of view, and ideas. All data were coded and categorized using both deductive and inductive methods. Coded data were read and organized according to themes emerging from the data (Miles & Huberman, 1994). The themes were examined collaboratively with the participants in order to understand what certain data meant and how certain facts could be explained. Data analysis and interpretation, therefore, incorporated both emic and etic perspectives (Jones, 1979). Research narratives based on the collected data were constructed. To address the concern expressed in the RCAP (CCG, 1996) report that "Aboriginal people have had almost no opportunity to correct misinformation and to challenge ethnocentric and racist interpretations" (p. 235) and to give voice to the *other*, a key concern in this study, the research narratives were returned to the research participants for comments, changes, and/or confirmation before being included in the final report. According to Te Hennepe (1993), "Returning the text is to move the conversation into an outer circle and ask the people there if, in their opinion, the reconstructed conversation has integrity" (p. 236). Te Hennepe also writes, "the integrity of the speaker's words can be lost as the text writer creates a new telling of what was said" (p. 236). An attempt has been made to respect the participants' words or contributions by including them as quotes where appropriate to enrich the research narratives.

Where participants are quoted in the report, pseudonyms have been used to protect their identities. Therefore, the 10 students are referred to as Mike, Ned, Kem, Rich, Liz, Joe, Don, Andy, Tim, and Jon. The teachers are referred to as Mrs. B. and Mr. X.

Findings and Discussion

Analysis of the data generated from the research instruments revealed several findings related to the two major concerns of the research:

1. curriculum materials, learning goals, teaching methods or strategies, and student learning tasks currently used by successful social studies teachers of Aboriginal students;
2. aspects of Aboriginal cultural socialization that enhanced or inhibited Aboriginal student participation and conceptual understanding when these materials, strategies, and learning tasks were employed in the social studies classroom.

The curriculum materials, learning tasks or activities, teaching methods or strategies, and learning goals observed in the social studies classroom during the research are presented in Table 1.

The following section discusses the themes that emerged from my conversations with the Aboriginal students about the aspects of their culture that helped or hindered their learning.

Caveat. The study recognized the diversity present in Aboriginal cultural values and traditions, a few of which emerged in the research conversations with the Aboriginal students in this study who came from Ojibway, Cree, and Metis backgrounds. However, there were sufficient common elements among them that appeared to conflict with the values, culture, and processes that are dominant in the conventional classroom. These common elements in the data provided the bases for the construction of themes.

Table 1
Curriculum Materials, Teaching Methods or Learning Tasks, and Learning Goals in a Grade 9 Social Studies Class

<i>Curriculum Materials</i>	<i>Teaching Methods or Learning Tasks</i>	<i>Learning Goals</i>
<p>No prescribed textbooks were used.</p> <p>Materials were selected according to needs and interests of students, but of relevance to successful living in mainstream Canadian society. Materials used included the following:</p>		
<p>Stories with moral messages from the book <i>Chicken Soup for the Soul</i></p>	<p>Reading of the stories by the teacher; teacher-led discussion of questions on the stories (questions ranged from recall to higher levels of thinking).</p>	<p>To develop students' listening and comprehension skills; to develop higher level thinking; to provide student motivation through the moral lessons in the stories (e.g., perseverance, respect for self and others).</p>
<p>Concepts such as <i>stereotyping, discrimination, prejudice, racism, lazy</i> that depicted some of the lived experiences of many Aboriginal students.</p> <p>Concepts of more general relevance and application, for example, <i>supply and demand, critical consumer decision-making factors, advertising, motives for purchasing goods and services, human rights</i>.</p>	<p>Small-group discussion of concepts; two teachers and one teacher aide in the room provided support to students as they worked in groups; sharing of insights through oral presentations; teacher input through further discussion, examples, probing questions (scaffolding), and notes.</p>	<p>For students to understand the ignorance and discrimination present in stereotyping; for students to recognize their own prejudices; for students to improve their discussion and public speaking skills; to relate curriculum to students' daily lives.</p>
<p>Pictures of accomplished Aboriginal people in respected professions.</p>	<p>Whole-class teacher-led discussion through higher-level thinking questions that encouraged student participation (expression of ideas and opinions).</p>	<p>To make the curriculum relevant to the Aboriginal students (students see themselves in positive ways in the curriculum); students will be motivated by positive role models.</p>
<p>"The Canadian Scrapbook: Looking back on Aboriginal early lives."</p>	<p>Independent and small-group worksheet activities; scavenger hunt locating information from pages already identified by the teacher (scaffolding research work); individualized instruction by teachers; whole-class discussion of student responses.</p>	<p>For Aboriginal students to understand their rich history; for students to develop research skills.</p>

Table 1 (continued)

<i>Curriculum Materials</i>	<i>Teaching Methods or Learning Tasks</i>	<i>Learning Goals</i>
Teacher's notes on transparencies and other visual aids.	Visual aids were used by the teacher to explain certain concepts. Notes provided lesson summaries for students.	To support student learning through visual examples.

Themes Relating to Cultural Influences on Aboriginal Students' Learning

Theme 1: Traditional Aboriginal Approaches to Learning

Four traditional (meaning Aboriginal indigenous approaches to learning practiced outside the formal school system) practices in Aboriginal culture were found to have enhanced or hindered the participation and conceptual understanding of the Aboriginal students in the social studies classroom where the research was conducted, as follows.

Learning through stories. All the students in the study agreed that the storyreading method adopted by their social studies teacher was effective in helping them understand the concepts and messages contained in each story. Consistent with claims by Cruikshank with Sidney, Smith, and Ned (1990) and Haig-Brown (1997) that in Aboriginal culture narratives are often used for teaching about cultural norms, the students provided the following cultural reasons for the effectiveness of the storytelling method.

In indigenous Aboriginal culture traditional stories, legends, songs, and many other forms of knowledge are passed on among generations by continual retelling (through stories) by elders and leaders who carry the knowledge of these spoken forms in their memories. As one research participant put it,

My grandmother knows these stories inside out. My parents also know them and I learn the stories from them all. We all know the songs that go with each story. (Don)

Armstrong (Kirkness with Bowman, 1992) affirms these claims when she writes, "Aboriginal traditional education is a natural process occurring during everyday activities (such as storytelling) ... ensuring cultural continuity and survival of the mental, spiritual, emotional and physical well-being of the cultural unit and of its environment" (p. 7).

Children develop a sense of morality by observing parents and elders modeling certain behaviors and through stories and legends they hear from parents and elders.

We learn what is right and wrong from these stories. For example, many stories of hunting my grandpa has told me are about being honest about the number of catches each person had on a group hunting trip. (Jon)

Stories offer important ways for individuals to express themselves safely (e.g., convey messages of chastisement without directly preaching the message or specifically moralizing or blaming the culprit). According to Archibald (1993), First Nations peoples' stories are shared with the expectation that the listeners will make their own meaning, that they will be challenged to learn something from the stories. Stories, therefore, appear to contain layers of mean-

ing that listeners decode according to their readiness to receive certain teachings.

You just get the message as you listen to the story and you loosen up and improve your behavior, if you want to. (Ned)

Learning through observation and imitation. A second learning approach that appeared to have a strong basis in Aboriginal culture emerging from the study was observational learning. Probing questions during our research conversations revealed a close link between learning by observation and imitation and some traditional childrearing practices that have survived in many Aboriginal families. It appears from these conversations and others I had with four of my own university students (two white and two Aboriginal) that whereas white children, for example, by virtue of their upbringing and their linguistic overexposure are oriented toward oral communication as a vehicle for learning, Aboriginal children have developed a learning style characterized by observation and imitation as children and adults in the extended family participate in everyday activities. Joe, a student in the study, elaborated on this approach to learning:

When they [parents, grandparents, or teachers] actually show you and you see it in action, it's easier for you to grab.

Kem, another student, linked this learning method to preparation for adult responsibility:

Actually seeing how something is done, instead of reading how it's done, that's hard to remember. When you watch how it is done it automatically clicks in your head. It's like making bannock, you learn to make it by watching the older people and then making it by yourself.

By contrast, students in the study pointed out that the "talk approach" to much of school instruction actually inhibited classroom learning for them. In an effort to reconcile these data with the benefits of oral instruction earlier touted by these participants during our discussion about storytelling, I asked them for clarification. Liz's comment below reflected those made by the rest of the students:

Do you remember how I said some teachers explain too much and too fast? That really confuses me. I get lost in the explanation. But Mr. X, he cuts it down to size, right to the chase, works the formula on the board, which I watch step by step. I like that.

It appears that although oral instructional methods such as storytelling are an important cultural approach to learning for these students, the verbal saturation that characterizes much of school instruction, especially when this instruction is fast-paced and delivered in a different language, is not conducive to academic success for them. Haig-Brown et al. (1997) support this finding with their description of the concise communication style of the Aboriginal mathematics teacher they observed at Joe Duquette High School, an Aboriginal community school. They write:

His directions are minimal, short, almost abrupt: "Put your name at the top. Straight multiplication. Maximum, five minutes and there is a table at the top.

Five seconds. Start." There are no words wasted, no wasted time. One might think of the speaker in another class telling the students of his learning that the Cree language is a gift of the creator to be used wisely. (p. 110)

This finding is significant because such learning style differences have far-reaching consequences in the formal education of Aboriginal students, particularly in view of the fact that the formal education system almost always favors those who are highly verbal.

Community support encourages learning. Learning through verbalization was also disparaged by the students for another reason: the perceived lack of support in the integrated classroom community. All but one Ojibway participant pointed out that the teaching-learning method they found most uncomfortable was when they were called on to make an oral presentation in front of the class. The students revealed that they were intimidated by the direct criticism that this method entailed in the formal (Western) school system. Jon's comment on this point is instructive:

It's like they are looking out for the mistakes you make and they pounce on you. Even the teachers sometimes make you feel dumb by the questions they ask after you have presented something.... It's like they don't believe you, because they don't understand.

I probed further to see how learning might be different in the Aboriginal community, and Ned said:

In the [Aboriginal] community, if you don't have the right answer you are not criticized directly, and you ask for some help because you know the people that are around you, so you feel secure. Also, in the community you are doing it for the community so everyone pitches in.... In school, although you know the teacher and the other class members, you are on your own. You are doing it for your own education as an individual. As far as school is concerned, I don't look forward to sharing my responses.

This finding is consistent with Brant's (1990) documentation of parenting and social interaction in some Aboriginal cultures as entailing *noninterference*, meaning refraining from directly criticizing the individual. It is also consistent with Collier (1993) who, based on her research on teaching Aboriginal students, made a suggestion: "never put Native students on the spot [by] asking them directly by name to answer a question in public" (p. 114).

For these Aboriginal students silence seemed to be the best defense mechanism in an integrated class where they felt they were among white strangers whom they have been raised to believe are constantly critical of them. Chris's comment spoke to this point:

Yeah, that's why I prefer to remain silent in class.... It's just that I don't really know and trust people here. At home and in my community, I know and trust people, so I just blabber along without fear of making mistakes or being criticized. But when school starts, I don't talk, period, so they leave me alone.

Te Hennepe (1993), in her study of the experiences of First Nations students in university anthropology classrooms, quotes one of her interviewees, Mary, on how Native students deal with the breakdowns that occur when the expected respect and authority of their voices are violated in the learning process.

When a Native student goes into a classroom, part of you is removed and sort of your Indian spirit is put apart from you, so you are separated so you can deal with the mainstream societal values. You try to talk about native matters that are in the text without using the eyes of your Indian spirit. ... When you look at it with your wholeness all that emotional stuff wells up. You try to see it through their eyes. When you leave the room your spirit is back. This is how I deal with the pain. Remove yourself from your body. Your spirit is up there waiting for you. You are up there and looking at yourself. You look back and you see compliance. You comply. (p. 257)

Some researchers have explained the classroom silence of Native students in terms of *interference theory*, which states that Native children in nonschool contexts “talk a mile a minute” and that their silence in class derives from the culture of the classroom because the instructor and context require a different language to learn material that is foreign (Whyte, 1986). Whyte writes, “The problem (of classroom silence) lies not with the child but rather is an educational problem of designing a learning setting which is right for the children—in which children feel comfortable and secure enough to participate verbally” (p. 297).

The Ojibway participant who said he was not uncomfortable with oral classroom presentations is a clear indication that membership in a certain group does not predict behavior; it only makes certain types of behavior more probable. This shows that culture is not a unified whole, and although there may be distinctive learning patterns among cultures, great variations exist among individuals within groups (Winzer & Mazurek, 1998).

Learning through scaffolding. When asked about the type of support they needed to help them learn most in social studies, the data indicated that all the students in the study required some form of scaffolding or temporary framework of support, at least until they were able to develop the skills to learn independently. Forms of scaffolding identified included: direct guidance and support from the teacher through detailed and slow explanations (Jon, Liz, Rich, Mike); numerous examples (Jon, Ned, Andy); and explicit steps to follow in the performance of a given task (all except Ned). Data from the classroom observation showed that the two teachers and one teacher’s aide in the classroom provided these structures to enhance Aboriginal students’ learning.

These three forms of support appear to have direct foundations in childrearing practices among certain Aboriginal peoples where children are socialized to accomplish tasks largely through the support, direct guidance, and feedback from parents and other significant adults. Don compared this classroom support to what he obtained at home:

Mrs. B., Mr. X., and Ms. T. always go round when we are working on our own, to explain more about what we are to do. It helps a lot, just like at home.

Learning through visual sensory modes. Eight of the 10 participants in the study pointed out that they were better able to understand and retain concepts when these were presented through visual images. Ned, for example, said:

Mrs. B. can explain something verbally over and over and many of us still ask her for further clarification. But when we see it in pictures or on transparency, when the overhead comes on, it is different, probably because it is bright. It does grab

your attention and then you see the material as she is talking about it. It's like a different way of learning.

Liz agreed:

For me too. I understand better when I actually see an image or picture of something, which the teacher is talking about.

Rich added,

She [Mrs. B.] gets our attention better with things we actually get to see. Most of the students stop fooling around when the transparency comes on, for example. That's why many of us also like to learn on the computer. We actually see the images in front of us and then understanding becomes less difficult.

However, although these findings are consistent with Grossman's (1995) assertion that Native American and Alaskan Native youth tend to be visual learners, the claims to elevated visual abilities need to be established by further research. Psychological research is still inconclusive about whether visualization abilities are higher among Aboriginal groups than among comparative groups. For example, Berry (1966) in several studies found that Canadian Inuit indeed scored considerably higher on various spatial and visual tests than comparative groups from West Africa and Scotland, but Mackinnon (1972) failed to replicate this finding in a small study of Canadian Inuit students. Berry (1969), however, theorizes that the ecological demands of a particular environment, along with the cultural group's adaptation to that environment, may press for the development of a particular pattern of cognitive abilities.

Kleinfeld (1971), in a study conducted in the United States, also found that Inuit village students exceeded urban students of the same ages on a modified version of the Memory for Designs Test. However, because the students in my study were neither Inuit nor village students, further research is needed to develop a theoretical basis for their claims to elevated visual abilities. Furthermore, there is a dearth of reviews in the literature on the effects of instruction adapted to the ability patterns and learning styles of Native groups in both Canada and the US. Of the three studies found by Kleinfeld and Nelson (1991) on the proposition that adapting instruction to Native groups' learning styles would increase achievement, two studies did not show that Native groups learn more with visually based instruction. Another study found support for the proposition in one sight but not in another, and the visually based instruction was even more effective for Caucasian students. These findings called into question the notion that instruction was effective because it was "culturally adapted" and established the need for further research into the hypothesis that instruction adapted to Native groups' visual learning style will enhance learning.

Theme 2: Effective Oral Interaction Between Teacher and Aboriginal Students Assist Learning

This theme emerged from our conversations about cultural and socioeconomic class differences in patterns of oral interactions between parents and children. Heath (1983), from a study conducted on linguistic interactions among different cultural and socioeconomic groups, established that white middle-class parents communicate with their children largely through indirect statements

(e.g., “Is this where the scissors belong?”) whereas working-class whites and African-American parents from all socioeconomic classes are more likely to use directives such as “Put the scissors back on the shelf.”

The data in my research suggest that Aboriginal parents also communicate with their children mainly through the use of such directives. Two of the research participants, for example, said:

They [parents] tell me directly what they expect me to do; they do not leave it up to me to figure it out what they mean. (Liz)

Mr. X. [the Black teacher] tells you straight what he requires from you. I like that. (Don)

Because teachers in Canadian classrooms are mainly white and come from middle-class backgrounds, Aboriginal students are less likely to understand what to do if the teacher uses indirect statements. Research (Heath, 1983; Philips, 1983) has shown how a mismatch between a child’s linguistic culture and that of the teacher and the classroom can adversely affect learning and academic achievement. Clarity is important to school success because students are judged by what they produce in class and on tests. Such product, based as it is on the specific codes of a particular culture (English or French in the case of Canada), is more readily produced when the directives of how to produce it are made explicit. The study data strongly suggested that effective teachers of Aboriginal students offer clarity about what they demand, and they provide structures that help students produce it.

Theme 3: Concepts of Self

This finding refers to notions of the self, how the self is constructed and understood, and how this construction mediates the learning process in different cultures. Bearing in mind that any ontological boundaries of the self are primarily theoretical (most theorists propound hybrid concepts of what constitutes the self), the research revealed that the Aboriginal students in this study understood and described notions of the self and how the self is constructed in Aboriginal culture largely in terms of interdependence, communality, and social relatedness more than, say, Caucasian groups who frequently deemphasize the relationship between personality and culture and tend to treat the self as a relatively self-contained agent. Because these Aboriginal students viewed themselves less as a separate psychological unit and more as a part-function of the cultural forces from which they emerged, they identified a cultural model of learning that is grounded in Aboriginal cultural values such as cooperation, collaboration, group effort, and group rewards. In school these values would lend themselves well to group work and cooperative tasks, and it was, therefore, not surprising that eight of the 10 research participants disclosed that they thrived better as learners in cooperative, collaborative, or group work situations. However, they also pointed out that because group work and cooperative learning tasks in school were not usually organized effectively for productive work, group work had actually hindered rather than promoted learning for them. Several of them elaborated on this point, as the following quotes demonstrate.

You see, it's different in school than in the [Aboriginal] community. In the community everybody participates equally or almost. You have a bunch of people who carry an equal share of the task and they know it is for the good of the community. So everyone does their part and you learn from each other. In school no one in the group cares, really. Group members do not share their opinions or ideas. (Don)

And they make a lot of noise during group work. (Liz)

Yes, and if you have someone smarter than the other people in the group, then they are going to rely on that one person for all the ideas. (Mike)

So I think what we need is better group work organization from them [the teachers]. I like group work because you can talk to others. You can discuss your ideas if you don't understand something, like in the community.... But in class that does not happen in groups. (Ned)

Haig-Brown et al. (1997) have pointed out that communal work is integral to life and each day in the Aboriginal community and that community members work together, each taking on the responsibilities appropriate to their knowledge abilities.

However, caution is needed in interpreting this finding as specific only to Aboriginal students. In a study conducted into the learning styles of various cultural groups in the US, Cox and Ramirez (1981) found that many culturally diverse students are more group-oriented, more sensitive to social environments, and more positively responsive to adult modeling than are Euro-American students.

It is clear from these discussions that more needs to be done in the area of cooperative group work in schools to enable Aboriginal students to benefit from it academically by drawing on the cooperative, collaborative, and communal aspects of their culture to enhance their learning. Boyle-Baise and Grant (Ellis, 1999) have reported that teachers did not generally acknowledge group membership as an important part of some students, insisting that all students are individuals with individual differences.

Theme 4: Curriculum Relevance Enhances Aboriginal Students' Learning

Relevant curricula have long been acknowledged as supporting and promoting successful learning for all students, and according to the RCAP (CCG, 1996) report, this requirement is seen by Aboriginal people as one of three fundamental issues in the education of Aboriginal children and youth (the others are Aboriginal language education and Aboriginal control and parental involvement). Curriculum relevance for success in school learning is particularly important for minority students such as those of Aboriginal ancestry for two reasons. First, educationists (Greene, 1993) have observed that despite all the exposure to difference in the world today and the increasing interest in pluralism and the existence of multiple realities, Eurocentric and patriarchal views still persist where curriculum and learning are concerned. Second, minority students continue to be treated largely as invisible when they are made to experience textbooks and linguistic conventions considered to be neutral but that in fact assume a subject from the dominant white culture (Ellis, 1999). Furthermore, as one of the students in the study said during one of our conversations relating to photographs of successful Aboriginal professionals

that Mrs. B. had used as curriculum material for two of her social studies lessons,

Aboriginal people are seen [in white society] as backward, stupid, and responsible for their own failure. When one individual fails to make it, everyone in the culture is called a failure. (Rich)

For this reason, although the research participants said they would appreciate exposure to non-Aboriginal curriculum content because, as Liz put it, “the exposure helps us learn about other perspectives and cultures,” they overwhelmingly agreed that seeing positive representations of themselves (Aboriginal people in general) more regularly in the school curriculum would validate their identity, motivate them to participate more in class, and help them develop pride in their own culture and people. According to one student, such a curriculum would also nurture their aspiration for the future:

Yeah, these pictures [of successful Aboriginal people] make you feel like you have a chance. You walk down town Winnipeg any day and all you see is [sic] Aboriginal people lying on the ground either completely drunk or asking for change. That feels really depressing and hopeless. But when you see pictures of Aboriginal people who have succeeded—police officers, lawyers, and all that—you feel you have a chance and you push yourself more in school to be like them. (Ned)

Research participants also pointed out that in addition to positive images of Aboriginal people, curriculum should include Aboriginal perspectives, histories or traditions, and interests, all of which have foundations in their cultural heritage but which have been largely denied them in the formal school system:

In my previous school, there was nothing in grade 7 or 8 social studies about us [Aboriginal people]. We learned about people through different ages—Greeks, Romans, Egyptians, but nothing really about Aboriginal people or if there was, we did not cover it in class. (Mike)

Here in this school at least, Aboriginal students are in the majority and sometimes in social studies, some of our lessons have Aboriginal material. But in my former school, the teachers generally did not talk about us as part of the lesson.... Yeah, maybe they were scared to offend us. (Liz)

Referring to the importance of cultural heritage in learning, Binz (Ellis, 1999), after teaching language arts to mature-aged Aboriginal students in an Aboriginal studies program in Australia, wrote:

I began to see how they operated from and through a cultural heritage, that is, from a deeply embedded and culturally defined system of values, beliefs and meanings about the social world. More importantly, I learned that this system significantly influences and reflects what students value and why they value it and, therefore, is central, not peripheral, to creating curriculum in the classroom that is culturally relevant and personally meaningful. (p. 177)

As Ellis (1999) elaborates, without the knowledge or the interest to begin planning curriculum from an appreciation of who students are or what they know or care about, teachers tend to seek diagnostically and remediate what they think is missing in students.

Theme 5: Teacher's Interpersonal Style

Under this theme are subsumed many subthemes that emerged to describe those dimensions of teacher interpersonal style that are effective in eliciting intellectual participation from the Aboriginal students in the study. These dimensions, in order of importance to the study participants, are as follows.

Respect

All the research participants identified respect as the most important dimension of the teacher's interpersonal style. Because research on cultural difference has found that various cultures may hold different views of behaviors that express such feelings as respect (Wax & Thomas, 1961, in Kleinfeld & Nelson, 1991), participants were asked to elaborate on what they meant by respect in teacher-student interactions. For them respect referred to the following teacher behaviors.

Not stereotyping me as the drunken, failed Indian whose image the teacher already has in mind. (Ned)

Treating me like I already have something the teacher respects. (Liz)

Not making me feel dumb in front of the whole class. Treat me like I know something which the teacher may not know ... everybody knows something. (Don)

It is as simple as valuing and understanding me as a person. Like, just teach the way you want to be treated.... You know, teach with respect for us as individuals and do not treat us like we are all the same. (Rich)

This finding supports Haig-Brown et al.'s. (1997) interview with 16 students of Aboriginal ancestry (Cree, Ojibway, Metis, and Saulteaux) from Joe Duquette High School, in which all the students identified respect as "the number one rule" for successful interactions among the teachers, staff, and students in the school. According to these researchers, respect is integral to traditional Aboriginal values. They write: "Respect encompasses the understanding that children are complete human beings given as gifts from the Great Spirit on loan to adults who share with them the responsibility for preparing them for life's journey" (p. 46). They also quoted what a member of the school's Parent Council said about respect during an interview: "You are born as equal and you are born with respect ... every individual has it [respect] and you don't have to earn it" (p. 46).

Strictness

Although earlier research (Brant, 1990) has documented the practice of noninterference (meaning not attempting to control the behavior of others by direct intervention) as a prominent characteristic of parenting and social interaction in many Aboriginal cultures, the image of the teacher as a strict disciplinarian emerged as the second most important characteristic of the teacher's interpersonal style. With one exception (the Metis student in the study who said he was being raised by his Cree grandmother), participants seemed to expect their teachers to be strict, intolerant of nonsense, and act like the authority figures they are. Otherwise the message is sent that this adult has no authority, and the students react accordingly. As the following quotations show, the Aboriginal students in this study firmly believed in this strict image of the teacher.

I think Mrs. B., I don't know what it is, but she should be tougher with us. After all she is the teacher, she has the authority. (Jon)

I agree with Jon. She needs to be stricter to keep the class more in order. Some people call her down and treat her anyhow ... whatever, and she just stands there. (Mike)

Some of the things kids do in her class, I know I can never get away with at home. I know my boundaries and how far I can take my family, especially my dad. If I go past that boundary I know I am in trouble ... probably get grounded for days or something, without any argument. I was surprised at first at what she [Mrs. B.] was tolerating from them. (Ned).

From the above quote from Ned, it appeared that his surprise had foundation in the teaching traditions of some First Nations where elders and parents, as respected teachers, convey to the young the acceptable rules of behavior and the values to be honored through subtle verbal and nonverbal communication (CCG, 1996). Such a teacher is a role model whose own behavior and attitudes are absorbed by the children.

Another possible reason why these Aboriginal students expected an authority figure to act with authority is that in Aboriginal culture, authority is earned through effort and exhibited by personal characteristics, as opposed to authority being achieved by the acquisition of an authoritative role. According to Mike,

In the community, like the chief—this is just an example—like the chief is chief because he has done many good things in his personal life and in the community to deserve to be chief. He has that authority. The teacher is the same ... I mean she has qualifications, and therefore, the authority. She should act with authority.

Many middle-class teachers do not perceive authority in this way and may attempt to reduce the implications of overt power in order to establish a more egalitarian and nonauthoritarian classroom atmosphere. However, if the students operate under another notion of authority, as the Aboriginal students in this study seemed to be doing, they may perceive the middle-class teacher as weak, ineffective, and incapable of taking on the role of teacher.

However, as indicated above, the image of the teacher as a strict individual wielding authority in the classroom did not seem to hold for the Metis participant, suggesting that the cultural values and traditions of Aboriginal peoples are diverse. In response to Ned's comments about behavioral boundaries he had to observe at home, this Metis student said:

Jeez, I can never live like that. My grandmother lets me do what I want. I go and come as I like, no questions asked. Sometimes, I go for two days ... as long as I stay out of trouble. (Chris)

Chris's comment is consistent with Brant's (1990) claim that in some Aboriginal cultures,

the principle of non-interference predominates. The child's will is respected, and adults do not interfere in the choices made by the child. The imposition of the adult's will on the child is inappropriate except, of course, in instances where the child may encounter harm. (CCG, 1996, p. 454).

English-Currie's (1990) description of her upbringing as a member of the Blackfoot Nation in what is now Alberta also echoes this claim. She writes:

This non-interference, non-directive approach determined a basis for a future lifestyle. We matured rapidly and we became adept at determining our own actions and making our own decisions, while being sensitive to the expectations of the collective and to our elders. (p. 50)

The contrast between this *laissez-faire* approach and the regimentation of the classroom experience, including the exertion of the teacher's authority may constitute a discontinuity between the school and the child's home environment. This cultural conflict has been cited in several documents as a threat to the Aboriginal child's identity in the formal education system and a major cause of school failure (Wuttunee, in CCG, 1996).

Personal Warmth

The data revealed that nine of the 10 participants in the study expected their teachers to treat them with emotional warmth and have personal relationships with them. This finding is consistent with Haig-Brown et al.'s. (1997) report that teachers at Joe Duquette High School referred to their students as "extended families" (p. 142), and students referred to their teachers as "friends," "second parents," and "sensitive" (p. 122). It is also consistent with Collier's (1993) position that Native students like to have personal relationships with their teachers.

Warmth as a teacher attribute emerged during our conversation about the effectiveness of the individualized instruction each student regularly received from the two teachers and one teacher's aide present during each lesson. Ned's comment on this point was typical and instructive:

When she [Mrs. B.] is teaching from in front of the room, she is kind of far from you and she is usually talking to everyone, not to any of us in particular except if she is addressing a question to someone specifically. But when we are working on our own and all three of the teachers go round and help us individually, that helps a lot.

Wishing to find out more about how this personal contact or closeness, as opposed to the professional distance teachers typically maintained in the classroom, enhanced Aboriginal students' learning, I asked Ned to elaborate on his comment and he said,

Well, I mean, the close contact means personal attention. When they come close to you, sometimes they bend down to your seat level and you tell them your specific problem and they explain and help you. When you get the point right, sometimes they pat you on the back. They are also more friendly one on one.

Research shows that individualized instruction has a positive effect on student academic achievement in general. For Aboriginal students in particular, individualized instruction appears to carry added benefit because of its significance in communicating the warmth that these students perceived as important in interactions between them and their teachers. Joe expressed this feeling best in his closing comment on this aspect of our conversation:

When they [the teachers] are that close and personal you get the feeling they care.

However, the effect of personal warmth on Aboriginal students' intellectual performance needs to be further investigated. Many studies with white students have also found warmth to be a central dimension of teacher behavior related to outcomes such as student attentiveness (Ryans in Kleinfeld & Nelson, 1991), productivity (Cogan in Kleinfeld and Nelson, 1991) and achievement (McKeachie & Lin in Kleinfeld & Nelson, 1991).

Data from my study do not suggest that all "respectful," "strict," and "warm" teachers are good teachers of Aboriginal students. They do, however, suggest that there are different notions among different cultural groups about which characteristics make for a good teacher. It is, therefore, impossible to create a model of the good teacher without taking issues of cultural and community contexts into account.

Tentative Recommendations

Based on the above findings and discussions, the following tentative recommendations were developed for teaching and teacher education that have the potential to enable Aboriginal students to draw generously and positively on their cultural heritage to acquire the school knowledge and mainstream cultural codes they need to succeed in Canadian society.

1. The use of indigenous Aboriginal approaches to teaching and learning, such as storytelling and learning through observation and imitation, should be encouraged in classrooms with Aboriginal students. Storytelling especially has been found to be a most powerful teaching tool for making abstract ideas intelligibly concrete to students (Osborne, 2001) and should, therefore, be used more often to arouse the interest not only of Aboriginal students, but all students in the classroom.
2. Teaching methods largely characterized by fast-paced talk as a main vehicle for bringing about students' learning should be minimized. The verbal saturation characterizing current teaching in schools appears to impede Aboriginal students' learning.
3. Until they have developed the skills for independent learning in the formal education system, Aboriginal students should be provided with learning scaffolds in the form of detailed explanations, numerous concrete examples of concepts under classroom discussion, and explicit steps to follow in the performance of a given learning task.
4. Until conclusive research evidence emerges to disprove the claim that instruction adapted to Native groups' visual learning style will increase learning, visually based instruction should be maximized in classrooms with Aboriginal students.
5. Because of the existence of cultural differences in patterns of oral interactions, classroom communication by teachers should offer clarity (preferably in directive language) about what is required (the product) from Aboriginal students in the classroom.
6. Without belittling the importance of independent thinking and independent work in the teaching of Aboriginal students, as many opportunities as possible should be provided for cooperative and collaborative group work. In doing so, care must be taken to build the elements of accountability and equitable distribution of work into cooperative or collaborative tasks to

increase their academic benefits for all students, but more so for Aboriginal students for whom this approach to learning seems to have a cultural basis. Collier (1993) endorses this recommendation when she posits that an added benefit of small-group work for Native students is that it provides them with easier opportunities to speak and go over the material than larger-class situations.

7. To increase motivation for learning among Aboriginal students, curriculum materials and classroom teaching-learning processes must include Aboriginal perspectives, histories, cultures, and successes and should nurture high aspirations for Aboriginal students while also exposing them to non-Aboriginal curriculum materials. Here infusion rather than once-in-a-while add-on materials and activities should be stressed. As Banks (1994) has pointed out, culturally sensitive education is a dynamic and ongoing process. Add-on programs often trivialize ethnic cultures and view ethnic content from the perspective of mainstream culture.
8. Aboriginal students seem to expect their teachers to be strict, show personal warmth toward them, and show respect for them and for their own knowledge and experiences. Teaching and teacher education aimed at enhancing Aboriginal students' learning must, therefore, encourage the development of these teacher characteristics.
9. Supportive classroom environments should be created to increase opportunities for oral participation by Aboriginal students. Whyte (1986) states that the verbal capacity of Indian or Metis students may have been underestimated, with the end result in some cases of their being streamed away from academic programs, which emphasize verbal skills.

Suggestion for Further Research

This was a small-scale exploratory study undertaken to identify Aboriginal cultural aspects that mediate or influence the learning of some students of Aboriginal ancestry in the formal school system. Some specific hypotheses concerning such cultural mediators have been developed as a result of this study. As the above discussions of the study's findings indicate, research is still largely inconclusive about many claims relating to specific or predominant Aboriginal cultural ways of learning, highlighting the difficulty in arriving at any final "formula" for helping a cultural group perform better in an educational setting. Indeed, researchers still have to resolve whether optimal results are achieved when the learning styles of any cultural group or individual are systematically matched to curriculum and instructional methods (Curry, 1990). Some (Franklin, 1992; Miller-Lachman & Taylor, 1995) have pointed out that accommodating cultural learning styles of at-risk students consistently has resulted in increased academic achievement, increased attendance and retention, and gains in reading and mathematics (Carbo & Hodges, 1991). Others (Kleinfeld & Nelson, 1991), however, have concluded that although ample evidence documents that certain learning styles tend to be predominant in certain cultures (i.e., patterns exist in how members of different groups approach tasks), there is no demonstrable impact on achievement when teachers try to match specific teaching strategies to specific aspects of students' cultural learning style preferences.

At this point, further research designed to test rigorously the key findings of my study in a larger population needs to be carried out in order to develop more informed recommendations to guide teacher education and teaching.

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