

# “She Can Bother Me, and That’s Because She Cares”: What Inuit Students Say About Teaching and Their Learning

*Brian Lewthwaite & Barbara McMillan*  
*University of Manitoba*

In this study, we have investigated, through interviews, conversations, questionnaires, and observations, perceptions of learning success of northern Qikiqtani (Baffin Island) of Nunavut Inuit middle years (grades 5-8) students and the classroom pedagogy influencing their success, in particular their learning in science. Most of the processes identified as contributors to successful learning were culturally located. Students also placed importance on teachers who cared not only for them as people, but also for their performance as learners. Based upon students’ information, we have presented a profile of the characteristics of effective teachers in Inuit schools to promote learning within a positive environment.

Key words: Nunavut, culturally responsive teaching, social and interactive processes, Qikiqtani (Baffin Island)

Les auteurs ont étudié, à l’aide d’entrevues, de conversations, de questionnaires et d’observations, les perceptions d’élèves de 5<sup>e</sup> à 8<sup>e</sup> année sur l’île de Baffin au Nunavut au sujet des facteurs entrant en jeu dans leur réussite scolaire, notamment en sciences. La plupart des facteurs identifiés étaient reliés à la culture locale. Les élèves accordaient en outre de l’importance aux enseignants qui se souciaient d’eux non seulement comme personnes mais aussi comme apprenants. À la lumière des entrevues effectuées, les auteurs brossent un tableau des caractéristiques d’enseignants efficaces qui réussissent à promouvoir l’apprentissage dans des écoles inuites, dans un environnement positif.

Mots clés : Nunavut, enseignement adapté à la réalité culturelle, processus sociaux et interactifs, *Qikiqtani (île de Baffin)*.

The establishment of the territory of Nunavut in 1999 emanated from a deep-rooted and overwhelming call through years of lobbying by the Inuit of northern Canada to move towards self-governance in all aspects of Inuit society. In no context was there greater resonance of voice for self-determination than in the domain of education. Through the establishment of Nunavut, Inuit gained self-rule and control in policy over their own institutions, including schools. Since 1999, Nunavut has moved to establish the *Education Act* (Government of Nunavut, 2008) to set the course for future developments in education across Nunavut. As Ed Picco (2006), the past Minister of Education, purported in legitimizing the length of time it had taken to come to a collectively accepted document, "Nunavummiut<sup>1</sup> want a made-in-Nunavut *Education Act* that reflects Inuit values and culture. We want to ensure [it provides the foundation for] the best quality of education for our children" (p. 2).

With the establishment of Nunavut and, ultimately, the *Education Act*, the territory faces the challenge of reversing assimilation and regaining a sense of identity, especially within classroom experiences that influence the education of Inuit children. The Government of Nunavut Department of Education (GN) has identified "culture-based education" as one of the foundational principles for school development. The GN policy requires organizations within Nunavut communities to create activities that preserve, promote, and enhance their culture, including arts, heritage, and language. This policy, based upon the principle that culture, in all its expression, provides a foundation for learning and growth, and that the GN should support individuals, organizations, and communities to promote, preserve, and enhance their culture (Government of Nunavut, 2005). The underlying premise of culture-based education is that the educational experiences provided for children should reflect, validate, and promote the culture and language of Inuit. These experiences should be reflected not only in the management and operation of schools but, arguably more important, the curricula implemented and pedagogies used at the classroom level.

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<sup>1</sup> This word means the people of Nunavut.

Similar to most Indigenous<sup>2</sup> peoples, Inuit presently participate in a school system that has been drawn from the dominant culture, in their case southern Canadian school system models. Although Inuit staff work in the schools, especially elementary schools, the majority of teachers, principals, and school operations administrators are non-Inuit and the curricula and pedagogy of classrooms are based on southern models. Because of this, school practices such as the content of curricula and pedagogical practices have both intentionally and unintentionally denied the inclusion of those aspects of culture that have value and are important to children (Bishop, 1996; Bishop & Glynn, 1999; Chisholm, 1994). The present study arises in response to this cultural denial to support a move towards a better understanding of classroom practices that have value in the learning of Inuit. The following questions guided our research:

1. What do Nunavummiut Inuit students identify as success?
2. What pedagogical and social interactions at the classroom level influence their learning?

#### CULTURALLY RESPONSIVE TEACHING

We defined this research, informed by the ideas and explanations of *culturally responsive teaching*, as using the cultural knowledge, prior experiences, frames of reference, and performance styles of students to make learning more relevant to and effective for them (Gay, 2000). Although several studies have focused on the identification of the critical elements of instruction influencing the school success of Aboriginal students (e.g., Berger, 2007; Clifton & Roberts, 1988; Deakin University Press, 1991; Kleinfeld, McDiarmid, & Hagstrom, 1995), few have focused on grounding the studies in the voice of Aboriginal students themselves and their Aboriginal educators. One Nunavut-based resource publication, *Inuuqatigiit: The Curriculum from the Inuit Perspective* (Government of the Northwest Territories [GNWT], 1996) and two research and development projects, one based in Canada (Kanu, 2002, 2006) and the other in New

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<sup>2</sup> The terms Aboriginal and Indigenous in this article refer to Indigenous peoples including Australian Aborigine, Inuit, Inuvialuit, Māori, Metis, and First Nations. These are the contexts in which the authors individually and collectively work and facilitate similar educational aspirations for these people groups.

Zealand (Bishop, Berryman, Tiakiwai, & Richardson, 2003), have provided an invaluable platform for this study because they place authority on students' ability to identify and communicate their understandings of what influences their learning. All three publications or projects are similar because they inform improvement in educational success in response to what students are saying about their learning in Aboriginal (i.e., Inuit, First Nations, or Māori) settings, especially where educational success has been thwarted by a variety of factors, in particular, the marginalization of Aboriginal culture from the formal education landscape.

The document, *Inuuqatigiit: The Curriculum from the Inuit Perspective* (GNWT, 1996) that Inuit educators wrote for educators of Inuit, provides considerable insight into the classroom and interactive social interactions influencing Inuit student learning. The document, which outlines traditional Inuit practices for teaching, shows how these are translated into contemporary classroom practice. In the second publication of significance to this study, Kanu (2002, 2006) engaged several Aboriginal students of inner-city Winnipeg in conversations to identify the pedagogical and interaction patterns that have resulted in their negative or positive learning experiences. In this analysis, she focused on determining the curriculum materials, teaching strategies, and classroom interactions that influenced student learning. By developing an understanding of those interactions that supported or inhibited student engagement and learning, Kanu has assisted teachers to develop effective teaching and classrooms patterns that reduced the rupture between home culture and school for inner-city First Nations students. In a third publication of significance to this study, Bishop et al. (2003) in New Zealand with their ongoing *Te Kotahitanga* project have identified through their conversations with Māori students a variety of practices that contribute to both positive learning environments and student success in learning, practices located mainly in students' home culture. By so doing, they have developed an "effective teaching profile" for teachers of Māori students based on operationalizing interaction and pedagogical practices that students believe address and promote their educational achievement.

Both Kanu's (2002, 2006) and Bishop et al.'s (2003) research projects, mentioned above, are similar because they determine from the perceptions of Aboriginal students teaching practices that contribute to their

success as learners. These researchers used students' voice to question the protocols of mainstream classrooms and, in response, promote a dynamic and synergistic relationship between home and community culture and school culture (Ladson-Billings, 1995). This questioning ultimately and purposely "problematizes" teaching, upsets the orthodoxy of classrooms, and encourages teachers to ask about the nature of student-teacher relationship, their teaching, the curriculum, and schooling (Ladson-Billings). By creating this disequilibrium, educators are pushed to seek resolution of these issues to move their classrooms to become more *culturally* responsive as they employ a culturally preferred pedagogy. As suggested by Gay (2000), culturally responsive teachers *respond* to the cultural knowledge, prior experiences, and performance and learning styles of students to make learning more appropriate and effective for them. They teach to and through the strengths of their students, reducing the discontinuity between the home cultures of these students and the social interaction patterns of the classroom (Kanu, 2002, 2006). As Bishop et al. (2003) assert, at the heart of many school systems' thinking is a belief or, at least, an assumption that Western ways are superior and that Aboriginal culture and specifically students may bring deficits to classrooms, not assets. Such thinking suggests that not only are students' background experience and knowledge of limited importance to promote learning, but so are their cultural foundations. Deficit thinking or theorizing, as it is called, is the notion that students, particularly low-income, minority students, fail in school because they and their families experience deficiencies such as limited intelligence or behaviours that obstruct learning (Bishop, 2003; Castagno & Brayboy, 2008; Valencia, 1997).

In contrast, the underlying premise of culture-based education is that the educational experiences provided for children *should* reflect, validate, and promote their culture and language. These experiences should be reflected not only in the management and operation of schools but also in the curricula and programs implemented and pedagogies used. It assumes that students come to school with a whole set of beliefs, skills, and understandings formed from their experience in their world, and that the role of the school is not to ignore or replace these understandings and skills, but to recognize the teaching practices and understandings within

the cultural context and affirm these in formal classroom settings (Stephens, 2003; Wyatt, 1978-1979).

This advocacy has long been held in Nunavut schools. As Stairs (1995) has asserted, Inuit students' lack of educational success can be attributed to, to a greater degree, the inability of northern schools to meet the learning needs of their Indigenous citizens through the experiences offered and pedagogies used in classrooms. She asserted that this failure includes not only resource and language materials appropriate for each context, but also, more importantly, the culturally located pedagogy that moves beyond the *what* of classrooms to the *how* of classrooms. Stairs identified in her ethnographic research that the formal learning (referred to as *ilisayuuq*) of Qikiqtani (Baffin Island) schools is radically different from the informal learning of Inuit home culture (referred to as *isumaqsayuuq*) and that successful classrooms are likely to reflect these home practices (GNWT, 1996). These claims have been advocated for but tragically ignored for decades in Indigenous settings (Wyatt, 1978-1979). Although culture-based education may be rhetorically premised as the foundation of Nunavut classrooms, what would classroom environments and teacher practices look like that are, indeed, reflective of Inuit students' preferences?

#### CONTEXT OF THE STUDY

Over the past five years the authors, both experienced middle-years teachers and now researchers at the University of Manitoba's Centre for Youth, Science Teaching and Learning (CRYSTAL), have been working with three northern Canadian Qikiqtani (Baffin Island) school communities to assist these schools to achieve their aspirations for science education, aspirations grounded in a desire to see Inuit culture affirmed in the school science experience provided for their children. The communities chosen for the project were Nunavut schools that were relatively geographically close to each other (albeit at least one hour flight time apart and at least six hours total flight time north of Ottawa) and were willing to work towards a development project based upon local aspirations for science education in a language of instruction decided by local community, in their case Inuktitut.

A variety of goals were anticipated for the CRYSTAL project. First, for school communities, the ultimate goal was to establish a science education program that honoured community aspirations. Lewthwaite and McMillan (2007) and Lewthwaite and Renaud (2009) have detailed the results of community discussion and the outcomes. The common theme among these community discussions, without exception, was for a science education experience that combined the views of “both worlds,” that is, one that combined the knowledge, values, and skills of both Inuit ways of knowing and Western science. Within one of the communities in this study, this “both-ways education” – that combines the knowledge, practices, values, beliefs, and ways of knowing of both the community of scientists and Inuit culture – is known as *piqusiit tamainik katisugit* (personal communication, elders working in association with the Nunavut Research Institute, Igloodik). Parents and other community members indicated a high regard for and in many cases an obligation to see science taught in a manner that integrated traditional (cultural) and contemporary science knowledge and practices. The following comments are representative of this advocacy (Lewthwaite & McMillan (2007):

For a long time we would put away our knowledge [at school] and the way we do things and it wasn't important. For my children I want that to change. I want them to be raised to [be] proud of who they are and learn things that are important to their lives in the future, both if they live here or away. They have to learn both ways. (Inuk teacher and grandparent, interview)

I was told for so long [through schooling] what I knew wasn't important. That has changed but it still needs to change for better. There are things we need to learn but there are things [about our culture] we need to be reminded are important, not just about what we know but the way we do things. (Inuk Local Education Authority member, interview)

Teaching with reference to both [contemporary and traditional knowledge] just strengthens the richness of the experience provided for students. It's not a matter of being obligated in doing so. One without the other just reduces the richness of experience for children. (Non-Inuit Program Support Teacher, interview)

These comments were characteristic of many stakeholders who indicated that a high regard for teaching science to honour local epistemology was

essential in schools. These comments imply the desire to see a repositioning of the knowledge and procedural aspects of *Inuit Qaujimaqatuqangit*<sup>3</sup> alongside contemporary Western science thought and practice, ensuring its validity within the classroom. Also implied is an assertion that stakeholders are unwilling to have their children experience science education success at the expense of their cultural and psycho-social well-being (Fordham, 1988). They stated that their children's cultural competence was not to be compromised by their learning of formal science. McKinley (2000), a New Zealand Māori academic, supports this educational imperative. McKinley recognized that the intentions of mandated science curricula do not adequately ground the priorities of Indigenous communities because they are largely expressions of the dominant, mainstream culture. Such curricula must acknowledge local Indigenous communities and their knowledge, values, beliefs, and pedagogies as thoughtful and purposeful cultures. McKinley's assertion is honoured within the communities involved in this Qikiqtani science education development project despite the acknowledgement (e.g., Douglas, 1998) that some of this epistemology, especially traditional knowledge, can be diametrically opposed to Western scientific knowledge and its processes.

We had a second goal for this project: the practical teaching resources emanating from, and an understanding of, the processes influencing the realization of these goals would provide an example for other Nunavut and Aboriginal communities to achieve their curriculum goals. That is, we anticipated that the factors and processes influencing an individual teacher and her or his school community's ability to achieve these aspirations would be identified and communicated through pro-

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<sup>3</sup> The guiding principles of *Inuit Qaujimaqatuqangit* (IQ) are likely capable of supporting the development of classroom learning environments, curricula, and overall school operation and management structures. To many people, the "traditional knowledge" aspect of IQ is often the only side that is seen, but that describes only one half of it because IQ is equally and probably more importantly about process (Arnakak, 2001). IQ is really about healthy, sustainable communities, including school communities, regaining their rights to a say in the governance of their lives using processes, principles, and values they regard as integral to who and what they are (Arnakak, 2001). A basic foundation of IQ is the ground rules, customs, and the right way of doing things for Inuit.



fessional and academic publication, and, in turn, would provide clarity to others in their similar endeavors. These outcomes are communicated in other publications (Lewthwaite & McMillan, 2007; Lewthwaite & Renaud, 2009).

Finally, and central to this study, we anticipated that the learning experiences provided for students currently, and through the CRYSTAL efforts, would help identify classroom-based pedagogy and influence students' perceptions of their own school success. We premised this component of the study upon Stairs' (1995) assertions that resource development and first-language use are *only* a starting foundation for a classroom that operates upon a broad culture base. She asserted that a broad culture-based classroom experience for Aboriginal children would be manifest through the adoption at the school and classroom level of social and cognitive processes operating within local Aboriginal culture. Although this stage of the project is ongoing, preliminary data collection, based primarily upon conversations with children and teachers, and observations of successful classrooms, provides ample evidence to make some assertions about classroom pedagogical and interactive teaching influencing student success that are valuable to many, especially teachers in communities in our study and Nunavut schools in general. This latter outcome is the focus of this article. That is, what do students and teachers of these students identify as the pedagogical and social interaction that influence Inuit students' perceptions of their own school success?

#### METHODOLOGY

As purported by Bevan-Brown (1998), our overall aim of this research was motivated by our desire to better inform and benefit Inuit students and their teachers to see the realization of Inuit aspirations for education. Both Kanu's (2002, 2006) and Bishop et al.'s (2003) qualitative projects, grounded in the domain of culturally responsive pedagogy and critical pedagogy (Freire, 1970), have provided a foundation for both the research questions and methodology central to this study. In all cases, the methodology for the overall research project is informed by participatory action research, especially that conducted in Aboriginal communities of the Northern Territory of Australia, which drew upon the collective aspirations of each Aboriginal school community (i.e., its teachers, students,

parents, administrators, and supporting elders) as researchers in collaboration with the authors to (a) identify common goals, (b) implement strategies for achieving these goals, (c) evaluate the effectiveness of efforts to achieve set goals, and, finally, (d) respond to the evaluations with further courses of action (Kemmis & McTaggart, 1988). Because the project overall endeavors to critically identify and change patterns of action of local institutions in response to locally identified goals, including the pedagogy in Aboriginal schools and their classrooms, it is emancipatory as well (Deakin University Press, 1991). Our research questions are:

1. What do Inuit students perceive as educational success?, and
2. What teacher-specific and learning-environment characteristics and social interaction behaviors do students perceive contributing to this success?

#### PARTICIPANTS AND DATA COLLECTION

To answer these questions, we have employed a variety of data sources to improve the confirmability and transferability in the findings (Bogdan & Biklen, 1998). These sources of student data included (a) completion of a questionnaire in English or Inuktitut by a 36 grade-5 to -8 students in two communities, (b) individual interviews with 24 grade-7 and -8 students in three communities, and (c) group interviews with 39 students from three grade-7 and -8 classes from three communities. These three sources of student data included all students available through informed consent on the days in which data collection occurred. In all, 89 per cent of students, all Inuit and Inuktitut first-language speakers, and their parents/caregivers consented to participate in the study. In both the questionnaire and interviews, we asked questions that focused on students identifying (a) the last time they felt they had been successful in school, (b) what their teachers did to help them to learn, (c) what was happening in their classroom when they were learning best, and (d) what they would change about their teachers' teaching or what should happen in their classrooms to assist them in their learning.

We, as CRYSTAL researchers, also observed six teachers (two Inuit, one First Nations, one Indo-Canadian, two Caucasian) identified by their teaching peers, principals, and us as successful classroom teachers who

created positive learning environments. These observations occurred on researcher visits to the schools twice a year over a three-year period. In all six cases, we observed these teachers each year with a different student group. The total observation time in each classroom was about 10 hours.

Because we have spent on average two weeks per year in each school over five years, we have observed the same students in, typically, five different classrooms with five different teachers. Students were quite familiar with us because both have worked alongside their regular teachers in teaching science related activities that are developed as the other component of this research and development project. Further, we interviewed eight teachers (six being non-Inuit), who were completing their employment with Government of Nunavut, to ask them to consider teacher, student, and classroom characteristics that promoted positive learning environments and facilitated engagement and learning.

Finally, we shared in two schools interview results with students and with teachers at a staff meeting. All teachers were invited to respond to students' comments about teacher behaviours that influenced their learning. These meetings involved the entire elementary-middle years teaching staffs which, typical of Nunavut settings, were predominantly Inuit at the elementary level and non-Inuit at the middle years level. All interviews were audio-recorded. We verified transcribed sections of the conversations as accurate through our conversations with each other as researchers and with the students and their teachers.

In all cases, our formal interviews were more a conversation because of our relationship with the students and teachers. The informal interviews were a chat based upon the need for collaboration between researchers and researched to construct the final story as evidenced in the vignettes and themes in a subsequent section.

#### DATA ANALYSIS

Using the questionnaires, conversations, interviews, and classroom observations that have occurred throughout the past five years of the study, we identified themes that we shared with students and their Inuit and non-Inuit teachers individually and collectively, seeking to better understand the nature of interactive behaviour patterns influencing stu-

dent learning. The study, drawing upon multiple sources of information (students, teachers, and background literature), includes a multi-perspective analysis generating themes from the relevant players and the interaction among them. Overall, we sought to make sense of the respondents' personal stories about classroom learning and how these stories intersected (Glesne & Peshkin, 1992). We sought to understand students' and teachers' behaviour from their own frames of reference. Within the experiences of the participants, we identified common themes (Bogdan & Biklen, 1992)

#### RESULTS AND DISCUSSION: PERCEPTIONS OF SUCCESS AND FACTORS INFLUENCING SUCCESS

Because the purpose of this research was to identify what students see as educational success and the classroom-based pedagogical and social interaction that influenced perceptions of their own school success, we have organized the themes from our data around three headings. Again, what we report primarily focuses on comments where consensus was evident among students or teachers or between teachers and students. Kanu (2002) suggests that these themes are likely to be manifest in students' home and community culture, and we have made such connections in the accounts that follow. Our findings verify assertions made by Inuit educators in *Inuuqatigiit: The Curriculum from the Inuit Perspective* (GNWT, 1996).<sup>4</sup> Because the CRYSTAL project is within the context of science, many of the comments reported refer to science-related topics.

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<sup>4</sup> The ongoing phase of this research seeks to now position these findings alongside the views of community elders, especially those elders who have worked in a formal educational role in order to draw these themes to further resolution. Further, the ongoing study seeks to determine through empirically-based research, the influence of these pedagogies on student learning

*Student Perceptions of Success: The Importance of Working to an End*

From the questionnaire surveys and individual and group conversations, students' perceptions of educational success, without exception, focused strongly upon their identification of achievement in some first-hand experience of "working to an educational end" or assisting someone to work to an educational end. The focus of the responses was on the satisfaction received from completing something or accomplishing it individually or collaboratively through effort, much more than any mention of the external formal evaluation of a completed project. Performance was evaluated primarily on physical product and the knowledge that effort had been required to work to an end. As examples, the "product" often included mastering a series of mathematics problems, completing a poster or model, or assisting others in their efforts to work to completion. Participants always valued praise from a teacher or peers, which helped them to identify the completion of a product. However, students most commonly were able to identify when they had persevered and individually "worked to end," implying that they were able to self-evaluate on-task completion. Comments and illustrations elucidating their views of success are listed below.<sup>5</sup>

Interviewer: When was the last time you felt successful at school?

Elijah: The turbines [wind rotators]. Mine worked good. It went around fast.

Interviewer: Why did you feel successful?

Elijah: It wasn't easy. You had to work at it. We tried this, then this, working to make it go and it went. Then we tried some more and it went better. (Elijah, student interview)

Elisapee: When you help someone [with math] and then they can do it because you helped.

Interviewer: Why did this make you feel successful?

Elisapee: They didn't get it and then because you helped them and they didn't give up, they were really happy. You worked together to make it ok.

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<sup>5</sup> In all cases throughout these vignettes, we have used pseudonyms for students' names. We used pseudonyms for teachers where they did not permit use of their names.

Shane: We made the [string] telephones and ours worked. You could tell they weren’t all working. We changed it and got it to work well in the end. (Elisapee, student interview)

Eli: I worked on the [model of the] village. It was just like the real village long ago, but very small. We made it really close to what it was like. It took a long time but we made it. I felt proud.

James: We do the story-writing and then we drew a picture. [Another student] could read my story and she could see the picture. It was the first time someone reads my story. I was happy and wanted to do it [again] in the afternoon. (Eli, student interview)

Tuqqassie, an experienced Inuit teacher, confirmed these comments.

We want our students to persevere and see the result of their work. They need to know that they can do something on their own. Being helped is ok, but they need to know they can do it on their own. It is the way our culture works. You have to be able to persevere, and be encouraged as you persevere. They can get frustrated but they have to be able to work it through in their own mind and not give up. That is what is important. (Tuqqassie, Inuit teacher)

Tuqqassie’s comments emphasized the importance of students persevering to an end and being affirmed as they worked to an end, not simply being judged for their performance removed from the actual process of working to an end. As well, students were not only working on tasks that were attainable in terms of completion, but also having a degree of open-endedness in terms of the end result. Students were not simply following a set of steps to all arrive at the same conclusion or end. Instead they were required to show some initiative, perseverance, and independent thinking to arrive at an end result. What was evident overall from students and teachers is that end results that focus on assigning achievement scores based on knowledge and understanding “correctness” were much less important than the actual completion of a task. We feel that students’ sense of success is culturally situated; that is, within their culture, success is defined in terms of working to an end. Comments in *Inuuqatigiit: The Curriculum from the Inuit Perspective* (GNWT, 1996) affirm this conclusion. Teachers in this curriculum document emphasized that “doing of things,” task completion, and developing a sense

of accomplishment from task completion are an integral component of Inuit learning.

Often in subjects like science the focus for teachers is on developing students' understanding of a conceptual area or having right answers, whereas for students their sense of accomplishment is likely to come from completion of the activities that provide students with the foundational experiences to support their learning of science ideas. Within a subject such as science, the middle-years curriculum (which is still mandated as the Northwest Territories curriculum for grades 1 through 6 and the Alberta curriculum for grades 7 and 8) begins to shift focus from initial first-hand experiences to the conceptual understanding of science ideas. Associated with this shift is the likelihood that many teachers will emphasize knowledge development at the expense of first-hand experiences. Because students' greatest sense of satisfaction apparently comes from working to an end, teachers must be aware of the significance of providing learners with attainable opportunities promoting first-hand experiences that require them to persevere to an end. As well, because students themselves nearly always recognize success by persevering to completion, teachers need to emphasize formative assessment practices which focus on more informal but informing assessment practices. They need to reconsider the emphasis they might place on marks and scores for evaluating students' performance as opposed to performance evaluation of working to an end. Students are unlikely to hold a view that "a mark," especially a summative mark accredited much after the completion of an act, has much value or should have more value than their personal perceptions of having worked through something to an end.

As Bishop et al. (2003) suggest, the dominant culture typically has defined success for Aboriginal students. In Nunavut schools it is possible, even likely as Berger (2007) asserts, that teachers from the south define success differently from their Inuit students. Terms of reference for defining success in southern curriculum documents need to be challenged because the very pedagogy will hold these definitions as a central value. If the terms of success are to be culturally determined, teachers need to reposition how they see and evaluate success – a claim also asserted by Berger (2007). The comments from students suggest that their achievement is acknowledged primarily through their self-evaluation of

their ability to work to an end and their sense of satisfaction reinforced through the acknowledgement of others that they have worked to an end in an appropriate manner.

*Classroom Interaction Contributing to a Positive Learning Environment*

Students identified a variety of classroom interaction patterns, primarily influenced by their classroom teachers, that contributed to a positive learning environment. Because the majority of responses came from students themselves, we conclude that the interactions influencing students' perceptions were those to which teachers contributed either directly or indirectly. Similarly teachers suggested that they themselves were primarily responsible for contributing over time to a positive learning environment. They also noted that students instigated negative classroom environments. Bishop et al. (2003) suggest in their research that many teachers of Māori identified that someone outside a teacher's area of influence such as the school administration, the community, or the students themselves were responsible for the development of a negative learning environment. That is, where teachers perceived their classroom to be a negative environment to foster learning, they attributed the cause to elements other than themselves: It is not something for which a teacher is responsible. Fuzessy (2003) has also identified this perception which he identified among non-Inuit educators in the Nunavik context.

Such beliefs typically manifest themselves in a "me and them" frustration mentality at the classroom level. Although there are factors outside a teacher's direct control, teachers who position themselves and accept their part in the relationship are likely to make more progress in establishing positive learning environments. That is, teachers who have a personal understanding that they *can* bring about change and *are responsible* for bringing about change in the interaction patterns in classrooms are likely to have much more success in creating positive learning environments. As two southern teachers leaving the north suggested:

You have this idea that things are going to be quite utopic [here in the north] and that isn't what I faced halfway through the year [when I arrived]. I had in my mind the way things should be, and I was going to move towards that end. It took me that whole year [to work towards this and I didn't achieve it], and if I [had] achieved this end it wouldn't necessarily have been the best result. I guess I



just wanted a well-managed classroom where everything went my way, or at least the way I thought was best. (Paul, teacher interview)

When I look back [over my time here] what has changed most is me; just how I see the purpose and goal of education. For students it's mainly about what we are doing, and for me it was always the end result – learning this, reciting that – I just had to become much more focused on the *way* we did things – not just the end result. Seeing them [the students] as individuals and their interests and abilities – that made the biggest difference – not just a whole class with me as a teacher. (Esther, teacher interview)

Both Paul and Esther talked at length about how they had worked towards establishing more positive ends primarily through their changed relationships and interactions with students, especially in the development of positive learning environments. In contrast, one teacher who saw the problem as inherent within the nature of her students and the culture of the community asserts:

It never seemed to get to the place where I wanted it to. Just for students to work independently and co-operatively – at least for even a short period – they [the students] were just unable to. Unless I was in charge and very structured it wouldn't work. (Pamela, teacher interview)

Students, however, were able to identify teacher behaviours that supported the development of positive learning environments. As they said:

I didn't know which one [of the teachers in Grade 6] I wanted this year. Everyone knows they are very nice to you. They make you work, but they are nice. They care. (Wayne, student interview)

She [my teacher this year] doesn't just have to have things her way. Last year [the teacher] was strict but that doesn't mean I enjoy[ed] it or learn[ed] more. (Elisapee, student interview)

She tells us she cares about that we learn and we want to learn. That's her job and our job is to try hard to help us to learn. She says that all the time and it's true. I know sometimes she's mad at us and that's ok. We try hard. (Jacob, student interview)

She can bother me, and it is because she cares. We think that she cares about everyone the same way. [A student] doesn't come to school and she cares about that. It doesn't matter what it is. We know the [whole] class is important. I hope next year [at the high school] that's what we get. (Joelie, student interview)

These comments are consistent with Berger's (2007) reflections of previous assertions about teacher expectations and positive learning environments for Inuit settings. He suggests that a warm and caring environment where a teacher is seen as part of 'the team' *and* maintains high expectations is thought to be best (Clifton & Roberts, 1988; Watt-Cloutier, 2000) and is something teachers can work towards. Consistently students in our study made distinctions between classrooms that were very structured and teacher-directed and those classrooms where the environment was co-constructed and reflected students' perceptions of a positive learning environment. As one teacher said:

I don't know how well I'll do teaching down south again. Here, I have had to work with my students to make it work. It's about reflecting their needs and interests and I think [down south] I'm used to it being pretty much on my terms. It's [This is] what I want to have in my classroom [down south] but I'm concerned that this might not be the attitude of the teachers I'll work with [and will prevent me from responding to my students]. (Esther, teacher interview)

Teachers and students did not negate the role of a teacher as authority, but all emphasized the role of a teacher of working with students to facilitate a common vision for the learning conditions of a classroom. As one teacher who has lived in the north for several years suggested:

Students may know you and of you out of the classroom and the school, but until they are in your class they don't really know what you are all about. That can make the start of the year difficult. But, I focus on them telling me what they think my responsibilities are and them telling me what their responsibilities are. We write these on a wall poster. We always return to these. We try to live by these. (Sharon, teacher interview)

Sharon's comments are reflected in the comments of nearly all students. She worked towards establishing an open dialogue among her

students to identify each person's expectations and to identify how these expectations became the foundation to define a positive learning environment. Both she and her students demonstrated their high expectations for a secure, well-managed learning setting: a focus on two-way communication and an open dialogue that speaks truthfully of expectation, disappointment, and successes for teachers and students. Sharon's comments are strongly embedded within the Inuit *Qaujimaqatuqangit* principles of *tunnganarniq* (respecting others and relationships), *aajiiqatigijnniq* (ensuring all aspects of community development are fostered through decision making through collaboration and consensus), *pilimaksarniq* (development through practice and action ensuring members of the communities are full and meaningful partners in community and social development activities) and, *piliriqatigiinniq* (working together for a common cause) (Arnakak, 2001). These principles may be quite foreign to teachers who see their role from a much more teacher-dominated and teacher-directed stance. In contrast to this, the comments of students and teachers in the previous quotations see positive learning environments as learning communities that have been constructively negotiated: where expectations were clear and both teachers and students were accountable. As many students and teachers in one school suggested:

We all know what is expected of the other. If an individual student doesn't comply, even the other students will try to bring them on board. As a last resort we will seek administrative support. Note I said WE – it starts with us as a class and then it'll go outside the class if necessary. (Greg, non-Inuit teacher, interview)

I like it that we do [the decisions together]. I don't like it when one student gets it [singled out and disciplined by the teacher]. I like it better when we work on it together. We all know what we are supposed to do [including our behavior]. (Elisapee, student, interview)

These comments are affirmed by the Inuit educators in *Inuuqatigiit: The Curriculum from the Inuit Perspective* (GNWT, 1996) in which the curriculum writers assert the need to treat children with respect and include them as contributing individuals as part of a partnership in the overall success of classrooms. Parents and children want a positive atmosphere

for their children where students can feel good about their progress (p. 15). They echo Stairs' (1995) identification that personal relationships between teachers and Inuit learners are important and a teacher should be seen as part of "the team" (p. 284). Similarly, this observation resonates with Clifton and Roberts' (1988) findings that "effective teachers of Inuit students create emotionally warm and personable classroom environments" (p. 332).

#### *Pedagogical Practices Contributing to Student Learning*

The primary focus of the CRYSTAL conversations was to elucidate through student responses the pedagogical practices that influenced students' learning, an aspect encouraged by Stairs (1994) in her description of broad-based Aboriginal education. In the present study, we identified through consensus the low-inference teacher behaviours that influenced student engagement and learning. As suggested by Murray (1999) low-inference behaviours, specific and observable teacher behaviours, help students to learn. Students and teachers consistently identified the following behaviours, which are not presented in a priority list.

*The Importance of First-Language Use and Effective Oral Communication.* Because most middle-years students and their teachers were in classrooms where the students' first language was Inuktitut, but teachers were not of the majority language and were unable to communicate in the students' first language, students and teachers deemed effective oral communication as a major factor influencing student learning. Similar to Kanu's (2002) findings, effective teachers in the present study were able to communicate clearly to students or use strategies to explain, even if they required the assistance of others. As the students said:

He speaks fast. He is kind of mumbling (sic) too. I don't know why he doesn't speak so we can listen and learn. (Wally, student interview)

It's like he tries to make us not learn. I want to learn but I can't learn because I can't listen to what he says. (Joelie, student interview)

Students typically considered clear communication as simple, uncomplicated expectations that were often accompanied by visual representations or modeling. Teachers commonly undertalked rather than over-

talked. Within the context of science, the following two comments are specific to this characteristic.

She shows us what to do rather than just telling us. The words are there but when the words are with the thing we do, it makes sense. She doesn't go on and on. (Esther, student interview)

I can follow the books we use in science. I like the pictures because you can see what it looks like. Then the words she says make sense. (Thomas, student interview)

And, as their non-Inuit teacher suggested:

We use [name of a science series]. The language is appropriate and it is supported by wonderful visual images that support their carrying out the activities. It's visually sequenced so even if I speak clearly and slowly they can see what I am saying. Even gesturing and pointing [at pictures] becomes a means of talking. (Charles, teacher interview)

Non-Inuktitut fluent teachers often referred to their frustration in communicating ideas in all curriculum areas, and the difficulty in communicating with students whose first language is Inuktitut. As well, they suggested strategies used to communicate effectively.

You try to get across an idea, like the other day with the idea of a 'vibration.' They need to experience it first and then you try to show the meaning of the word. This worked well when I use my hand to show a vibration or drawing it on the board. But, Jeff [a teaching assistant and bilingual Inuk] was in the room and he explained it to the students and you knew that they understood it right away. (Charles, teacher interview)

You become thankful pretty quickly that some students are bilingual and can assist you in communicating ideas. We [the class] just need to accept that I can't talk to them in their language, but we can use others in the class to get across ideas. (Joelie, teacher interview)

Similarly, students recognized the influence of this language barrier as a frustration in their learning.

I can learn but when there's no Inuktitut I don't learn well. [Another student in the class] will help us to learn our way [in Inuktitut] so you don't feel like you are not smart. Sometimes you learn by seeing [the teacher do it]. Sometimes you have to hear it to learn. (Freda, student interview)

Freda's comments are not uncommon. She recognized that her learning was sometimes impeded because her first language was not the medium of instruction. But, where it is used mainly through a bilingual conduit, her learning is not impeded.

I learned lots last year [in a bilingual classroom]. This year I don't learn as much. I find it more hard because there is no Inuktitut. (Wayne, student interview)

Wayne's comments similarly expose the challenge for students in classrooms where they had to make the transition to another language of instruction.

*The Importance of Multiple Instructional Strategies.* Associated with the previous point is the importance of teachers using multiple instructional strategies to support student learning. The most common statement by teachers and students was associated with how they tried to communicate ideas, especially when the learning was associated with abstract ideas. Students commonly referred to learning through an instructional sequence that involved a teacher modeling, often repeatedly ensuring that students visualized what they were required to learn. This finding, similar to Kanu (2002), suggests that a strong link occurs between learning by observation and then imitation. Classroom observation of effective teachers often revealed that teachers did this modeling in silence and then, second time around, they added a limited verbal account of the procedure or explanation. Following this, teachers provided opportunity for students to independently provide an explanation or carry out a task and, if necessary, seek help from their teacher or from peers. As examples, two students commented of how a string telephone worked:

We had done it [made the telephone] but didn't know how it worked. She showed the picture of the things moving [vibration] and how the sound travels. We did the acting [role play] and you could see how the sound goes through [the

string]. She made us draw this our own way and I could explain it to [another student in Inuktitut]. (Simon, student interview)

Sometimes it's hard to understand [in English] and we might have [learning support teacher] in the classroom and that helps but together with the pictures and other things [role plays] we can get it. She wants us to get it. (Joelie, student interview)

Teachers' tangible visual representations through modeling to support abstract ideas were valuable, as is the opportunity for students to hear and provide explanations in their first language. Teachers commonly cited multiple approaches as ingredients to foster students' learning. These comments are endorsed by *Inuuqatigiit: The Curriculum from the Inuit Perspective* (GNWT, 1996), which emphasizes the importance of observation and imitation and ultimately through repetition, practice, and progression students become confident enough to do something independently.

*Allowing Time and Initial Support for Completion and Mastery.* Because students perceived success to be associated with accomplishing a task through to an end, they commonly cited that an effective teacher provided repeated opportunity and the time necessary for them to work through to an end. When students faced difficulty, teachers provided initial support to alleviate possible frustration, instead boosting initial confidence. As one Inuit teacher suggested:

You can't do it for them, but they must have some initial success and persevere. We worry about students that are too depending on us, but that can't change overnight. Once they see more success in themselves they are willing to do more on their own. It's like blooming – if we feed them encouragement through their little successes it gets better. (Tuqqassie, teacher interview)

Several students affirmed this comment. For example,

She'll [non-Inuit teacher] show us how to do it. Many times she'll show us. Then we try. She'll help us or we help each other. It will take time. She makes us do it on our own but first she will show us how. She can explain but showing me is better. She can go away then. (Tanner, student interview)

Tanner's comments reiterate the comments made by *Inuuqatigiit: The Curriculum from the Inuit Perspective* (GNWT, 1996):

Provide short verbal instructions in a calm, positive, respectful voice and model tasks ensuring you provide time for students to learn. Eventually children are expected to do the whole task from beginning to end, but must have a sense of achieving progress as they work towards the end. (p. 14)

*Providing Individual Attention to Support Learning.* Building upon previous comments, we note that students repeatedly mentioned the importance of someone, usually teachers, being near them, observing them completing tasks, and repeatedly assuring them that they were doing something properly. Students typically associated such comments with mathematics where teachers asked students to complete something on their own. When asked about their most recent examples of success, students often referred to completing numeracy- or literacy-related tasks. As identified by Kanu (2002), students often required some form of temporary framework or scaffolding, at least until they were able to develop the skills to learn independently. Repeatedly our classroom observations showed that these effective teachers or peers supported others' learning through direct guidance and assurance. Again, learning was supported by frequent, informal, yet informative feedback.

In math we mainly work alone or [in] groups after she has shown us how to do it. I like it when she shows us first and then helps us as I need help. You can get mad when it doesn't work, or you just want to stop, but she can be there to help. (Wayne, student interview)

*Local Contexts and Resources.* Consistent with the communities' aspirations for science education, students repeatedly responded positively to teachers who included local context as examples in their teaching. The underpinning mandate for the CRYSTAL initiative, which honours community aspirations for a two-way learning experience, advocates Inuit cultural knowledge and social interactions as thoughtful and purposeful (McKinley, 2000). The development of CRYSTAL resources – based upon the premises of culture-based education and the legitimization of local knowledge and processes (Bishop & Glynn, 1999) (detailed



previously in this article) – are a declared foundation of education in Nunavut. Of particular importance to students was hearing directly through elders' visits or the reading of the transcribed stories from elders or members of their community, especially in Inuktitut. As two teachers suggested:

Hearing about people they know immediately evokes response from them. They can relate to the stories and their experiences. There is a significant sense of pride associated with hearing of stories most relevant to their lives. (Elaine, non-Inuit teacher, interview)

My experiences in this community are limited. But, every experience I have seems to translate into a story and students respond so well to this. Especially when it has to do with someone they know or a place they have been. (Susan, non-Inuit teacher, interview)

And similarly, from students:

I read a story about my uncle [George Kappianaq] today. I was proud to hear about him and how he had made it [broken flashlight] work [by knowing how the internal mechanism of a circuit operated]. [As a challenge from the teacher] I knew I could make it work too and we worked [together] to make it work with lots of light. (Tanner, student interview)

It is like they [the elders whose stories have been written into narratives] want you to be able to do things [that are challenging] and you want to try your best. It feels good to try hard to show them [you are able]. (Joanna's name, student interview)

Strongly embedded in these comments is the imperative importance of the use of local context to engage students and support student learning. The underlying premise of culture-based education is similar to that advocated in place-based education. Place-based education is rooted in the local socio-cultural, ecological setting. As Dewey (1907) has stated,

The great waste in schools, from a child's perspective, is his (sic) inability to use the experience he gets outside of the school in any complete or free way within the school itself; while on the other hand he is unable to apply what he is learn-

ing in daily life. That is the isolation of the school – its isolation from life. When the child gets into the schoolroom, he has to put outside of his mind a large part of the ideas, interests and activities that predominate in his home and neighborhood. (p. 47)

In place-based and culture-based education, the role of schooling is to provide a secure, nurturing and engaging environment to reflect the culture of the community and promote the participation of educational staff, students, families, and the community to make decisions about learning. Teaching is grounded in what students are familiar with: actualities rather than abstractions. It emerges from the particular characteristics of place. It draws from the unique characteristics and strengths of a community and, thus, does not lend itself to duplication or replication. Promoting the use of community resource people, it is inherently experiential drawing upon opportunities provided by the local context and its people. As one non-Inuit teacher suggested:

I had taught in a northern setting before, but here we have culture specialists available in the school to augment our teaching. I'll be teaching a topic and realize that there are points of view that can be addressed by the elder, so they come in. I get them to talk about a specific thing and it goes so well. [The District Authority Director] said he heard his son [who is in my class] was being taught about the weather from both me and the elder and thought that this way of having us both contributing was the ideal for his son. I tend to agree. It means both of us contribute to the learning. (Ian, teacher interview)

Ian saw the benefit of students experiencing two-way learning. As well, the school community saw him as an effective teacher because he drew upon the local community as a resource in a variety of ways, in particular the inclusion of community members and their knowledge and skills to contribute to student learning. He also was able to address the tension that many teachers experience in drawing upon community members.

Unfortunately using the Culture Specialists is not seen by everyone as a positive move. Some people have trouble believing the [elder's visits] are worthwhile and so they don't make the effort. Some people believe the money could be better

spent elsewhere. I believe having them here [in the school] shows we respect that [traditional] knowledge and think it's important. (Ian, teacher interview)

*Inuuqatigiit: The Curriculum from the Inuit Perspective* (GNWT, 1996) asserts the importance of embedding learning within the experience base of students. Inuit want learning to be as meaningful for today as it was in the past. It does not mean that learning deals only with the traditional and historical, but it must begin with the life of a child and a community (p. 14).

*Reciprocal Learning.* Several teachers reported that they found that providing opportunity for students to share of their skills, experiences, and knowledge to contribute to a class's learning was a significant strategy to promote learning and a positive learning environment. Teachers, especially those non-Inuit, emphasized that they quickly realized that encouraging students to help each other was an important and positive vehicle for promoting learning.

You learn pretty quickly that you don't have to be everywhere at one time. The students need individual support and they're quick to call upon their friends to help them. (Chad, non-Inuit teacher, interview)

It seems somewhere this year I realized that each student had something to contribute. Without expecting it, you'd be doing something and then, suddenly, they [referring to a quiet student or students] would have something to say and you would just sit and listen. I'd think if only I knew each of them really well I'd be able to draw upon that more. (Paul, non-Inuit teacher, interview)

He [our teacher] knows we can all do things [some better than others] and he'll get us to show the others or help each other. [A student's name] helps me in math and I help him with the words. We know we can help each other. He'll get us to help and we don't just need to use him. (Wayne, student, interview)

*The Role of Novel Opportunities.* An interesting theme recognized by students was a sense of the unexpected and less orthodox experiences students might be introduced to as a result of their teachers' efforts. This comment was mentioned repeatedly in one school's conversations and was clarified through conversations in another school.

We work hard in her class and we don't expect anything. But she does these things that she doesn't need to do for us. I know she cares. (Elisapee, student interview)

We sometimes wonder if she's planning something. She always lets us know when she's proud of us but then she brought a cake. We felt proud. (Rebekah, student interview)

As is mentioned in *Inuuqatigiit: The Curriculum from the Inuit Perspective* (GNWT, 1996), students want a positive learning environment with fun, laughter, and a sense of anticipation (p. 17). Embedded within comments presented in this article are suggestions that students saw that novel and unexpected opportunities provided evidence that their teachers cared about their progress and were willing to tangibly honour their collective successes.

#### IMPLICATIONS OF THE STUDY: AN EFFECTIVE TEACHING PROFILE FOR INUIT

As stated earlier in this article, data collected from our multiple sources provide evidence of some prevalent themes associated with student perceptions of success and teacher-specific and, most likely, culturally determined classroom characteristics that influence student learning. We have limited ideas about implications of our study to those comments that teachers and students held consistently. These themes assist teachers to think about their own teaching practices and environments, primarily as a starting point for reflection upon whether their own classroom practices are responsive to the voice of their own students. As mentioned previously, a culturally responsive teacher should be able to "problematize" his or her teaching and question the nature of the student-teacher relationship, the curriculum, and schooling in general. At the focus of this consideration are teacher perceptions of the sources of problems if they are evident within their classrooms. Are problems located within the nature of students and their culture, or are problems manifest in teachers' own interactions and relationships with students? If problems are located within interactions and practices within classrooms, are teachers willing to respond to establish a positive learning environment?

Similar to the work of Bishop et al. (2003) and Goulet (2001), we present an effective teaching profile for teachers of middle-years Inuit students in Qikiqtani. We acknowledge that as non-Inuit researchers we have interpreted these data and Inuit understandings. Nonetheless, our list is a starting point for teachers, both non-Inuit and Inuit, to consider and build upon to identify successful practices to establish positive learning environments and pedagogy. Here is our list of implications from this study.

1. Effective teachers consider how their students define educational success: what students perceive as success based upon their recognition of, and pride in, their achievements. Accordingly, they reposition their efforts to acknowledge success in students' terms, especially in regarding perseverance and working through to an end as opposed to simply evaluating a product and placing greater regard on the evaluation outcome. Accompanying this attribute is ensuring that the experiences provided for students have 'working to an end' opportunities based upon practical, first-hand experiences.
2. Effective teachers reconsider what they believe to be the attributes of a positive learning environment in response to what *their* students identify as a positive learning environment. They reposition themselves in their role and interactions with students to develop a more co-operative, co-generated learning environment. They are caring, consistent, interested, and connected teachers.
3. Effective teachers communicate to their students that they care about their educational success. They do not see deficits in their students. They communicate that they work to foster success and that they want them to succeed; teachers are committed to fostering students' success. They are willing to enter into conversations about what they can do to foster their students' learning. As Noddings (1996) suggests, and affirmed by Berger (2007), caring is manifest in actions: it delights, challenges, responds, and affirms.
4. Effective teachers allow room for students to use their first language in the classroom. They respond to how students seek to understand their instructions and develop new strategies and protocols to communicate in students' first language such as using the human re-

sources available to them, including other students and support workers in the classroom.

5. Effective teachers communicate clearly and concisely with their students. Their communication in English is appropriately abbreviated and direct. When teaching, they undertalk rather than overtalk. It simplifies appropriately to the language proficiency of the student rather than complicates.
6. Effective teachers foster learning by using multiple instructional strategies such as direct instruction and modeling. They reconsider and change their pedagogical practice in light of how students respond to their teaching
7. Effective teachers allow time and provide individual support to promote student learning. They develop an awareness of the pace at which their students work and their need to complete work satisfactorily and the amount of individual attention they require in their learning. They provide informal and informative feedback to their students.
8. Effective teachers establish reciprocal learning opportunities within their classrooms. They recognize that others can contribute to the overall learning and will promote students to both seek out and provide support in learning as the need arises.
9. Effective teachers use local contexts and resource materials in their teaching. They do not believe that they are the central figure in their students' learning. They use the local community and the resources within it to engage and support students and their learning. They legitimize the knowledge and practices of the community by endorsing it within the classroom, especially through stories and narratives directly from or about local people.
10. Effective teachers recognize that they *can* and *must* change their teaching to help students learn. They do not believe that students must learn the teacher's way, nor that a teacher needs to control or define student-teacher and student-student interactions, but, instead, they see the behaviours influencing student learning as opportunities to change their teaching to better suit their students. They make adjustments and even transformations to the orthodoxy of their practice to include practices reflective of the home culture (Harker, 1979).

A question that arises from this study is the uniqueness of these effective teacher attributes for Inuit. Are they not, simply, good teaching practices for all students? The literature, especially in science education, identifies characteristics commonly evidenced of effective teachers (e.g., Tobin & Fraser, 1990). As one might expect, the general education literature contains a plethora of citations referring to effective teaching characteristics. One study of significance is Hattie's (2009) meta-analysis of over 800 studies associated with effective teaching practices as they relate to student achievement. In his meta-analysis, Hattie has distilled five broad dimensions common to effective teachers. Effective teachers (a) identify essential representations of their subject, (b) guide learning through classroom interactions, (c) monitor learning and provide feedback, (d) attend to affective attributes, and (e) influence student outcomes. Although these attributes are evidently linked to some attributes of effective teachers identified through this study for the students of Qikiqtani, what is most apparently missing in Hattie's list is any explicit mention of pedagogies that *respond to the cultural norms of the settings students represent*. Several of the effective teaching practices identified within this study (e.g., use of first language, succinct communication patterns, use of local resources and contexts) are manifest in students' home and community culture. This is the distinction and potential relationship between culturally responsive and effective teachers. Culturally responsive teachers are effective teachers by responding to the cultural norms of the settings students represent. They are able to use the cultural knowledge, prior experiences, frames of reference, and performance styles of students to make learning encounters more relevant to and effective for them (Gay, 2000).

#### SUMMARY

We originally based this article in the voices of middle-years Inuit students, and, to some extent, their teachers in three northern Qikiqtani communities to find out what they perceived as educational success. Further, in our study we considered what students primarily identified as a teacher's specific classroom characteristics that contributed to this success. As much as the voices of the respondents contribute to an un-

derstanding of student success and the contributors to success, the narratives paint quite vivid descriptions of teachers who have responded to their students and their backgrounds to create pedagogically preferred practices to create positive learning environments. Central to prompting these changes and successes were teachers who have deeply considered what they could do to best support the development of classrooms to foster student success. As two effective southern teachers suggested:

You come north to teach and you want the experience to be different, not just in the community but in the classroom. Somewhere along the way I realized that the real [positive] experience here was to be gained by not living my southern life in the north, but instead responding to the opportunities [this community] offered. It was the same in my classroom. I wanted it to be different, but I had to be the one to respond. I knew the education [here] would be different. I wanted it to be more reflective of this community and the students and their lives. I made some progress, but it needs to be the focus of all [the schools' teachers] of our conversations. How can we respond better to what our students are telling us about their schooling and learning? I know we don't ask that enough. If we did we would be making much more progress. (Esther, teacher interview)

If I look back at my first year here and compare it to how I teach after four years, I can see that my students haven't changed from year to year but I have. I want them to know I care about them, but also really care about their learning. I want them to do well and to do it well. I'm not easy on them but I also show I care. My approaches have changed. I try to give each student care and concern and let the class know we need to work together in our learning and that learning is really important. I'm more focused on them, not just what they do. I think they know that and that's why it works. (Sharon, teacher interview)

At the heart of these changes is teachers accepting that *they* are the central players in fostering change, first in themselves by shifting power relationships and working collaboratively towards an environment where practices reflect the culture in which students are situated and second, by changing their teaching practices to assist students in their learning. For middle-years students in the Northern Qikiqtani, this study suggests that students *are* very aware of what *can* contribute to their learning. Culture-based education *should* and *must* reflect, validate, and promote the culture and language of the Inuit of Nunavut. These expe-



riences must be reflected not only in the management and operation of schools but also in the curricula and programs implemented and *pedagogies* utilized. Such is the nature of culturally responsive teaching – using the cultural knowledge, prior experiences, frames of reference, and performance styles of students to make learning more relevant to and effective for them. Such is the challenge the outcomes of this study place on the classroom educators and those involved in determining the educational policies and practices that influence the education of Inuit middle-years students.

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#### REFERENCES

- Arnakak, J. (2001). What is *Inuit Qaujimagatuqangit?* *Canku Ota*. Retrieved May 23, 2008, from [http://www.turtletrack.org/Issues01/Co01132001/CO\\_01132001\\_Inuit.htm](http://www.turtletrack.org/Issues01/Co01132001/CO_01132001_Inuit.htm)
- Berger, P. (2007). Some thoughts on Qallunaat teacher caring in Nunavut. *Journal of Teaching and Learning*, 4(2), 1-12. Retrieved January 27, 2010, from <http://ojs.uwindsor.ca/ojs/leddy/index.php/JTL/article/view/120/192>
- Bevan-Brown, J. (1998, July 7-9). By Māori, for Māori, about Māori – Is that enough? In Te Pumanawa Hauora (Ed.), *Te Oru Rangahau* (Proceedings of the Māori Research & Development Conference) (pp. 231-246). Palmerston North, New Zealand: Massey University.
- Bishop, R. (1996). *Collaborative research stories: Whakawhanaungatanga*. Palmerston North, New Zealand: Dunmore Press Limited.
- Bishop, R. (2003). Changing power relations in education: *Kaupapa Maori* messages for 'mainstream' education in Aotearoa/New Zealand. *Comparative Education*, 39(2), 221-238.
- Bishop, R., & Glynn, T. (1999). *Culture counts: Changing power relations in education*. Palmerston North, New Zealand: Dunmore Press Limited.

- Bishop, R., Berryman, M., Tiakiwai, S., & Richardson, C. (2003). *Te Kōtahitanga: The experiences of year 9 and 10 Māori students in mainstream classrooms* (Report to the Ministry of Education). Hamilton, New Zealand: Ministry of Education. Retrieved February 1, 2010, from [http://www.educationcounts.govt.nz/\\_\\_data/assets/pdf\\_file/0017/7532/te-kotahitanga.pdf](http://www.educationcounts.govt.nz/__data/assets/pdf_file/0017/7532/te-kotahitanga.pdf)
- Bogdan, R. C., & Biklen, S. K. (1992). *Qualitative research for education: An introduction to theory and methods* (2nd ed.). Boston, MA: Allyn & Bacon.
- Castagno, A., & Brayboy, B. M. (2008). Culturally responsive schooling for Indigenous youth: A review of the literature. *Review of Educational Research, 78*(4), 941-993.
- Chisholm, S. (1994). Assimilation and oppression: The northern experience. Education and the Aboriginal adolescent. *Education Canada, 34*(4), 28-34.
- Clifton, R. A., & Roberts, L. W. (1988). Social psychological dispositions and academic achievement of Inuit and non-Inuit students. *The Alberta Journal of Educational Research, 34*(4), 332-343.
- Deakin University Press. (1991). *Aboriginal pedagogy: Aboriginal teachers speak out*. Geelong, Victoria, Australia: Author.
- Dewey, J. (1907). *The school and society*. Chicago, IL: University of Chicago Press.
- Douglas, A. S. (1998). "There's life and then there's school": School and community as contradictory contexts for Inuit self/knowledge. Unpublished doctoral dissertation, McGill University, Montreal, Quebec, Canada.
- Fordham, S. (1988). Racelessness as a factor in Black students' school success. Pragmatic strategy or pyrrhic victory? *Harvard Educational Review, 58*(1), 54-84.
- Freire, P. (1970). *Pedagogy of the oppressed* (trans. M. Bergman Ramos). New York: Herder and Herder.
- Fuzessy, C. (2003). An investigation of teachers' role definitions in Nunavik. *Canadian Journal of Native Education, 27*(2), 195-204.
- Gay, G. (2000). *Culturally responsive teaching: Theory, research, and practice*. New York: Teachers College Press.

- Glesne, C., & Peshkin, A. (1992). *Becoming qualitative researchers: An introduction*. White Plains, NY: Longman.
- Goulet, L. (2001). Two teachers of Aboriginal students: Effective practice in sociohistorical realities. *Canadian Journal of Native Education*, 25(1), 68-82.
- Government of Northwest Territories (1996). *Inuuqatigiit: The curriculum from the Inuit perspective*. Yellowknife, NT: NWT Department of Education.
- Government of Nunavut. (2005). *Aboriginal language and culture based education directive* (ALCBE Directive). Iqaluit, Nunavut, Canada: The Author. Retrieved February 1, 2010, from <http://www.aboriginal.cmec.ca/documents/NTAboriginalLanguageandCultureBasedEducationDirective.en.pdf>
- Government of Nunavut. (2008). *Education Act*. Iqaluit, Nunavut, Canada: The Author. Retrieved February 1, 2010, from the Government of Nunavut, Department of Education web site: <http://www.gov.nu.ca/education/eng/>
- Harker, R. (1979, July). Research on the education of Māori children: The state of the art. Paper presented to the First National Conference of the New Zealand Association for Research in Education. Wellington, New Zealand: Victoria University.
- Hattie, J. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. London, UK: Routledge.
- Kanu, Y. (2002). In their own voices: First Nations students identify some cultural mediators of their learning in the formal school system. *The Alberta Journal of Educational Research*, 48 (2), 98-121.
- Kanu, Y. (2006). Getting them through the college pipeline: Critical elements of instruction influencing school success among Native Canadian high school students. *Journal of Advanced Academics*, 18(1), 116-145.
- Kemmis, S., & McTaggart, R. (Eds.). (1988). *The action research planner* (3rd ed.). Geelong, Victoria, Australia: Deakin University Press.
- Kleinfeld, J., McDiarmid, G., & Hagstrom, D. (1985). *Alaska's small rural high schools: Are they working?* Fairbanks, AK: University of Alaska.
- Ladson-Billings, G. (1995). Toward a theory of culturally relevant pedagogy. *American Educational Research Journal*, 32(3), 465-491. Retrieved February 1, 2010, from <http://diversitypedagogy.com/EDCI6333.270-Sheets/>

Secured/Ladsonbilings.%20toward%20a%20theory%20of%20culturally  
%20relevant%20pedagogy.pdf

- Lewthwaite, B. E., & McMillan, B. (2007). Combining the views of both worlds: Perceived constraints and contributors to achieving aspirations for science education in Qikiqtani. *Canadian Journal of Science, Mathematics and Technology Education*, 7(4), 355-376.
- Lewthwaite, B. E., & Renaud, R. (2009). *Pilimmaksarniq: Working together for the common good in Science curriculum development and delivery in Nunavut*. *Canadian Journal of Science, Mathematics and Technology Education*, 9(3), 154-172.
- McKinley, E. (2000). Research and Māori education. In G. Haisman (Ed.), *Exploring issues in science education* (pp. 24-35). Wellington, New Zealand: Research and Curriculum Division, Ministry of Education.
- Murray, H. G. (1999). Low-inference teaching behaviors and college teaching effectiveness: Recent developments and controversies. In J. C. Smart (Ed.), *Higher education: Handbook of theory and research: Vol. 15* (pp. 323-345). New York: Agathon Press.
- Noddings, N. (1996). The cared-for. In S. Gordon, P. Brenner, & N. Noddings (Eds.), *Caregiving: Readings in knowledge, practice, ethics, and politics* (pp. 21-39). Philadelphia, PA: University of Pennsylvania Press.
- Nunavut Department of Education. (2005). *Nunavut education act K-12: 2005 public consultations*. Iqaluit, Nunavut, Canada: The Author.
- Picco, E. (2006, May 26). Made-in Nunavut education act: What we've heard from Nunavummiut so far. *Nunatsiaq News*, p. 2.
- Stairs, A. (1994). Indigenous ways to go to school: Exploring many visions. *Journal of Multilingual and Multicultural Development*,
- Stairs, A. (1995). Learning processes and teaching roles in Native education: Cultural base and cultural brokerage. In M. Battiste & J. Barman (Eds.), *First Nations education in Canada: The circle unfolds*. Vancouver, BC: University of British Columbia Press.
- Stephens, S. (2003). *Handbook for culturally responsive science curriculum*. Fairbanks, AK: Alaska Science Consortium and the Alaska Rural Systemic Initiative. Retrieved February 1, 2010, from <http://www.ankn.uaf.edu/publications/handbook/>

- Tobin, K., & Fraser, B. J. (1990). What does it mean to be an exemplary science teacher? *Journal of Research in Science Teaching*, 27(1), 3-25.
- Valencia, R. (Ed.). (1997). *The evolution of deficit thinking: Educational thought and practice*. New York: Routledge.
- Watt-Cloutier, S. (2000). Honouring our past, creating our future: Education in Northern and remote communities. In M. B. Castellano, L. Davis, & L. Lahache (Eds.), *Aboriginal education: Fulfilling the promise* (pp. 114-128). Vancouver, BC: University of British Columbia Press.
- Wyatt, J. D. (1978-1979). Native involvement in curriculum development: The native teacher as culture broker. *Interchange* 9(1), 17-28.

*Brian Lewthwaite* is a teacher educator in the Department of Curriculum, Teaching and Learning at the University of Manitoba. He started his professional career as a science and mathematics teacher in Canada's Arctic. Since then, his teaching and research activity has been in teacher and school development in Aotearoa-New Zealand, Australia, and Canada, especially within the context of Indigenous settings and science education in these countries.

*Barbara McMillan* is a teacher educator in the Department of Curriculum, Teaching, and Learning at the University of Manitoba. Her research interests include teacher development, contextual teaching, and the effect for Inuit and Cree students on teaching and learning of interdisciplinary curricula that incorporate local knowledge and voices as well as history of science components.

Contact: [bcmill@cc.umanitoba.ca](mailto:bcmill@cc.umanitoba.ca) or [Brian\\_Lewthwaite@umanitoba.ca](mailto:Brian_Lewthwaite@umanitoba.ca)