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Inuit Attitudes and Cooperative Learning

Abstract

This study argues that an improved understanding of Inuit student attitudes may assist northern teachers in their educational task. After noting the lack of available information about Inuit student perspectives, the study reports the differences in modern attitudes between Inuit and white students in two Eastern Arctic schools. The implications of the finding that Inuit students have significantly more traditional, collectivity-oriented attitudes than white students is discussed in terms of restructuring classrooms using cooperative learning strategies.

Several decades of social science research on northern Native peoples has done little to alleviate the severity of their social concerns. The case of Inuit and Indian education illustrates this situation. Within both these groups, academic self concepts and participation rates are low, drop out rates are high, and academic achievement is relatively weak (cf. Finley, 1983; Kleinfeld, 1975, 1979; Vernon, 1984). Witness the following illustrative facts reported in a recent review of the Inuit situation (Duffy, 1988, pp. 124-127): 74% of a large sample of grade 9 graduates failed a standardized mathematics test; under 15% of Inuit students graduate from high school; Inuit university attendance is negligible and college or technical school attendance is sparse. Since one goal of social research is improving the effectiveness of various intervention schemes (Patton, 1978), it is meaningful to ask why, despite our research efforts, more successful educational improvements have not resulted.

One response to the proposition that existing research has had limited impact on northern Native education is that not enough research has been conducted. There is, in fact, some truth in this response. The

inadequacy of the existing literature on northern education is evident to anyone who has surveyed the research in this area. Even basic descriptive statistics are not readily available on many important issues. However, after recognizing that research related to northern Native education is incomplete, we are still left to ask: Why has the available research not led to more effective educational programmes? One possibility focusses on the "kind" of research being conducted.

An assessment of the existing literature on Inuit students and addressing northern education suggests that much of it has one or more of the following characteristics: its goals focus on testing hypotheses not related to educational issues; it has a psychological orientation; it is more rhetorical than empirical in its approach; it often provides descriptive evidence from single case studies. To report that much of the existing literature falls into these categories does not deny the value of these investigations. The point is that some significant shortcomings accompany research that is primarily of these sorts and, importantly, these deficiencies may contribute to the limited translation of this literature into effective educational interventions.

For instance, when the goal of collecting data from Inuit students is testing discipline-based theoretical hypotheses, it is predictable that social science, rather than Inuit concerns, is likely to be the principal beneficiary. As Merton (1976) reminds us, this results because "human interest and scientific relevance do not invariably coincide" (p. 217). Furthermore, the predominance of psychological studies of northern students, although a credit to the initiative of researchers from this discipline, tends to focus our thinking on the individual as the unit of analysis. This emphasis on individual attributes diverts attention away from other sources and potential solutions to Inuit educational difficulties including, for example, structural variables. Finally, the limitations of case studies and speculative works are rooted in problems of generalizing the applicability of their recommendations.

Obviously, the incompleteness and inadequacies of the existing literature on Inuit education can only be gradually rectified. Accumulating evidence and exploring its implications for social action is a slow process. The research reported in this paper assists this process by providing evidence relevant to educational policies. Its goal is to assess the modernity of a sample of Inuit students and suggest what these findings may mean for improving their education. More specifically, the authors attempt to improve on the existing literature in three ways. First, the study was designed to collect data applicable to Inuit educational concerns, rather than use Inuit students to test hypotheses relevant to developing scientific theory. In other words, although there is a theoretical framework supporting

the work, the principal goal was policy directed. Secondly, the investigation utilizes some empirical data from a sample of Canadian Inuit students and, therefore, provides evidence that is different from those reports that employ American subjects, discuss the experience of a single student, or rely on speculation. Third, the investigation suggests an intervention based on changing the structural arrangements of the cross-cultural classroom, rather than the more common call for reshaping the traits of students. On this last account it is argued that it is more appropriate to align the social structure of a classroom to fit the culture of the students, rather than attempt to resocialize the students so they fit the existing system in a classroom. As a first step toward addressing the paper's objectives, it begins with a discussion that underlines the educational importance of appreciating Inuit student attitudes.

Understanding Inuit Student Attitudes

There is little doubt that teaching in a northern cross-cultural classroom is a demanding task, and one that is met with varying degrees of success. High teacher turnover rates provide one indicator of how difficult a challenge this is, as do the plethora of problems mentioned by newly hired northern teachers (Dickerson, 1980). Given the difficulties faced by teachers in these classrooms, the low academic achievement of Inuit students may not be surprising. Indeed, the situation is so serious that some Canadian and American observers have concluded that Inuit education "isn't working" (Carney, 1983; Finley, 1983).

There are undoubtedly multiple causes contributing to the low academic achievement of Inuit students and, similarly, multiple factors contributing to less than optimal teacher performance. Nonetheless, some efforts have been made to identify variables that merit attention in the search to improve the instruction in northern classrooms. One promising lead in this regard focusses on understanding the attitudes of Inuit students.

In her work on the effective teachers of Inuit and Indian students, Kleinfeld (1975, p. 301) identifies "the ethnocentric teacher" as "a prominent villain." These ethnocentric orientations are underwritten by poor preparation of teachers who continue to be recruited from southern Canada, often with minimal training in cross-cultural education. The result is that "... in the north these teachers remained psychologically in the south ... [and] often experienced difficulty in identifying with their native students" (Duffy, 1988, p. 107). Such researcher reports are corroborated in the strains listed by teachers working inside these cross-cultural schools. For instance, Dickerson (1980) found that newly hired northern teachers report "understanding and adjusting to living and working with a minority culture" as one of their most frequently mentioned adjustment problems. In

short, teachers and other observers note that ethnocentrism is an important variable affecting the quality of Inuit students' classroom experience.

Given the sociological fact that knowledge is related to social position, it is to be expected that observers of northern classrooms would tend to disagree on significant issues. Where insider participants and external observers agree on an issue of substance, this corroboration suggests that the concern is a "real" one, in the sense that it has intersubjective reliability. In an area like northern cross-cultural education, in which the available research is just beginning to sort out the dense web of related considerations, it would seem prudent to attend to issues where there is identified agreement on their salience. Understanding the attitudes of Inuit students presents itself as just such an issue since those close to the classroom action, from ethnographers to teachers, have reported its significance.

The potential importance of investigating the attitudes of Inuit students is supported by more than empirical observations and reports. Social psychological theory also underscores the importance of having access to this subjective component of human action. For, as Thomas and Swaine (1928) stated in their classic *The Child in America*, and as symbolic interactionists, Weberians, phenomenologists, and other theoreticians have been elaborating and refining for decades: "If men [people] define situations as real, they are real in their consequences" (p. 572). Attitudes comprise a fundamental component of the definitions of the situation since they signify persistent orientations toward objects and predispose people to action.

In short, insider and outsider reports as well as sociological theory suggest that, if effective instruction is to occur, teachers require an accurate understanding of their students' attitudes. Lacking such understanding, accurate empathizing and role taking are hindered and the likelihood of designing and employing meaningful instructional strategies is reduced.

The Social Complexity of the Northern Teacher's Situation

All teachers are faced with the challenge of understanding the nature of their students, but this is an acute problem in northern schools. The supply of Native teachers continues to fall short of requirements and, consequently, teachers trained in southern Canada are still recruited to fill a substantial proportion of the teaching positions. These teachers are faced with the task of bridging the generation gap as well as the cultural distance between themselves and their Inuit students. It is also worth noting that Native teachers are not insulated from these alignment difficulties, although the cultural gap for them is not as great. After all, the teacher socialization experience has undoubtedly changed Native instructors in a direction that has

moved them (some way) toward having a cultural and social profile that is different from that of their students.

The educational challenges faced by both Native and non-Native northern teachers are further complicated by the fact that many classrooms in the Northwest Territories contain white as well as Inuit students. Such cross-cultural classrooms present problems for Native as well as non-Native teachers. Under such conditions, Native teachers are forced to deal with the same cross-cultural bridge as non-Native teachers, except in the opposite direction. The presence of white students also probably makes the task even more difficult for non-Native teachers than it would be if the class contained only Inuit students. Having white students present, who are more socially and culturally similar to themselves, may encourage non-Native teachers to bias their orientations toward these students, for in doing so they will be more easily understood and reinforced (cf. Kleinfeld, 1979).

It is evident, then, that the situation facing northern teachers in cross-cultural classrooms is socially complex. Moreover, teacher adjustment to and management of such circumstances is compounded by several factors. For instance, teachers entering these classrooms have probably had little, if any, cross-cultural training in their teacher education programmes, since such courses compose only a small, and typically optional, part of the curriculum in faculties of education. Duffy (1988, p. 107), for example, reports that training for cross-cultural education has been comprised of "orientation courses ranging from only one day to two weeks." Moreover, as Kleinfeld reports (1975, p. 340), even when such cross-cultural teacher-training has occurred, its effects are probably only of limited help. In addition, even given the reasonable assumption that well-intentioned, southern trained teachers now come to the North with an ideology of cultural relativism (rather than ethnocentrism), there is a critical shortage of recent information about what characteristics, including attitudes, their Inuit students have. In this respect, a recent article (Vernon, 1984) references articles that are a decade or more old, and the authors' own search of the research literature has fared little better. In summary, teachers of Inuit students in the Canadian North find themselves in a structurally complex situation for which their teacher-training has probably inadequately prepared them. Both empirical reports and sociological theory suggest that knowledge of Inuit student attitudes would help teachers cope more effectively with such situations, yet such information is virtually non-existent.

Teachers in circumstances such as these are prone to experience what is termed "role strain" (Bredemeier & Bredemeier, 1978, p. 39). Their professional socialization has internalized in them a set of expectations about instruction and these personal expectations are reinforced by the

educational institutions that surround them. This joining of personal and institutional expectations generates considerable social pressure on teachers. To do their job and maintain self esteem these teachers must teach, and teach well. However, as it has been outlined, the complexity of the social situation in northern cross-cultural schools makes it difficult to meet these expectations, even when the teachers themselves and those supervising their conduct want to conform. Hence, there comes the identification of these teachers' circumstances as "role strain," for there is a tension-generating mismatch between what they are required to do and what they are realistically capable of doing.

There is a large body of literature which shows that when actors experience role strain, when there is a substantial gap between the ends they desire and the means at their disposal, they experience frustration (cf. Heiss, 1981). Faced with frustration, teachers act the way others do in similar circumstances, i.e., they seek some means of reducing their frustration by managing the obstacles that prevent them from reaching their objective. In the case of northern teachers, it is suggested that one set of obstacles that frustrates their pursuit of effective instruction of Inuit students is the social complexity of the classroom, one component of which is the teachers' uncertainty about the attitudes and orientations their students possess. Although there are undoubtedly many strategies teachers can adopt in coping with role strain, one simple and effective way is to reduce the complexity of the social situation by clarifying their understanding of the attitudes of Inuit students.

But how can teachers gain a clearer picture of what Inuit student orientations are when a lack of such information was a contributing cause of their initial frustration? One plausible solution to this dilemma is for teachers to do what others in structurally comparable circumstances do; namely, rely on stereotypes of the actors whom one has difficulty understanding. Kleinfeld (1975, p. 33), for example, provides evidence of such stereotype usage. Lippman (1922, p. 60), who coined the social science usage of the term, reports that stereotypes are "pictures in our heads" whose function it is to "compensate for the limitations of human perception and experience" (Mackie, 1985, p. 221). Stereotypes provide a means of simplification by replacing a complex or ambiguous understanding of others with a firm picture of them based on some group characteristics.

Although stereotypes may serve tension reduction and situation management functions for northern teachers, the use of stereotypes as coping mechanisms has problems. In the case of Inuit students, for instance, it is unclear just what the stereotype of this collective is or should be. Some observers have noted that at least some teachers in northern schools hold stereotypes that are not far removed from the *Nanook of the North* image, where Inuit are categorized as unaggressive, non-competitive,

quiet and shy (Kleinfeld, 1975, p. 333). Others have reported less traditional images as characterizing the modern Inuit. A roster of these images reported by Mayes (1982, p. 43) suggests that the Inuit are a marginal group holding both southern white and northern Native frames of reference, as exemplified by their description as "apprentice white men" (Crowe, 1974, p. 216), "colonials" (Hodgins, *et al.*, 1977, p. 141), and comprising an "unrooted society" (Jenness, 1964). Given these competing stereotypes, it becomes problematic for teachers who wish to employ this coping mechanism to select one for use.

Additionally, even if northern teachers select a stereotype as a basis for interaction with Inuit students, they must manage the doubt generated by the fact that stereotypes are somewhat inaccurate. The accuracy of stereotypes is a variable, as Mackie's studies (1974; 1985) demonstrate. Consequently, employing stereotypes of unknown validity creates uncertainties for teachers that counteract the uncertainty reduction that initiated their use. The result may be that, even by employing stereotypes, teachers may find themselves little or no better off in coming to an understanding of Inuit student orientations that would promote effective teaching.

In summary, for a variety of reasons, it is clear that teacher instruction of Inuit students would be more effective if they possessed an informed appreciation of the attitudes their students hold. However, for various sociological reasons, it is difficult for teachers to acquire an adequate understanding of the relevant attitudes of Inuit students. The following sections on methodology and results report the design and data from a preliminary attempt to document the attitudes of a small sample of Inuit students, and contrast their orientations with those of their non-Native classmates.

Methods

Instrumentation

Modernization is the process that transforms simple societies into complex ones. As Mayes (1982, p. 37) reminds us, the transformation involved in becoming modern fundamentally involves social structural changes. From this perspective the Canadian Inuit are becoming a modern people, for they have significantly modified their traditional social arrangements to align themselves with the requirements of an industrial society (Roberts, 1983). Such change is clearly evident with respect to the institution of Inuit education, which has moved from traditional, oral, personalized teaching to an impersonal, formalized system of instruction based upon southern Canadian curriculum (Crowe, 1974; Roberts, 1983).

Since modernization is a process, it must be conceptualized as a variable. In other words, groups are meaningfully categorized in terms of the degree to which they possess those characteristics associated with modernity. Moreover, modernity expresses itself at various levels, including the cultural, structural, and personal.

In constructing an instrument to measure the attitudes of contemporary Inuit students, it was considered important to take these facts about modernization into consideration. The goal was to develop an instrument that was relevant to the general social condition of the Inuit (i.e., becoming modern) and to their particular situation in northern schools. In addition, since the individual was the unit of analysis, a personal (rather than social or cultural) indicator of modernity was required. After reviewing the literature, it was decided that "achievement motivation" was a variable relevant for these purposes, since acquisition of such attitudes is related both to the modernization process generally (Spates, 1983; Mook, 1987), as well as to success in school (Bowles & Gintis, 1976; Dreeben, 1973; Weyant, 1986).

For this study items were selected from Kahl's (1965, 1968) and Inkeles' (Inkeles & Smith, 1974) instruments (which themselves incorporated items from over a dozen different scales) and modified for use in northern schools. The rationale for working from an existing set of items, rather than creating an original set, stemmed from the following considerations. First, research based on Kahl's original studies had already been successfully conducted in a variety of cultural settings, including Mexico, Brazil, and the United States (see Miller, 1983, for references) and this record was encouraging. Moreover, the researchers were sensitive to the fact that measurement problems are compounded in a cross-cultural setting like the Canadian North. Accordingly, it seemed prudent to work from an instrument like Kahl's which, in cross-cultural work, has established reliability and validity. Miller (1983, p. 60) reports these coefficients and notes that "although Kahl constructed the scale for use in developing countries, it may be applied in developed countries with many different ages or minority groups."

The specific dimensions of the instrument that was created include: (1) Activism, which refers to planning for a predictable future; (2) Individual Accomplishment, which emphasizes the primacy of setting individual goals and effort; (3) Integration with Relatives, which relates to placing family loyalty over self interests; (4) Occupational Primacy, which refers to the salience of occupational success; (5) Trust, which measures beliefs in the stability of life and the trustworthiness of others.

Thirty-two items representing these five dimensions were originally included in this study. The items were factor analyzed using principal

component analyses (Harman, 1967, pp. 136-137), and fourteen items were found not to load above 0.30 on their respective factors. In order to obtain an instrument meeting the criteria of parsimony and simple structure, the eighteen items with loadings above 0.30 were refactored and included in this study. Each item had scores ranging from completely agree (1) to completely disagree (5). Alpha reliability coefficients were calculated for the scales and were 0.61 for Activism, 0.60 for Individual Accomplishment, 0.63 for Integration with Relatives, 0.49 for Occupational Primacy, and 0.60 for Trust. Using the criteria proposed by Smith and Glass (1987, p. 106), these moderately high reliability coefficients are acceptable for research purposes.

Sample

Students participating in this study were enrolled in the public schools of two communities in the eastern part of the Northwest Territories. The total population of students attending these two schools, 46 Inuit and 11 white students, were included in this study. The Inuit students ranged in age from 10.5 to 16.5 years and had attended school for between 3 and 11 years. More than 50% of the Inuit students had spent either 6 or 7 years in school. The Inuit students were quite evenly divided between the sexes, with 24 females and 22 males in the sample. The white students ranged in age from just under 11 years to just under 16 years and, therefore, were similar to the Inuit sample. The time that white students had spent in school was more restricted than the Inuit students and varied between 5 and 10 years. As with the Inuit students, over 50 percent of the white students had been at school for between 6 and 7 years. The white students included 2 females and 9 males. On balance, the Inuit and white students in this study were quite similar except for their sex distributions.

The differences in the sex distributions between our samples of white and Inuit students represent a potential source of bias. This potential exists because members of a dominant group (white) are being compared with members of a subordinate group (Inuit) when these samples also have different sex distributions. Where the dominant group (whites) is composed primarily of members of the dominant sex (males), and the subordinate group (Inuit) contains a majority of subordinate sex members (females), the interaction effects between sex and ethnicity in the samples may exaggerate the group differences that are reported. This possibility rests on the assumption that there are significant sex differences in attitude within these groups. This possibility was tested and sex differences were found to be insignificant.

The fact that these findings come from small, non-random samples clearly limits the results. However, availability samples such as these have a legitimate place, especially for studies in under-researched areas (Mueller,

et al., 1977, p. 370). Moreover, discussions with other researchers and teachers suggests that these two schools are quite typical of integrated schools throughout northern Canada. On balance, for these reasons, a cautious use of this sample to form some preliminary conclusions seems warranted.

Results and Discussion

The objective of the statistical analysis was to determine if student ethnicity was systematically related to the modernity in their attitudes. In order to assess the degree of this association for the fifteen attitude items, the proportional reduction in error statistic *tau c* was used. This statistic provides an appropriate and readily interpretable measure of the strength of the relationship for variables of the type employed here (Agesti & Finlay, 1986; Bohmstedt & Knoke, 1982). Table 1 (page 223) reports the findings.

From Table 1 it is clear that a moderate association is present between ethnicity and almost all of the attitudinal indicators of modernity. Specifically, statistically significant associations ($p \leq .05$) were found for fifteen of the eighteen items and, for the significant relationships, the modal degree of association was approximately 0.30 with a *tau c* range of 0.18 to 0.35. These findings suggest that, across a number of attitudinal indicators of modernity, white students generally hold more modern attitudes than Inuit students. Stated in predictive terms, one can proportionally reduce errors in predicting modernity of attitudes by between 18 and 35 percent if it is known whether a student is Inuit or white.

These differences in the modernity of Inuit and non-native student attitudes reflect cultural differences, where culture is defined as "a set of cognitive and evaluative beliefs . . . that are shared by members of a social system and transmitted to new members" (House, 1981, p. 542). On balance, Inuit students display more "traditional" attitudes than their white peers, in the sense that they have less active orientations, are more trusting, show less regard for occupation and individualism, and are more concerned with family integration. Taken together, these findings suggest that the "collectivity orientation" characteristic of traditional Inuit culture, with its emphasis on virtues such as sharing, seniority, and family solidarity (Williamson, 1974), continues to be identifiable in the attitudes of the young. Given these attributes, it is evident that Inuit students stand a good chance of being alienated from a modern school that values individualism and competition. Such misalignment is, moreover, a plausible contributor to their low academic achievement.

McCue (1981) has noted that the "failure rates in native schools are more a testimony to this [modern] educational policy than to the potential

TABLE 1

*Relationship between ethnicity and modernity of attitudes**

	<i>tau c</i>	<i>p <</i>
Activism		
1. Planning only makes a person unhappy, since your plans hardly ever work out anyway.	.35	.01
2. Making plans only brings unhappiness because the plans are hard to fulfill.	.31	.01
3. With things as they are today, an intelligent person ought to think only about the present, without worrying about what will happen tomorrow.	.21	.05
4. It doesn't make much difference who people elect to government, for nothing will change.	.31	.01
Individual Accomplishment		
1. The best kind of job to have is one where everyone works together, even if you don't get credit for your own work.	.16	.09
2. All I want out of life in the way of a job is a secure, not too difficult job, with enough pay to afford a nice skidoo, boat, and kicker.	.22	.03
3. A child should be taught from infancy to take the greatest pride in doing things well.	.09	.22
4. A mother ought to teach her child to try to do everything (s)he does better than anyone else.	.30	.01
Integration with Relatives		
1. When the time comes for a person to take a job, they should stay near their parents, even if it means giving up a good job opportunity.	.28	.01
2. Even when teenagers get married, their main loyalty still belongs to their fathers and mothers.	.08	.24
3. When you are in trouble, only a relative can be depended upon to help you out.	.33	.01
4. If you have a chance to hire an assistant in your work, it is always better to hire a relative than to hire a stranger.	.31	.01
Occupational Primacy		
1. The best way to judge a person is by their success in their job. (reverse scored)	.22	.03
2. The most important thing for a parent to do is to help their children get a better job than the parent did.	.20	.04
Trust		
1. Most people are fair and do not try to get away with something.	.29	.01
2. People help persons who have helped them not so much because it is right, but because it is good business.	.26	.01
3. Children should learn that most people can be trusted.	.18	.05
4. It is not good to let your relatives know everything about your life, for they might take advantage of you.	.18	.05

* All items coded so that higher scores indicate more modern attitudes.

educability of the people" (p. 1). Granting this point, the question becomes: How can we respond to the multicultural education situation where the attitudes of an ethnic group are not optimal for effective performance in a modern school system? One set of responses centres on attempting to change the attitudes of these students so that they better match the structural requirements of the school. Based on the premise that the existing system is sound, the idea is to change the characteristics of the learner. Such programmes are psychologically grounded and are exemplified in Kolb's (1965) and McClelland *et al.*'s (1953) programmes for increasing student achievement motivation. The personal causation training of deCharms (1972, 1976) and Dweck's attribution therapy (Dweck, 1975; Dweck & Licht, 1980) are also of this type.

Although interesting and useful in some circumstances, this course of action is not recommended for Inuit students in the Canadian North. First, these strategies were developed for students whose initial socialization took place in a modern context. These circumstances do not apply to Inuit students whose northern communities are based on cultural configurations quite different from a southern, middle-class value system. Given this misalignment, the structural arrangements, time, and other resources required to reorient the attitudes of Inuit students to something different from what they come to school possessing are so great that success is unlikely. Not only is the success of such efforts improbable but such a recommendation is questionable on other grounds. In a multicultural society the emphasis should be on working to create an educational system that encourages the strengths of ethnic communities, rather than resocializing for homogeneity. In short, for practical and evaluative reasons, cultural reorientation is not recommended.

A more plausible educational response to the distinctiveness of Inuit student attitudes is found in a structural intervention. Structural refers to "persisting and bounded patterns of social relationships (or pattern of behavioural interaction) among the units (that is, persons or positions) in a social system" (House, 1981, p. 543). The assumption is that teachers, especially those in a multicultural setting, should be aware of and respect the attitudes their students bring to the classroom. Furthermore, having done this, they should restructure their classrooms to utilize the orientations their students possess.

Taking account of these findings, the structural response recommended is that teachers move away from an organization based on competitive individualism and toward one based on cooperative principles. The typical northern classroom, like those in the south, is based on a competitive, individualistic ethos in which the personal achievement of grades is a central organizing principle. To be sure, this organizational

system has advantages, especially for students whose socialization has cultivated attitudes aligned with these principles. However, organizing classrooms on competitive individualism has serious drawbacks. In general, such systems produce disproportionately high numbers of social casualties (Bredemeier & Bredemeier, 1978). When applied to classrooms, competitive principles make it virtually certain that some students will fail in attaining the rewards dispensed by schools. Moreover, competitive principles also encourage the development of anti-academic norms among students (Slavin, 1980). All of these drawbacks appear in acute form among members of disadvantaged minority groups expected to compete in classrooms with majority group members.

The benefits of cooperative learning strategies have been reported in social science research for several decades (Deutsch, 1949; Haines & McKeachie, 1967; Weyant, 1986). However, only recently have these general principles been developed into specific teaching strategies that teachers can readily implement (Aronson & Oshehow, 1980). It is not the place to review all of these alternative approaches here, yet it is worth noting that there are several possibilities to select from (e.g., Aronson *et al.*, 1978; Slavin, 1980).

Cooperative learning strategies are based upon teachers changing the reward structure of the classroom from a competitive reward structure to a cooperative reward structure. Cooperative learning strategies also rely upon changing the authority structure from one centred on the teacher to one centred on the peer group. By restructuring classes so that the reward structure is not centred around themselves, teachers can present students with two ways of increasing the opportunities for receiving rewards. Specifically, students can receive rewards by working hard themselves, and they can also receive rewards by influencing their teammates to do their best. One principle underlying cooperative learning is the observation that when peer groups administer rewards to group members, they are much more sensitive to small incremental changes in performances than teachers are. Moreover, since peer groups are usually composed of several members, they are able to reward changes in individual performance more frequently, and often with a greater magnitude, than can teachers. In short, frequent praise from a group of peers is often a more powerful stimulus for student learning than infrequent praise from teachers. For ethnic groups, such as the Inuit, who have a more traditional, collectivist orientation which sensitizes them to the attitudes of their peers (cf. Briggs, 1970), cooperative learning principles appear to be particularly appropriate.

A number of cooperative learning strategies have been developed, and many of these have been shown to be effective with minority group students (see Slavin, 1980, 1983; Slavin *et al.*, 1985). Of these, Student-

Teams-Achievement-Division (STAD) is a good example. In this strategy, students are divided into 4- or 5-member heterogeneous teams. The teams are the social units around which cooperation is organized, and students are expected to help each other prepare for tests. For instance, teammates are expected to study together and quiz each other so that all team members are prepared for the tests. Approximately every four or five weeks a test is given by the teacher. In order that performances and rewards are contingent, the test results are formed into team results as soon as possible. The amount each student contributes to his or her team is determined by the amount the student's test score exceeds the student's own past average. Usually a base score is set at 5 points below each student's average, and he or she earns points, up to a maximum of 10 points, for each point by which he or she exceeds the base score. In this system, students with 100 percent automatically receive 10 points. This is called equal opportunity scoring because each student, no matter what his or her initial performance level, can contribute equally to the success of the team.

Cooperative learning strategies motivate students to engage in collective explanations and discussions because their teammates' learning is important to the success of each member of the team. Any particular student's performance becomes, to some extent, dependent on the achievement of his or her team members. The research literature on all cooperative learning strategies suggests that classrooms organized on these principles enhance student achievement and productivity, increase participants' self-esteem, and can improve relations between different ethnic groups. Although there are no studies reporting the effects of cooperative learning strategies on the Inuit students, the data in this research suggest that these students have a greater collectivity orientation. Consequently, it seems reasonable that Inuit students may benefit from instruction organized on cooperative rather than competitive principles. Moreover, structural interventions toward more cooperative arrangements make sense for northern, multicultural classrooms. First, structural changes do not entail the difficult task of changing the character of the students. Rather, they rely on changing variables within the teacher's control – the nature of the social relationships in the classroom. Secondly, the strategy of manipulating structural variables is congruent with the values of multiculturalism, since it respects the attitudes students bring to the classroom and attempts to build upon these attitudes. Given the serious deficiencies in Inuit schooling, it seems worthwhile to consider reorganizing classrooms along cooperative principles, especially when such suggestions are practical and have empirical as well as theoretical support.

Conclusion

Clearly the state of Canadian Inuit education represents a considerable challenge to interested parties, both Native and non-Native. The

fact that, in the early 1980s, Inuktitut was taught in under 40 percent of Northwest Territories schools and under 10 percent of teachers were Native, indicates the seriousness of the situation. Compared to other nations who are confronted with the task of bicultural education, Canada has not managed the situation in an exemplary manner. For instance, Dermot Collis (1983) has reviewed the Danish experience in Greenland which, like Canada's, has been guided by a series of fundamental misconceptions. Nonetheless, Collis (1983, p. 167) notes that at least they have made "a very earnest and consistent attempt to establish a school system in Greenland that is second to none. Canadian Arctic schools offer nothing remotely comparable in standard." Likewise, Finland, Alaska, and the Soviet Union have done a comparatively better job (Duffy, 1988, pp. 95-130).

Despite the enormity of the task, some substantial Canadian efforts have been made in the right direction. The role of Inuit teaching assistants has been steadily enlarged and has provided an important bridge by which teachers can reach Inuit students. School curricula and classroom materials have been made progressively more relevant to Inuit experience. Native teacher training programmes, like that at McGill University (Cram, 1978), have helped to fill the outstanding need for Inuit instructors. In short, there are some encouraging signs embedded in the knotty state of northern education.

The contribution of this research has been to describe the degree of modernity in the orientations of a sample of Inuit students and to suggest how these attitudes might be utilized through cooperative learning classroom strategies. It is hoped that research of this type will assist teachers and administrators confront the paradox of Native education, which is to blend meaning and modernity. This task involves taking a "both/and" (rather than "either/or") approach to maintaining traditional culture and teaching functional academic skills.

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