

RESEARCH ARTICLE

School Engagement Among Aboriginal Students in Northern Canada: Perspectives From Activity Settings Theory

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ABSTRACT

BACKGROUND: Educational disengagement is a public health concern among Aboriginal populations in many countries. It has been investigated previously in a variety of ways, with the conventional focus being on the children themselves. Activity settings are events and places, theorized in terms of their symbols, roles, time frame, funds, people, and physical location. According to the theory, particular behaviors and experiences are shaped by different configurations among these elements. This study explored how activity settings theory might provide new insight on school engagement.

METHODS: Ethnographic study was undertaken at a grades primary to 12 school in a remote First Nations community in Canada's Northwest Territories. We collected data through interviews, focus groups, archival material, and field notes from 7 months of participant observation. An activity settings model acted as template for data collection and interpretation.

RESULTS: Different aspects of the school's physical layout, routines, procedures, transport systems, mix of people, and rules were able to be systemically assessed and classified as either creating or eroding engagement.

CONCLUSION: This study applies an activity setting analysis to school engagement, thereby allowing researchers to investigate the dynamic and nested nature of context or environmental influences on engagement. It provides grounded observations that invite direct opportunities for action on dimensions that teachers and practitioners might not otherwise "see."

Keywords: Aboriginal; school environment; educational engagement; activity settings.

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Educational engagement is the extent to which students participate in academic and nonacademic school activities and identify with and value school outcomes.¹ Disengagement is manifest in early school leaving, truancy, absenteeism, and withdrawal from the activities of school life. In the Northwest Territories, where the majority of the population is Aboriginal, rates of educational disengagement are reported to be as high as 75%.² This rate is in comparison to a Canadian national "dropout rate" of 10.1%, with provincial rates ranging from 7.5% to 13%.³

High rates of educational disengagement are worrisome, especially given what is known about

schooling and its link to health. Alienation from school is a significant predictor of negative health behaviors among students.⁴ People with more education have higher levels of self-reported overall health and are able to achieve higher socioeconomic status. They have lower levels of morbidity, disability, and early mortality.⁴⁻⁶

Research pertaining to northern Aboriginal youth and school has been relatively sparse.⁷ There are explorations of the education and training experiences of northern youth in different contexts,⁷⁻¹⁰ studies testing specific theories about factors relating to educational engagement among northern students,^{11,12} projects aimed at determining specific dropout rates,¹³ and a

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study examining the implementation, and factors for success, of a school-based intervention.¹⁴ The government of the Northwest Territories recognizes that beyond individual factors, school engagement is affected by factors of the larger social, political, and economic environment, as well as factors associated with available resources, expectations for students and staff, policy and legislation, and curriculum and organizational structure.¹⁵ Of particular interest is the investigation of community type (village or town), as it relates to educational outcomes, and studies examining schooling in isolated Northern communities.^{10,16-19} These analyses invite new ways of thinking about contextual-level understandings of the disengagement problem.

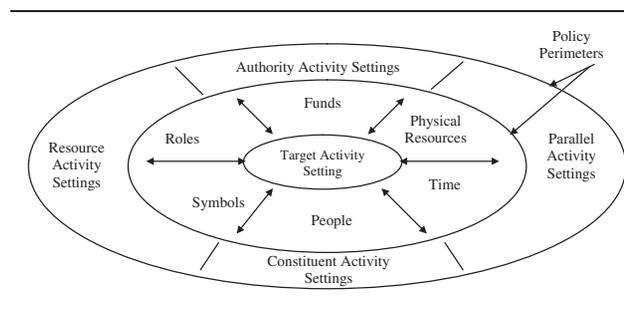
This study takes these ideas further and focuses on interactions that take place between students and features of the school and community environment or context, in an attempt to understand pathways of influence on engagement behavior and to identify how interventions could be designed to support school engagement and promote health. The main research question is—How do features of the school’s setting, and the school’s larger context, create or erode the engagement of students?

METHODS

The research was informed by ecological theory and the concept of the “activity setting” from the field of community psychology. Activity settings are the “social furniture of our family, community, and work lives.”^{20(p3)} They are best described in terms of their “who, what, when, where, and why.”²¹ The “who” refers to the people present. The “what” describes their actions, including routines and scripts (for norms of interaction). The “when” and “where” describe the time and place. And the “why” represents the activity’s objectives, participants’ motivations, and interpretations.^{22(p116)} Examples of activity settings include physical places such as homes, schools, and workplaces, events such as a Sunday church service, a backyard barbecue, or a community bingo. Activity settings can be nested within each other, such as the way a classroom is nested within a school. People’s experience and behavior in an activity setting is related to the interactions and proportional size of particular features of the setting and their configuration. For example, if there are more people in a setting than there are meaningful roles to share, alienation is produced. To reduce alienation in a classroom, approaches might include reducing class size or increasing the number of roles available for students.²³

A visual representation of activity settings theory, in the form of a model, was proposed by O’Donnell, Tharp, and Wilson in 1993.²¹ This model is divided into 2 distinct spheres (Figure 1).

Figure 1. **The Target Activity Setting in Context (Adapted From O’Donnell, Tharp, and Wilson, 1993)**



The inside sphere includes those factors associated with the immediate school setting. “People” refers to the population and subpopulations interacting in the school, and “positions” refers to the positions and roles that are available for them to take in the setting. The meaning of activity settings can be communicated through “symbols.” Attachment to symbols can also help create value and can help bind groups together. “Funding” is also a component of the inner sphere of the activity setting model and it refers to how the school and its activities are supported financially. The “physical environment” of the school denotes the layout, infrastructure, inside and outside subenvironments, the flow of people and activities, and the inter-relationship between the physical environment and other aspects of the school’s setting (people, funds, etc). “Time” is also included in the inner sphere; this involves a look at the use, distribution, and relative importance of time, the meaning of time for those at school, schedules, routines, and how activities are temporally structured.

The outside sphere of the activity setting model relates to the broader environment or context and to the relationship between the school setting and other activity settings that it may relate to. “Parallel activity settings” are other settings in the broader environment or context that might have activities, purposes, or target populations similar to those of the target setting. “Authority activity settings” are settings in the broader environment which act to establish, implement, and/or enforce laws, rules, regulations, and directives or by authorizing the use of specific resources. “Constituent settings” are places where constituents or people who use the school meet and interact outside of school. “Resource settings” are settings in the broader context that have resources for the use in, or by, the school. Resources can be physical, financial, social, or human. The policy perimeter exists between the inner and outer spheres of the model and this denotes that policies influence factors in both spheres and the relationship across the spheres.

Participants

The research took place between 2004 and 2008 with students at a school in the Tâichô First Nation community of Behchokö, Northwest Territories. In September 2004, the school had a total of 358 registered students (47 in the elementary, 119 in grades 7-9, and 192 in grades 10-12). There were 24 professional teaching and administrative staff and 19 support staff members. The Tâichô First Nation (or Dogrib people) makes up a distinct branch of the Dene or Athapaskan linguistic group. Behchokö has a population of just under 2000 people, 98% of whom are of Aboriginal ancestry.²⁴ Behchokö is located 115 km northwest of Yellowknife, Northwest Territories, Canada, and is made up of two, twin communities. Rae, the larger of the twin communities, is on the southeast shore of Marion Lake, and Edzo, the smaller, is about 13 km away by road.

Instruments

The principal source of data was field notes from hundreds of hours of ethnographic, participant observation undertaken by the principal researcher (first author) during the 7 months spent living full time in the community. The data from the field notes were records of daily routines, interactions, and behaviors of students, school staff, and others, the use of symbols and resources, public presentations, events in the school and community, notes from informal discussions with school staff, students and members of the community, and detailed accounts of other visits, interactions, and observations throughout the school and region. The principal researcher also maintained an ongoing journal in the style described by LeCompte and Shensul.²⁵(p153) The journal included thoughts and personal reflections, particularly as they relate to theory and project development and the evolving role of the researcher throughout the investigation.

Twenty-one formal, in-depth, semistructured interviews were undertaken. Participants included Aboriginal and non-Aboriginal participants, male and female elders (2), youth (4), school administrators (4), teachers and other school staff including youth counselors (4), government officials (1), adult educators in the community (2), and Band Council employees (2). Fourteen of the interviews were tape-recorded and transcribed. Seven interviews were recorded with detailed, handwritten notes. Two participants were interviewed twice.

Three focus groups were also undertaken with a total of 22 individuals using maximum variation sampling.²⁶ These individuals included 6 school staff members, 9 students, and 7 community health care workers. All focus group data were collected through detailed, handwritten notes, and these notes were later typed. Focus groups ranged from 45 to 60 min in length.

Additional data sources included graduation, registration, and attendance records and reports from the Treaty 11 Band Council Scholarship Committee. Data were also collected from, and about, physical artifacts, displays, and the physical environment at the school. Pertinent reports, letters, notices, and evaluations were collected in addition to newspaper articles and copies of public transcripts from previous research undertaken in the community.

Procedure

The researchers were guided by the *CIHR Guidelines for Health Research Involving Aboriginal People*.²⁷ According to principles of critical ethnography²⁸ and recognizing and with respect for indigenous methodologies,²⁹ the specific research topic and exact methods were decided upon after consultation with, and with guidance from, community members, school staff, and students in Behchokö. A local youth was hired as research assistant. The researchers informally shared research results and continued community consultations throughout the study and engaged in formal dissemination on completion of the study. A principal aim was for the study to be responsive to local needs and concerns and for the study to be useful for informing future intervention.

Data Analysis

Forty primary textual documents, including field notes, interview transcripts, focus group transcripts, and archival material were uploaded into a hermeneutic unit of Atlas.ti (Berlin, Germany) over the period of the study. The principal researcher coded each document initially with first-order codes through a process of constant comparison and template analysis as outlined by Crabtree and Miller and by Glaser and Strauss.^{26,30} Because activity setting theory and an activity setting model guided data collection, first-order codes included themes such as "Resources," "School Messages/Symbols," or "Relationship to Time," from the model, but they also included codes such as "Dogrib Language and Traditional Culture," "Events," or "Use of Metaphor." Data were periodically grouped under each code. This procedure helped determine where data gaps were as well as where saturation may have occurred. Data gathering was adjusted accordingly over time. As a first-order code list developed, lists of all the quotations for certain codes were brought together and new documents were created. These documents were recoded with higher or second-order codes. The coding process was undertaken by the principal researcher and validated and triangulated with the second author.

Textual, physical, and visual media were collected as data but were not inputted as computerized text. Instead, these other pieces of data were used to situate

and advance coding and theoretical understanding. These other data sources were also used, later in the study, to confirm or negate potential findings. This was a process of contrast and constant comparison. The results included in this article were previously fed back to the community, interpreted, and discussed.

RESULTS

Table 1 is an overview of the findings as to how the school, as an activity setting in a particular context, creates and erodes school engagement among Tâchô students. Sample data are included to illustrate each point.

This study supports a model of multifactorial influence on school engagement. Forty different factors or influences are listed in Table 1. There are factors related to physical resources and funds, people and roles, time, symbols, policy or authority as well as resource, constituent, and parallel activity settings. Twenty of the factors listed were found to help create engagement, 15 eroded engagement, and 5 of the factors are listed as being able to create engagement among some students and erode it for others. This highlights the fact that not all mechanisms influence all students in the same way. For example, the school has strict discipline practices and gives misbehaving students little leniency with regard to students with poor behavior and being permitted to stay at school. However, high standards of behavior help maintain a certain school climate or environment so that the majority of students thrive.

DISCUSSION

The use of activity settings theory highlights that educational engagement can potentially be thought of as a phenomenon created (in part at least) by context, and not simply by the characteristics or attitudes of people in it, which remain the conventional focus of investigation.^{31,32}

Alberta Learning^{33(pp3-4)} describes educational disengagement as “a complex phenomenon with multiple causes existing in several different domains... student-centred, school-related and community/environmental factors...co-existing and interacting in a myriad of ways causing early school leaving.” Clarke^{34(p87)} notes that “factors may interact synergistically to increase the likelihood of dropping out.” Bowker^{35(p15)} concluded that school disengagement is the result of “an accumulation of school, personal and family problems.” Other scholars support a similar multifactor, or layered, model of influence. Phelan³⁶ refers to “clusters” of influence such as family background, personal problems, or school-related factors that work in conjunction. Bowen³⁷ introduces an eco-interactional development model of school success and

Brown and Rodriguez³⁸ refer to the “co-construction” of school dropout between students, schools, and the adults who work in schools. Results from this study concur; disengagement influences are nested and multifactorial. But this work further demonstrates that the use of this kind of activity settings model can help observers make sense of complex school environments and multifactor environmental-level influences *systematically*.

Approaching the study with an activity setting lens means that equal weight is placed on many potential influences and relationships among influences and then weight or emphasis is adjusted, as more is learned about a particular context or set of influences. In this way, the observer begins to “dissect” the dynamic nature of a context, studying a myriad of influences in potentially nested, emerging, and evolving patterns and come to conclusions about overriding influences.

For example, time was important in determining and creating behavior patterns. Much negative behavior among students, such as engaging in vandalism, fighting, bullying, smoking, or leaving school without permission, were found to occur during unstructured time. It was observed during this study that reducing the amount of unstructured time, such as shortening the lunch period from 55 to 30 min, had an impact on patterns of social interaction and, via a number of pathways, on negative behaviors that would have direct and indirect links with engagement. With the provision of a universal hot lunch program, and only 30 min between classes to eat it, students did not generally have enough time to get bored, restless, or “in trouble” outside of class. While the school may have traded off some positive impact unstructured time could have had for some students, it was felt that these positive impacts could also be gained elsewhere and, the time adjustment would be worthwhile if it reduced negative behaviors and made more students feel safe, connected, and engaged. The use of time to bring about more positive and productive behaviors is consistent with activity settings theory.²²

In another way, time was seen to be a constraint to engage students overall, as in this frustrated insight from one teacher:

There is not really enough time in the day because there are some [students] that I feel that we are going to lose anyways. So I guess it is almost like that lifeboat question, and you can be plagued by asking yourself who do you keep in the lifeboat and who do you throw overboard? (School Staff, interview)

Activity settings theory would suggest that the way to solve this dilemma is not to add more time to the day at all, but to create specific patterns of time use and more meaningful parallel roles to occupy students during the time available; creating connection

Table 1. Summary of Findings — How Do Features of the School's Setting, and the School's Larger Context, Create or Erode the Engagement of Students?

Mechanism of Influence	Create	Erode	Sample Data
Physical resources and/or funds A variety of courses offered, such as courses for workforce or postsecondary educational preparation and cultural teachings	×		"There are students who do really well in the bush but then when they are in the classroom they have a hard time, and then students who do really well in the classroom but then when they are in the bush they are kind of lost" (Administrator, interview)
The bus system (with late busses and a special van for parents with children)	×		"Having the late bus, and not assuming that students can just find a ride home if they stay after school, means that students have the opportunity to engage in after-school activities or library time" (Excerpt from field notes of participant observation)
The geographic location of school for those who may have negative interactions outside school and view school as an "oasis"	×	×	"Those people who want to study and who are serious about it, they take the bus and they go, and they can work" (Elder, interview)
The geographic location and language of instruction of the school and its impact on the integration and ability of parents and community members to serve as resources for youth		×	"The school being out of the community, you know being 13 km away, is quite difficult. The kids leave in the morning, it is dark, they come back and it is dark and their life is in the school. . . . It is difficult for parents to go to Edzo, unless they have transportation" (Elder, interview)
Physical layout of the school, which encourages small group, peer interaction	×		Participant observation and field notes of student movement patterns and interactions throughout the year
The school is clean, controlled, and well supervised	×		"On the first day we arrived I went to the bathroom in the students' wing. I noticed there was graffiti on the walls that was a bit obscene. The next day I went to the same bathroom and the graffiti was gone" (GNWT official, notes from a public presentation)
Unique support structures such as providing a place for students to sleep if needed and allowing students who are parents to pass the lunch line at the cafeteria	×		Participant observation and field notes of these practices at school
Third-party funding acquired for extras at school such as special cultural events and supplies or a school greenhouse	×		"There is money there, if you can write a proposal and are lucky enough to get the money you ask for, then you can do these kinds of things with the students" (School staff, interview)
Lack of, or the underuse or misuse of, funds		×	"[We] went to the Band and to the Chief and got money to run the alternative program this year and it has just been. . . well, I have been so frustrated this fall. Just opportunity, after opportunity, after opportunity lost" (School staff, interview)
Unsustainable funding		×	"Well without [the teacher] here securing the funding I am not sure to be honest if the program will continue. [She] found the third-party funding so I don't know how long it will last" (School staff, interview)
Financial support for any student who goes on to postsecondary training People and/or roles	×		Records of the Tãichò Scholarship Committee of the Band Council
Positive peer relationships that are recognized and supported by the school staff	×		"The school is the most positive place in Rae-Edzo. The relationships in peer groups in very strong, there are extremely strong friendships here" (School staff, interview)
School staff members who care about students and who are dedicated to being effective teachers and positive adult figures in the lives of their students	×		"On my way out of the teacher's room I noticed a sign on the desk 'Wake up Craig' with a telephone number beside. I asked about it and he said that he called this student or his mom every morning to wake him up and get him to school. This morning he called and it took 25 minutes to get an answer. But the student came" (Excerpt from field notes of participant observation)
Transience of people in and out of the setting		×	Attendance, student registration, and staffing records over a 5-year period triangulated with interview and focus group data
The general lack of student cliques	×		Participant observation triangulated with other data. "There is such great acceptance here, our kids are very merciful. . . our kids are really accepted" (School staff, interview)
Lack of Tãichò teachers		×	"The benefit of having Tãichò staff is that students see people from the community in these positions and then think to themselves—if they can do it I can do it too? And also I remember being out on the land with the elders, when we do our prayer, I just wish [the non-Tãichò staff] could understand what they are saying. Because a lot of times through translation a lot of the feeling, the meaning is lost, and it is just not the same" (Administrator, interview)

Table 1. Continued

Mechanism of Influence	Create	Erode	Sample Data
Changing demographic profile of the school, for older students		x	"One of the girls was in a new teacher's class and she left in the first 5 minutes, she was in the hall and Jared, a high school teacher, came up. She said the other students were all really young and she didn't feel comfortable in there" (Excerpt from field notes of participant observation)
Lack of adequate school counseling services		x	"[There was] an inter-agency team which involved the RCMP, Social Services and Counselors and we sat down and talked with teachers about students who were high need. It was just a really good thing to be part of, . . . but we lost our full-time counselor at the school. . . mostly it was a band aid service" (School staff, interview)
Lack of options for adult and alternative education		x	"We have had 10 [alternative education programs] and have had a variety of successes. They start and stop and we haven't kept a program that kept going year after year" (Administrator, interview)
Symbols			
Graduates are celebrated and used as role models	x		Field notes of participant observation and photographs of graduate displays in the school triangulated with interview and focus group comments
Communicating realistic expectations (ie, the "honor roll," 5 golden rules of life, etc.)	x		"The 5 Golden Rules permeate the building; they are displayed and used by staff and students. . . Does the school motivate? Instill pride? Build self-esteem? Yes" (GNWT Official, notes from a public presentation)
Attempts at cultural and language integration (ie, cultural and language classes, Dene Games events, etc.)	x		"Yes, especially when we have a program like Gonaewo [traditional teaching]. Many students come just for that because they love that interaction with [the instructor] the hands-on activity" (Administrator, interview)
Sports banners and trophies displayed and celebrated	x		Field notes of participant observation and photographs of displays and artifacts in the school triangulated with interview and focus group comments
Policy and/or authority			
The policies of social progression and inclusive schooling (create engagement at younger grades but erode engagement in high school as many students arrive unprepared)	x	x	"The Inclusive Schooling Act. . . actually works fairly well until Junior High but when they go to high school things fall apart. Like there are some students in grade 8 now that read at a grade 2-3 level" (School staff, interview)
Students who do not follow school rules are given very little leniency (creates engagement among the general school population but erodes engagement among misbehavers)	x	x	Field notes of participant observation of disciplinary processes triangulated with teacher and administrative interviews and focus groups
The school has a high level of practical autonomy (depending on the programs and policies, may create engagement for some and erode it for others)	x	x	"We have done a lot of our own setting standards here. . . There is supposed to be a systems connection right through but the reality in the north is that mountains are high and the emperor is far away" (Administrator, interview)
Clear and strictly enforced school rules (create engagement for those that react well to structure and guidelines, but erodes it for those who counter authority, feel restricted by rules and leave)	x	x	"Why does he keep coming back here is the question? The only answer I have is that deep in his heart he know that he is safe here, that he is cared about here and actually, that there are going to be rules and structures to keep him in line here" (Administrator, interview)
Curriculum, diploma exam requirements and postsecondary admission standards that are unrealistic for many students		x	"The requirements to get into programs that are needed for example in the health field, social services, or education, the standards. . . their entrance requirements, they are becoming tougher and tougher" (Administrator, interview)
School seen as a foreign institution for some that is linked to historic and ongoing oppression, colonialism, and loss of language and culture		x	"Different people think of school in a different way. Especially if you have grandparents that never went to school, school has changed a lot, like when we have an open house, people come, they maybe know school just off TV or what other people have said" (School staff, focus group)
Time			
Offering courses with flexibility in routine and time line	x		"We offer courses over a longer period of time, it could be year long —instead of offering it for 6 hours a week we offer it for 9 hours a week or 12 hours a week" (Administrator, interview)
The school hot-lunch program and shortened (30 minute) lunch period	x		Field notes of participant observation during lunch periods and discussions with staff and students about the current and past lunch schedules

Table 1. Continued

Mechanism of Influence	Create	Erode	Sample Data
Parallel and constituent activity settings Distinct divide between the activity settings and social interactions at home and at school		×	"The gap between the elders and the young people is getting wider and wider. It is difficult for parents to go to Edzo, unless you have transportation and I mean, it is a beautiful school, but it's kind of a foreign land. You don't know exactly where you stand there" (Elder, interview)
Young parents		×	"She stopped coming to school at one point because she had a child. . . she also has a primary role of taking care of her younger siblings" (School staff, interview)
Provision of extracurricular activities and sports teams at school	×		"[School is] not only a safe environment, but I believe, a place to be, to belong, a young person's space. They've got their sport, they've got their things which unfortunately in the community, we don't supply" (Elder, interview)
Lack of activities in Behchokio for youth to be involved in	×		"The Sportsplex is not maintained properly. It has been abused, there are a lack of programs, and a lack of a recreation facilitator" (Adult community member, notes from a public presentation)
Resource activity settings Adults out of the home working and traveling thus increasing youth autonomy and decreasing supervision		×	". . . the kids really run the show. I think that there is more money in town, because of the mine but now parents are hardly ever at home. . . . They have replaced parenting and guidance and caring with money" (Elder, interview)
Lack of healthy home life and adult role models for some students		×	"Some kids just find their livelihood at home is just so despairing, is so pitiful, and I am thinking of many kids in Rae that I know what their situations are like. . . school is like 5 or 6 on their top 10 so I mean it is just trying to make some sense of their life that is just so important. They are just so confused and so lost and so hurting" (School staff, interview)
Loss of language and culture in youth generation		×	"As a Dogrib teenager I see our language dying. We are influenced by the white culture; elders are sitting in their cozy houses and waiting for youth to come by. People like the priest and some teachers are learning the language, they are more interested in our culture than us" (Student, notes from a public presentation)
Evolving community vision or narrative now, "glass half full"	×		"Yes I have dropped out before. I was bored with school, I thought school was for fools, but now I know differently" (Student, focus group)
The development of resource extraction industries, which spurred a renewed purpose for education (creates engagement for those who may be interested in this industry, may put off others)	×	×	"The school does about 1 trip a year to the mine, it is an encouragement to finish grade 12" (Elder, interview)

in this way.²² This would be better than ignoring or abandoning some students in the setting, which was the option this teacher felt frustrated by.

While the dominant influence of a feature in a setting was always the focus of attention (ie, whether it was eroding or creating engagement for the majority of students), using the activity setting as a lens for examination allowed for further dissection of the setting as well. It was noted, for instance, that the same feature could create engagement with some students and erode it with others. For example, the school is located 13 km from the main community. For many students, its physical location erodes educational engagement via the pathway of weakening students' social support systems. The lack of public transportation makes it difficult for anyone without access to a vehicle to reach it. Not spending time in the building and not being familiar with the setting reduces the potential for family members and other members of the community to support their students at school. For some students, however, the fact that the school is physically separated from the main community means that school can be an "oasis" from difficulties they may have in their daily lives, and this enhances their engagement with school.

The activity settings visual model was found to be a helpful guide in both the initial exploration of the context as well as when the researchers became more familiar with the study setting. The model informed data collection, and as more was learned about potential influences, more or less attention was placed on different parts of the model. This method allowed for the organic evolution of data collection, while at the same time provided a useful structure for observing and interpreting a complex phenomenon. Thinking about schools as activity settings, and using the activity setting model, may also provide a framework on which to "hang" other interpretative approaches to context such as photovoice methods³⁹ and to invite collaborative participatory enquiry in schools. So, the cells in Table 1, for example, rather than reflecting only the ethnographer's assessment, could be constructed to reflect multiple insights from different voices, thus formally recording and acknowledging diverse perspectives and concerns.

Results, as provided in Table 1, can also act as a means to anchor and catalyze stakeholder discussions about intervention development and action. While the complexity of educational disengagement is recognized, socioecological models for intervention have not developed in parallel.⁴⁰ This study suggests that the activity settings model could be a useful starting point.

Limitations

As an ethnographic study, key findings are not necessarily generalizable beyond the immediate setting. Data collection, analysis, and reporting were directly linked to the categories in the activity setting model and this may have limited insights from outside of the framework to some degree. The researchers remained flexible and were open to ideas that might extend beyond the preset categories wherever possible. Separate papers explore the data in more depth, such as the impact of local diamond mine developments on youth.⁴¹ The data are cross sectional, that is, we have not followed up systematically with former students to gain a more longitudinal perspective. The first author lived in the community for 7 months and developed extensive relationships in the school and community by being engaged in community activities (such as language classes and accompanying the community on a caribou hunt). This helped with creating a climate of trust for the collection of data. However, as in any qualitative study, the researcher's perspective is inevitably limited. A test of the validity of our findings would be if youth-led research came up with the same, or different, answers on dimensions of the activity settings model. Further information about the preliminary fieldwork and the consent process for this study have been reported elsewhere.^{42,43}

CONCLUSION

Educational engagement is a dynamic and complex phenomenon. A number of previous studies have employed activity setting theory and analysis.⁴⁴⁻⁴⁶ Overall, there has been much more written about activity settings from a theoretical standpoint than there has been from a practical one. This is the first study to apply activity settings theory and the O'Donnell, Tharp, and Wilson²¹ activity setting model to the issue of school engagement. The approach not only allows researchers, evaluators, and practitioners to investigate the dynamic and nested nature of context or environmental influences on student engagement, the process and results can be used to inform the co-construction of contextually sensitive interventions and as part of collaborations with school personnel to guide and inform potential concrete solutions, eg, adjusting the timetable to create more engagement or changing the layout of rooms.

Results from this study were presented and discussed with representatives from the school, school board, and local government and contribute to ongoing efforts within the community to continually improve support structures for youth in this region.

IMPLICATIONS FOR SCHOOL HEALTH

Activity settings theory can help schools to "see" dimensions that they might otherwise miss in assessing

their school climate. School health practitioners can use the activity setting model to examine current situations and plan interventions to make improvements to student engagement in their own contexts. While undertaken as part of an intense ethnographic investigation, the approach may also have some portability for less intense, participatory, qualitative inquiry. There is no reason to believe its application would be limited to Aboriginal schools. Indeed, the second author has been using this method in whole school interventions to promote connection to school, with a systematic assessment of the school's activity settings being part of the task of a facilitator, working with school action team made up of students and teachers. This is also the type of assessment and action process that could be assisted by the use of photovoice methods.³⁹

Human Subjects Approval Statement

The work was approved by the Aurora Research Institute of the Northwest Territories and by the University of Calgary Conjoint Health Research Ethics Board.

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