MAKING TRACKS 1.0: ACTION RESEARCHING AN ACTIVE TRANSPORTATION EDUCATION PROGRAM

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ABSTRACT

This paper reports on the results of the first cycle of an action research project. The objective of this action research was to examine the implementation of a school-based active transportation education program (Making Tracks). A two-cycle action research design was employed in which elementary school students’ (ages 7-9), middle school students’ (ages 10-12), and high school students’ (ages 15-17) experiences with Making Tracks were investigated. Qualitative data were collected through field observations, student questionnaires, and follow-up focus group interviews with elementary school “walkers,” middle school “cyclists,” and high school leaders. Results suggest Making Tracks ought to be recognized as a program that has great potential in school and after-school community contexts. Notwithstanding these positive results, additional changes to the program might be considered so as to enable additional positive results in the future.

KEYWORDS: action research, active transportation, physical activity, leadership, physical education

Since its beginnings in 1994, Active Healthy Kids Canada (AHKC) has been a national leader with respect to advancing physical activity-related knowledge through evidence-informed communication and advocacy strategies. Ten years after AHKC’s establishment, its 2004 National Physical Activity Symposium invited Dr. Thomas McKenzie to provide participants with important contextual information related to physical education and physical activity opportunities afforded to students in Canadian school communities. Within that presentation, McKenzie noted the curious phenomenon of students’ decreasing utilization
of active modes of transportation to school (Active Healthy Kids Canada (AHKC), 2004). Ten years later this same phenomenon garnered similar attention. That is, AHKC’s 2013 report card on physical activity for children and youth made active transportation its focal issue; the title of this most recent report card was, “Are we driving our kids to unhealthy habits?” (AHKC, 2013).

With active transportation garnering increased attention, action, and research within school communities, it is especially noteworthy that, compared to the national average, students within Atlantic Canada utilize active modes of transportation less frequently than do students in all other regions of the country (Canadian Fitness and Lifestyle Research Institute [CFLRI], 2013). Moreover, students in Atlantic Canada are also less physically active and more prone to overweight and obesity (and their related health risks) than are students in the rest of Canada (AHKC, 2013; Heart and Stroke Foundation, 2010; Statistics Canada, 2013). Given these observations, and the fact that active transportation might be conceptualized as a relatively simple and inexpensive way to increase physical activity levels of children and youth, we set out to introduce, support, and research a school-based active transportation education program in a small rural Atlantic Canada town. This active transportation education program was called Making Tracks.

**WHAT IS MAKING TRACKS?**

Making Tracks is a program designed to encourage children, youth, and their families to safely use active transportation to better preserve the environment, increase people’s physical activity, and improve traffic safety. Currently, Making Tracks includes modules for walking, cycling, in-line skating, scootering, and skateboarding. The primary goal of Making Tracks is to create and coordinate an experiential skill-based active transportation education program for children and youth. A secondary goal of Making Tracks is to encourage and develop community-based youth leadership.

**RELEVANT LITERATURE**

**Active Transportation**

Active transportation is a relatively new area of inquiry within school communities. Contemporary research has focused upon the benefits of active transportation, students’ utilization of active transportation, barriers to active transportation, and the implementation of school-site active transportation interventions.

*Active transportation defined.* Active transportation refers to any form of human-powered transportation. This may include walking, cycling, in-line skating, skateboarding, scootering, wheelchairing, skiing, ice-skating, or snowshoeing. Active transportation to school can include any of these modes of human-powered transportation; of these possibilities, walking and cycling are most common (CFLRI, 2013; Larsen et al., 2009).

*Benefits of active transportation.* Students who walk or cycle to school have higher daily levels of physical activity and better levels of cardiovascular fitness than do students who do not actively commute to school (Davison, Werder, & Lawson, 2008). Larouche, Saunders, Faulkner, Colley, and Tremblay (2012) found that students who walked or cycled...
to school accumulated up to 45 more minutes of daily moderate to vigorous physical activity (MVPA) than did students who travelled via motorized transport. Similarly, Sirard, Riner, McIver, and Pate (2005) determined that active commuters accumulated 8.5% more minutes of MVPA before and after school than did non-active commuters. Cooper et al. (2006) found that children and youth who cycled to school were significantly more fit than were their peers who were non-active commuters and Rosenberg, Sallis, Conway, Cain and McKenzie (2006) discovered that male students in grade four who actively commuted to school had lower Body Mass Index (BMI) and skinfolds than did non-active commuters (though a causal relation was not reported).

Students’ utilization of active transportation. The 2010 Physical Activity Monitor (CFLRI, 2013) asked parents/guardians to indicate their children’s mode of transport to school. According to the parents/guardians of 5-17 year old students, 24% used solely active modes of transport, 62% used solely inactive modes of transport, and 14% used both active and inactive modes of transport (CFLRI, 2013). Pabayo, Gauvin, and Barnett (2011) compared data from 1996 to 2001 from the Canadian National Longitudinal Survey of Children and Youth (NLSCY) and found the likelihood of active transportation increased as students approached age 10; at that point it decreased. Likewise, McDonald’s (2008) research with low-income and minority students found that high school students (aged 14-18 years) were much less likely to utilize active modes of transportation to school than were junior high school students (aged 12-13 years) or elementary school students (aged 5-11 years).

Buliung, Mitra, and Faulkner (2009) considered active transportation to school data between 1986 and 2006 in the Greater Toronto Area (GTA). In that period, students aged 11-13 years and 14-15 years both showed a decline in the frequency of walking to school. Likewise, other Canadian research has shown that although 58% of today’s parents/guardians walked to school when they were students, only 28% of their children do so today (Stone, Mammen, & Faulkner, 2012). A larger scale study in the United States revealed entirely concordant data (McDonald, 2007). McDonald’s (2007) analysis of data from 1969-2001 National Personal Transportation Survey revealed a steady decline in students’ use of active modes of transportation. For example, while 41% of students walked or cycled to school in 1969, by 2001 only 13% did so (McDonald, 2007).

Barriers to active transportation to school. Parents have reported that barriers to active transportation include safety issues related to perceived traffic, crime, and child abduction (Dellinger & Staunton, 2002; DiGuiseppi, Roberts, Li, & Allen, 1998). Kerr et al. (2006) have cautioned that parents/guardians may be overly concerned and are preventing their children from walking or cycling to school as “disproportionate media coverage of child abduction stories, for example, may be influencing parent concerns” (p. 6). Yeung, Wearing, and Hills (2008) surveyed 324 parents/guardians about the factors most likely to influence their decisions to permit or prevent their children’s active transportation to school; the most common responses included the age of the children, a safe route to school, adult supervision, commuting distance, and their children’s fitness
level. Of all of these factors, McDonald (2008) found that commuting distance has the strongest effect on students’ decision to walk or cycle to school.

**School-site active transportation interventions.** There is some evidence that school-site active transportation interventions have been met with success. California’s successful implementation of The Safe Routes to School program included a number of active transportation interventions, including a walking school bus (WSB), walk or cycle to school days, and school-based active transportation competitions (Boarnet, Anderson, Day, McMillan, & Alfonzo, 2005). Similar positive results were found with a Seattle WSB program (Johnston, 2008) and an Auckland WSB program (Kearns, Collins, & Neuwelt, 2003). Other successful school-site interventions have employed individuals to be paid leaders or coordinators (Heelan, Abbey, Donnelly, Mayo, & Welk, 2009; Mendoza, Levinger, & Johnston, 2009) while others have made provisions for additional financial support from other sources, including government agencies (Steiner et al., 2008; TenBrink, McMunn, & Panken, 2009). Evidence also suggests one-day active transportation events have proven to be both unproductive and unsustainable (Chillón, Evenson, Vaughn, & Ward, 2011; Merom, Rissel, Mahmic, & Bauman, 2005).

**Student Leadership**

*Student Leadership*  
*A Matter of Time: Risk and Opportunity in the Out-of-School Hours* (Carnegie Corporation, 1992) focused attention on the role that “productive” use of time could have upon desirable youth development. The main benefits included the learning of pro-social values while engaged in constructive activities and the establishment of positive social supports and networks to facilitate future education and employment (Eccles & Templeton, 2002). Providing authentic leadership opportunities to students is one manner by which such benefits may be realized.

Recognizing the potential of such leadership opportunities, Lieberman, Arndt, and Daggett (2007) have cautioned that although leadership opportunities may be made available within educational settings, “they must be consciously designed” (p. 47). For, without this, “it is only by chance that leadership skills are integrated into activity” (p. 47). Similarly, Gould and Voelker (2012) found that youths can, and do, learn to lead if leadership is intentionally developed through extracurricular physical activity programs. Leadership development cannot be left to chance; purposefully designed leadership development programs and opportunities are essential.

According to Brodkin and Coleman (1996), a mentor is “one who provides one-to-one support and attention, is a friend and a role model, boosts a child’s self-esteem, [and] enhances a student’s educational experience” (p. 4). In addition, Flaxman and Ascher (1992) have stated the purpose of mentoring could be to help a child or youth gain social learning and command over tasks of their everyday life in school, work, or society. This occurs through activities in which a mentor alternatively modifies, teaches, manages, questions, and structures a task for a child or youth (Flaxman & Ascher, 1992).
Smith (2011) studied youth mentorship in an after-school physical activity program and found youth mentors were able to positively impact younger students’ behaviour intentions related to physical activity. Likewise, Dzewaltowski et al. (2009) studied a youth leadership program (Healthy Youth Places [HYP]) meant to increase children’s physical activity levels and found that physical activity did significantly increase. Rhodes and Lounsbery (2010) have outlined their successful leadership program, Gymleader, as one in which a central goal was to empower the youth who take upon various authentic leadership roles. In all three of these programs, many of Quinn’s (1999) best practices in community programs for youths were addressed. These included reaching out to schools and community partners in youth development and enhancing the role of young people as community resources.

Hellison’s (1995, 2003) “Teaching Personal and Social Responsibility” (TPSR) model provides a framework and suggestions for practice for youth leadership and mentorship within physical activity settings. For example, Hellison (1995) has explained that the utilization of student-led mentorship programs is ideal for extended-day (i.e., before or after school) programs. Hellison (1995) has further suggested such mentorship programs have the potential to have a positive impact on both the mentors and the younger students, adding, “most mentors enjoy the experience, and several have wanted to do it again, even without academic credit” (p. 83).

**THE ACTION RESEARCH PROCESS**

**Why Action Research?**

Action research has been identified to be especially suitable for those who aim to address a specific educational problem (Creswell, 2009). Creswell (2009) has explained, “action researchers explore a practical problem with an aim toward developing a solution to a problem” (p. 576). Of all research designs, Creswell (2012) has labeled action research as the most applied and the most practical. Mills (2011) has described action research designs as systematic procedures done by individuals in an educational setting so as to gather information about, and improve upon, teaching and/or learning. Mills (2000) has also suggested action research within educational contexts is important because it encourages change, fosters a democratic approach to education, empowers individuals through collaboration, positions teachers as learners, encourages reflection, and promotes the testing of new ideas.

Given these characteristics, action research was the most suitable research design for our program. That is, our introduction of *Making Tracks* was meant to address an educational problem and improve teaching and learning while also attending closely to Mills’ (2000) above mentioned attributes of action research. We label our method of inquiry as practical action research (Creswell, 2012; Mills, 2011). Within such a form of action research, the purpose is to investigate a specific school program, with a goal of improving practice (Schmuck, 1997).

We know that students from across the country engage less with active modes of transportation than did their parents/guardians one generation ago; we also know that
students within Atlantic Canada utilize active modes of transportation less frequently than do their peers across the country. We know that students within Canada are less active and healthy than those from one generation ago; we also know that students within Atlantic Canada are less active and healthy than students from all other provinces. Moreover, we know there are great benefits to be afforded to older and younger students when authentic and meaningful leadership opportunities are nurtured. Though it is through our review of the literature that we know these observations to be true, we also know them to be true because of our own personal observations and experiences. We have a deep belief and intuitive sense of these things; we see them in our day-to-day working lives. That the literature supports these is, to us, commonsensical. It is therefore important to note that we have not taken up this action research simply, or solely, because of a consideration of the balance of research-based evidence. Rather, or additionally, we have taken it up because we believe these observations to be true, and we further believe that we ought to be doing something about them.

**Methodology**

**Research context and participants.** A considerable number of individuals were engaged with the *Making Tracks* action research process. Within the first cycle of this action research, these individuals included 26 female students in *Physical Education 11/12*, their female physical education teacher, two *Making Tracks* designates, two community recreation leaders, 14 elementary/middle school students, and we three university researchers (see Table 1). The 26 female students all participated in six *Making Tracks* “train-the-trainer” sessions during their regularly scheduled *Physical Education 11/12* classes. These sessions totaled 305 minutes and addressed both the walking and cycling modules of *Making Tracks*. Of the 26 students in the class, 10 volunteered to lead after-school active transportation sessions at the town’s elementary and/or middle school.

The high school leaders who led the walking or cycling sessions did so two days per week for three consecutive weeks. Each of these sessions was 90 minutes in length (360 minutes total). The elementary school walking sessions were attended by approximately eight students (i.e., numbers varied each week), between the ages of 7 and 9 years. The middle school cycling sessions were attended by approximately six students, between the ages of 10 and 12 years.

Two community recreation leaders were engaged from the beginning, initially as outside observers. In this initial role, they provided planning suggestions and shared a willingness to possibly become engaged with the second cycle. One of these two recreation leaders was especially involved in initial planning and has played an especially significant role in subsequent action, reflection, and action.

**Data collection.** Qualitative data were collected through field observations, student questionnaires, and follow-up focus group interviews with elementary school “walkers,” middle school “cyclists,” and high school leaders. Field observations were conducted at all 12 *Making Tracks* sessions (i.e., six walking and six cycling sessions). Elementary and middle school students with excellent attendance at *Making Tracks* sessions (i.e., attended
at least 5 of 6 sessions) were invited to complete brief questionnaires and participate in focus group interviews. Three elementary school walkers and two middle school cyclists did so. All 10 of the high school leaders were invited to complete detailed questionnaires and participate in focus group interviews; five did so.

Table 1: Summary of Research Cycle 1 Participants and Action Research Foci and Activities

<table>
<thead>
<tr>
<th>Date/Cycle</th>
<th>Participants</th>
<th>Action Research Foci and Activities</th>
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<tbody>
<tr>
<td>September 1 Cycle 1</td>
<td>High School Physical Education Students (n=26)</td>
<td>-plan and act/observe &quot;train-the-trainer&quot; Making Tracks sessions for high school students; plan and act to recruit elementary and middle school students for participation; plan and act to engage community recreation leaders for support</td>
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<tr>
<td></td>
<td>High School Physical Education Teacher (n=1)</td>
<td></td>
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<td></td>
<td>University Researchers (n=3) Making Tracks Staff Member and Trainer (n=2)</td>
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<tr>
<td>October 1 Cycle 1</td>
<td>High School Physical Education Students (n=10)</td>
<td>-act, observe, and reflect upon the implementation of Making Tracks walking and cycling programs; reflect with high school physical education teacher; plan and act with engaged community recreation leaders</td>
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<tr>
<td></td>
<td>High School Physical Education Teacher (n=1)</td>
<td></td>
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<tr>
<td></td>
<td>Elementary School Students (Walkers, n=8)</td>
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<td></td>
<td>Middle School Students (Cyclists, n=6)</td>
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<td></td>
<td>University Researchers (n=3) Community Recreation Leaders (n=2)</td>
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<tr>
<td>November 1 Cycle 1</td>
<td>High School Physical Education Students (n=5)</td>
<td>-observe and reflect upon the implementation of Making Tracks walking and cycling programs; reflect and plan with high school physical education teacher; reflect, plan, and act with engaged community recreation leaders</td>
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<tr>
<td></td>
<td>High School Physical Education Teacher (n=1)</td>
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<td></td>
<td>Elementary School Students (Walkers, n=3)</td>
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<td></td>
<td>Middle School Students (Cyclists, n=2)</td>
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<td></td>
<td>University Researchers (n=3) Community Recreation Leaders (n=2)</td>
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Data analysis. Field observation, student questionnaire, and focus group data were coded and categorized according to methods outlined by Miles and Huberman (1994) and Creswell (2005). Data were originally analyzed by a principal investigator who searched for key issues, similarities, differences, recurring ideas, and relationships. In this content analysis, repeated statements that possessed similar meanings were highlighted with different codes and assigned a name or phrase based on visible content information (Morse
Ethical Considerations
Ethical approval was granted by our university research ethics board (REB) and the schools’ central school board office. In keeping with the foundations of ethical research as outlined by the Tri-council Policy Statement: Ethical Conduct for Research Involving Humans (Public Works and Government Service Canada, 2005), all guidelines were strictly followed (e.g., with respect to consent, privacy, and confidentiality).

RESULTS
Field Observations
Overall, the leaders displayed the requisite knowledge of the Making Tracks program. However, they often were inadequately prepared to deliver sessions requiring material resources (e.g., cones, scarves, balls, handouts). There was an expectation on the part of the leaders that these material resources would be on site, but if not for our own interventions these items would not have been obtained. The walkers and cyclists demonstrated a willingness to try and a desire to participate, though we consistently observed behaviours that would cause concern (e.g., some of the walkers seemed too young and too immature while some of the cyclists seemed too old and too knowledgeable). There were times when the leaders seemed overwhelmed with children’s conduct and they projected a degree of discomfort when addressing inappropriate actions or misbehaviours. The leaders also displayed uncertainty when it came to demonstrating the learned active transportation skills off the school site and in the local neighbourhoods.

Following are some significant program-specific observations.

Walking. The younger walkers often appeared to have more difficulty following the leaders’ instructions than did the older walkers. At times they were either disengaged or disruptive during activities (e.g., crying, pouting, talking). Despite the few younger walkers whose behaviour challenged the leaders, the older walkers usually followed the instructions and participated in the activities and discussions. The leaders worked to guide walkers through the activities and discussions. They were active themselves and participated in many of the activities. They asked questions during the activities to ensure that the walkers knew what they were doing. The leaders always allotted time for the walkers to have discussions about their new learnings. At times the leaders did not arrive for their sessions prepared with all the necessary material resources. This created some difficulty for the walkers to effectively participate in the activities. However, when the leaders were adequately prepared, the walkers were often more engaged.

Cycling. As the sessions began, it was not uncommon to hear cyclists comment: “We’re ready to go!”; “Are we doing jumps?”; and “If it rains can we still bike?” Comments such as these clearly demonstrated commitment and interest to participate in the cycling aspect of the program. For each session, the cyclists were energetic and anxious to start. There were
times when this seemed to overwhelm the leaders but they would patiently call the group together to explain the activities, the importance of knowing cycling safety, or the importance of particular cycling skills. If cyclists were unfocused or inattentive, the leaders were firm in asking for attention and participation in a polite and respectful manner. However, at the beginning of the sessions it was not uncommon to hear leaders make the following statements: “Do we have enough bikers to start? Should we wait?”; “What should we do, I don’t want him to get hurt?”; “We just want to make sure he is okay to participate. Should we call his mom first?” (referencing a student with a disability); and “We’re not sure if we should go outside or stay in. Where do you think the best place will be for them to learn best?” These sorts of comments and questions suggested that having an additional adult on site would have been helpful.

**Questionnaires and Focus Group Interviews**

**Walkers.** The three walkers shared their perspectives about what they enjoyed most about *Making Tracks* and what they believed were their most important learnings. Moreover, they also shared some insight into how they felt when they were afforded opportunities to walk in their neighbourhoods without adult supervision.

*Playing games and walking for “real.”* When given opportunities to share what they enjoyed most about *Making Tracks*, or to explain their favourite moments, all three walkers spoke of the games that were introduced. These games were meant to foster learning while also being engaging and/or physically active. Asked about what activities they enjoyed most, walkers offered:

- Michael: My favourite activity was when we played green light or red light [a game] and safe or unsafe [a game].
- Jason: The other thing that I liked most was we got to like act out what was bad or good [a game]. We got to, we got to tell them it was bad safe or unsafe and that was fun and the other thing we got to act and I like acting a lot.
- Anika: My favourite activity was safe or not safe.

Once one walker also added that the community walk was his other favourite memory of his *Making Tracks* experience, others agreed. This culmination activity had leaders and their younger walkers complete a 4 km walk through the neighbourhood. In this experience, walkers were constantly quizzed (e.g., on traffic signs and procedures) as they were given opportunities to practice what they learned:

- Jacob: My favourite day was the last day. We got to go on the walk because it was fun and we got to practice walking safely.
- Anika: Yeah, that was the best. Because we got to actually do it and go places.

**Key learnings.** Asked about the most important things learned through their participation in *Making Tracks*, the walkers most often spoke of safety:
Anika: How to, what signs mean, cause it tells you like if you should go there or something.
Michael: And how to walk safely, walking safe on sidewalks. I didn't know there was such thing as jaywalking before I went into the program.
Jason: About jaywalking cause if I didn't know what jaywalking was, I would be like jaywalking every day after school. Nobody told me before.
Michael: If there was traffic outside probably. You’re gonna get hit by a car when you are walking if you, like if you forget to press the button.

The three walkers also identified three familiar barriers to walking to school. These included distance, weather, and safety (due to bullies). The Making Tracks sessions explored these barriers to walking to school (among others) and the three walkers evidently learned some of the presented adaptive and coping skills. For example, with respect to safety due to bullies, walkers offered the following:

Anika: I could, if I was like almost there I would just go to, try to go to one of my friend’s house if there was a bully following me, but, and tell their parents and they could call my parents and tell them.
Jason: I would tell my parents about the bully.

With respect to weather, walkers suggested:

Michael: I would wear warm stuff and like winter gear or something. And also if it was raining really hard I would wear a rain jacket and splash pants and boots and I would take an umbrella with me.
Anika: And about the weather, I would just wear a bunch of warm stuff.

Feeling “big.” The walkers were the youngest people involved in this program. All three of the walkers who participated in the focus group interviews explained that they felt bigger and more responsible when given opportunities to walk without adults:

Anika: I feel like I’m older and I’m bigger and that I have more responsibility and I like that. I like feeling big and responsible like that.
Jason: I feel like I have responsibility to go wherever I want by myself. I, like, I feel like an older kid, not so little.
Michael: Well, I’m younger than them. But I like it too. I feel the same thing. Like I’m in grade three or something.

Cyclists. The two cyclists were present for every session and felt they gained a great deal from their involvement in the program. During the focus interview, both referenced an interest in continuing the program in the spring and a desire to cycle more. From the focus group interview the following program insights were gathered.
The community ride was best. There was absolute agreement from both cyclists that being able to demonstrate their biking knowledge and skills in a community ride was a program highlight:

James: Our community ride at the end was the best because we really got to ride a lot and for a while. I really like biking. I was feeling great. It was a lot of fun. We got to go far and that was what I was waiting for the entire time.

Evan: The practice ride was perfect! I like that part best because I got to ride far. I got to bike beyond my driveway, you know past my neighbourhood loop. I have to stay in my driveway or my street on the loop. That day I got to go really far and that was the best.

Key learnings. Asked about the most important things learned through their participation in Making Tracks, the two cyclists were clear on what aspects of the program made a defined difference and gave examples of developed independence:

James: I know all the parts of the bike and that is the best to know. Because now I can fix my own bike if it's not serious, but at least I can go to the bike shop and ask for the right stuff. I now can get my part and if I can fix it I will but I will know what is wrong and what will probably have to happen to fix the bike.

Evan: I now am allowed to go beyond my driveway; my privileges have been extended—that's what my Mom says. But only if I stick to the program, but I am still not allowed on the main road.

Barriers. When the cyclists discussed barriers to continuing cycling they both suggested geographic limits, related to both distance and traffic.

James: The busy streets, the cars make me nervous. They go too fast and I don’t think they care about me. So if there are no sidewalks [a reality in many rural locations in Nova Scotia] to my friend’s house I sometimes don’t go because it’s too far or I will bike so far and walk the rest of the way. I always bike to school now, my bike is outside in the rack and I really like it when my Mom says I can because I do not have to wait for her to go to school. I will always bike, I never will stop, but I won't bike in the snow. It's too hard, but it could be fun so I might try some time, but not now.

Evan: My Mom stops me because I am not allowed on the highway [a main road beyond their neighbourhood], so I will never be allowed to bike to school—never! But I can now go to a friend’s house as long as it’s in my neighbourhood and now that is past my loop so that’s great.

Quality mentors that care. An essential aspect of Making Tracks is the reliance on the student leaders to deliver the program. As observed in the field observations, it was clear there was a caring capacity from the leaders. The cyclists shared their perceptions of the leaders:
James: They were the best; they really want to make you learn, real pro on the safety stuff. They sounded like cops, nice cops...but just really pumped up to keep us safe so we really had to learn that stuff. But they really wanted us to do well.
Evan: They were great, they never got mad... So I wanted to do well. They were smart; they never had to look at the book for the answers. They knew the rules and the program parts so they must have done the best to be allowed to teach us.

Leaders. The five leaders who completed questionnaires and participated in focus group interviews were able to provide their perspectives related to the benefits for their younger participants and also for themselves as leaders. They also were able to provide insights related to the limitations of the Making Tracks program.

Perceived benefits for walkers and cyclists. The high school leaders believed that the younger walkers and cyclists learned the basic program outcomes related to both safety and skills. When questioned about the benefits that might be realized by Making Tracks participants, the following was offered:

Ella: Just road safety I guess and biking skills and, I don’t know if it’s included in the question, just basics and just overall safety I guess of the road and all that.
Rennae: Yeah, I guess the laws on the road and that vehicles aren’t, some drivers aren’t safest, so that you have to follow certain rules to be able to get to Point A to Point B safely and independently I guess.
Anne: I did walking or I did the stranger danger with the kids and I did the game where you walk up to them and pretend to be unsafe and stuff like that and they were all really good to come so they kind of got an understanding that not everyone is safe and stuff like that so that was really good.

Moreover, they also suggested that, because of their involvement in the Making Tracks program, the younger students would be more likely to utilize active modes of transportation in the future. The leaders’ observations suggested that, in addition to learning certain safety and movement skills, younger participants also developed a sense of independence:

Suzi: I just think they are more comfortable. I did the walking and before they probably, they wouldn’t wanna do it by themselves, they needed someone to walk with them but now they probably can handle it by themselves.
Ella: I guess they are more independent. They won’t have to ask their parents to take them places if it’s a short distance, like, yeah I’m just going to walk there and I’ll be right back.
Rennae: And they have the independence, like they have the knowledge and everything so their parents should know by now that they’ll be safe if they’re
going. Like, safety, trust as well, if they're going to their friend's next door their parents know, oh they took the walking [course], they should be good to go and they are good to go.

Perceived benefits for leaders. The leaders also suggested some of the positive benefits they experienced from their participation as leaders for Making Tracks. These included leadership skills for this specific program, as well as for more general applications. When asked what they learned about themselves as leaders, the students offered the following:

Anne: You definitely have to be assertive and loud at some points.
Suzi: I also learned that you need to be patient with the kids. Some of them might be a bit slower so it will take some time for them to catch up with things and you just need to just be patient with them.
Ella: Well, a good thing is to make sure everyone is on the same page when you are doing things. Patience as well, as Suzi said, is going to come in as a big factor as well and you need to, whether its kids or adults, you just need to make sure that you have everyone in line and make sure everything is going smoothly.... And everything that was said can pretty easily be applied to everyone else.
Anne: I wanted to get more experience and actual knowledge in leading kids because I want to get a job with county rec and I thought this would be a good chance to learn things they would be looking for. I think it is a good use of time. I may want to go to university and this will help I think.

The leaders were also invited to share how their leadership experience felt. Their responses provided insight into their leadership development, most notably as it relates to a sense of confidence and accomplishment:

Suzi: I learned a bunch of things I never thought important and I know that I can make decisions and convince other people that my ideas are good.
Anne: It felt good, going home. It felt like you accomplished something. You, at least, if you teach one kid one thing then it just, I guess, I feel good and happy.
Suzi: I’m gonna say it was a little stressful at the time, with the little kids running all over the place but after you kind of get used to it and get everything under control you feel more empowered I guess and afterwards I did pretty good.
Tamara: I think it was the actual experience of being able to work with others, the girls and gain leadership skills. That is not easy to develop when you are in school. I actually developed confidence in myself, my leadership, because there were moments when it was not easy, you had to really work on strategies to keep kids focused. I think there was a lot of courage on my end to agree to do this program, and that goes for all of us, because not everyone in the class wanted to do this, it seemed too big with too many responsibilities.
Program limitations. The leaders shared their frustrations with the participating students’ age and/or behaviour. When questioned about frustrations as leaders, they offered:

Ella: The short attention span of the kids. The games had a purpose, I could see it, but they did not always get the point. They just wanted to play games and not talk about the learning. And I wanted them to know what they got from doing this. That was frustrating!

Tamara: The maturity of some of the kids. They should have been a grade or two older. I think the program needs to rethink grades for sure.

Anne: It’s about ages. I think the program needs to start later for the walkers and earlier for the biking kids. It’s not timed right and the kids are missing the points.

Rennae: When the kids were upset about something, that was frustrating. I think an adult needs to be there all the time because I am not their parent and what am I supposed to do about a crying kid? I want to finish my program and it’s hard when one kid wants to get their way in playing a game. So yeah, it’s a maturity thing again.

CONCLUSION

We titled this article Making Tracks 1.0 because we had always viewed this as a program-in-progress. The fall iteration was in all ways the first cycle of our action research process. The spring iteration, as a second cycle of our action research process, is planned to be different. Through a careful consideration of our data (including our informal conversations and reflections with our partners), we have mapped out “Making Tracks 2.0” as an idealized improved program (see Table 2). Our reflections have allowed us to refine our program so that our upcoming actions will be responsive to the observations, needs, and interests of our community partners.

Given the relative success of our initial fall offering, our community partners have recognized the value of Making Tracks and have committed a significant financial contribution for our upcoming spring program. This contribution has allowed for the purchase of 15 youth bicycles and helmets. Moreover, the community recreation department will also ensure that a hired recreation leader will lead Making Tracks in three different school communities. The hiring of a recreation leader is not meant to devalue the work of the high school leaders. Rather, it is meant to alleviate some of their concerns about taking on too much responsibility. This addition attends to our own field observations related to their struggles with behaviour management and material resources. Given the high school students’ experienced benefits (e.g., related to leadership skills and empowerment), they will continue to be involved as assistants, or leaders-in-training (LITs). Responding to our data and our informal conversations, and reflections, Making Tracks 2.0 will focus solely upon cycling and will be restricted to elementary students in grades 3 and 4. Our spring program will reach 50 more high school students, two more high school physical education teachers, 30 more elementary/middle school students, and, most importantly, two additional communities.
Table 2: Summary of Research Cycle 2 Participants and Action Research Foci and Activities

<table>
<thead>
<tr>
<th>Date/Cycle</th>
<th>“Active” Participants</th>
<th>Action Research Foci and Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>April Cycle 2</td>
<td>High School Physical Education Students (n≈75) High School Physical Education Teachers (n=3) University Researchers (n≈3) Making Tracks Staff Member and Trainer (n=2) Community Recreation Leaders (n=2)</td>
<td>-plan and act/observe “train-the-trainer” Making Tracks sessions for high school students at three school sites; plan and act to recruit middle school students for participation; plan and act with engaged community recreation leaders</td>
</tr>
<tr>
<td>May Cycle 2</td>
<td>High School Physical Education Students (n≈30) High School Physical Education Teachers (n=3) Middle School Students (Cyclists, n≈45) University Researchers (n=3) Community Recreation Leaders (n=2)</td>
<td>-act, observe, and reflect upon the implementation of Making Tracks cycling program; reflect with high school physical education teachers; reflect, plan, and act with engaged community recreation leaders</td>
</tr>
<tr>
<td>June Cycle 2</td>
<td>High School Physical Education Students (n≈15) High School Physical Education Teachers (n=3) Middle School Students (Cyclists, n≈9) University Researchers (n=3) Community Recreation Leaders (n=2)</td>
<td>-observe and reflect upon the implementation of Making Tracks cycling program; reflect and plan with high school physical education teachers; reflect, plan, and act with engaged community recreation leaders</td>
</tr>
</tbody>
</table>

Engaging in this sort of action research might have been a challenging process, if one person were responsible for all planning, action, and reflection. However, the shared investment in the process has welcomed many players to the table. We have seen Making Tracks have a positive impact upon our community. We have been able to share in those successes; with our larger group of peers and participants we have made these things happen. Perhaps most importantly, we are tremendously excited about continuing to do this work with one another into the future.

REFERENCES
Active Healthy Kids Canada. (2013). *Are we driving our kids to unhealthy habits? The Active Healthy Kids Canada 2013 report card on physical activity for children and youth.* Toronto, Canada: Active Healthy Kids Canada.


**Biographical note:**

Dr. Daniel B. Robinson is an Associate Professor at St. Francis Xavier University. He teaches undergraduate and graduate courses focusing upon a number of topics, including physical and health education, comprehensive school health, and administration of inclusive schools. His current research interests are related to culturally responsive pedagogy, physical education teacher education (PETE), physical education pedagogy, and active transportation education.

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Ingrid Robinson (PhD candidate) is a lecturer and doctoral student at St. Francis Xavier University. She teaches undergraduate and graduate courses focusing upon a number of topics, including social studies education, teacher preparation, gender and leadership, and research methods. Her current research interests are related to culturally responsive pedagogy, women in educational leadership, and active transportation education.