

Active Transportation:  
Children's Perceptions of the Walking School Bus Program in a Rural  
Manitoba Community

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## **Abstract**

A Walking School Bus (WSB) is a group of children walking to school with a supervisor. Providing safe and active routes to school for children to participate in allows them to be physically active while getting to school on time. The WSB Program allows children to be picked up at a designated location, to socialize, be active and to learn more about their community. This practicum explores the perceptions of children participating in the program in a rural community in Manitoba. The researcher found for the most part, students enjoy walking to and from school with the WSB. Most students enjoy it because they get to spend time with their friends and be outside. The program gives students independence, a safe way to get to and from school, and allows parents the freedom to not need to take their child to school.

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## **1.0 Introduction**

### **1.1 Purpose**

My research has a focus on the Walking School Bus program for primary school children in a rural community of Manitoba. The practicum has a focus on the perceptions of the children participating in the program and how those affect the program and contribute to the academic literature about these programs.

A Walking School Bus is a group of children who walk to school together with one or more adults. It can be as informal as two families taking turns walking their kids to school or structured with a specific route and meeting points (Walking School Bus, n.d.). The program allows children to be active on their route to school while being supervised. Not only does the program get kids to school safely in an active way; it can also benefit parents. Parents who work or do not have time to walk their child to school and therefore resort to driving them, or have other children at home and do not want to get all the children ready to go outside in the winter just for a short drive no longer have to, if their child gets picked up right at their house. A Walking School Bus program can be implemented in any community and can be modified to fit the needs of the school and students- from running every school day in the morning or afternoon, only in the mornings three days a week, or only one day a week. The school decides how they would like their program to run.

As the rate of obesity in children rises, the importance of being physically active becomes ever more important. Encouraging children and parents to use active transportation, like walking and biking, to get somewhere they are going anyways increases the amount of

physical activity children are getting each day. Whether an extra 15 minutes a day or an hour, it makes a difference in the child's health. Implementing a Walking School Bus gives children normally driven to school the opportunity to walk to school with their friends. Not only do they get exercise but they also potentially decrease their risk of obesity through living an active lifestyle.

Not long ago, children walked and biked to get to school and around their community. Today, this is no longer the case. Reliance on motor vehicles has increased in recent decades. As the vehicle traffic has increased, parents have become convinced that it is unsafe for children to walk or bike to school. As a result, they drive their children to school, increasing the amount of traffic around schools, creating more of a problem (Safe Routes Info, n.d.). A survey of parents to find out the most common barriers that prevented them from allowing their children to walk to school was done in the United States. Reasons for children not being allowed to walk to school were: distance to school, traffic-related danger, weather, crime danger, opposing school policy and other reasons (Safe Routes Info, n.d.).

Until the 1960s, schools were located centrally in communities, and on average 41% of students lived within one mile of school. Being within close proximity allowed for a high rate of walking and biking to school, with 88% of children living within 1 mile of school, using active transportation to get there. In the 1970s, instead of renovating the existing schools or building new schools within communities, school districts started building schools on the edge of communities where land prices were lower and more space was available. Schools located on the outskirts of town decrease the number of students living nearby. In 2009, 31% of students



lived within one mile of school and only 35% walked or biked there. The further students live from school, the less likely they are going to walk or bike (Safe Routes Info, n.d.).

As the percentage of children walking and biking to school decreases, the number of students getting driven to school increases, and parents become more convinced that walking to school is unsafe. Parents believe that driving their children to school is safer than walking, contributing to the traffic congestion and traffic dangers near schools. Being inside a vehicle does not promise safety. Motor vehicle crashes are one of the leading causes of death of school-aged children. To accommodate the increased amount of vehicles, the opportunities for walking and biking have suffered. Many areas do not have sidewalks, or they have been neglected in order to improve roadways (Safe Routes Info, n.d.).

The weather not has changed in recent decades; however social norms may have changed. It has become normal for people to jump into their car for most trips, especially in the cold, rain or heat (Safe Routes Info, n.d.). During these weather events, it may be more likely that a parent will choose to drive their child, rather than dressing them appropriately and walking or biking to school.

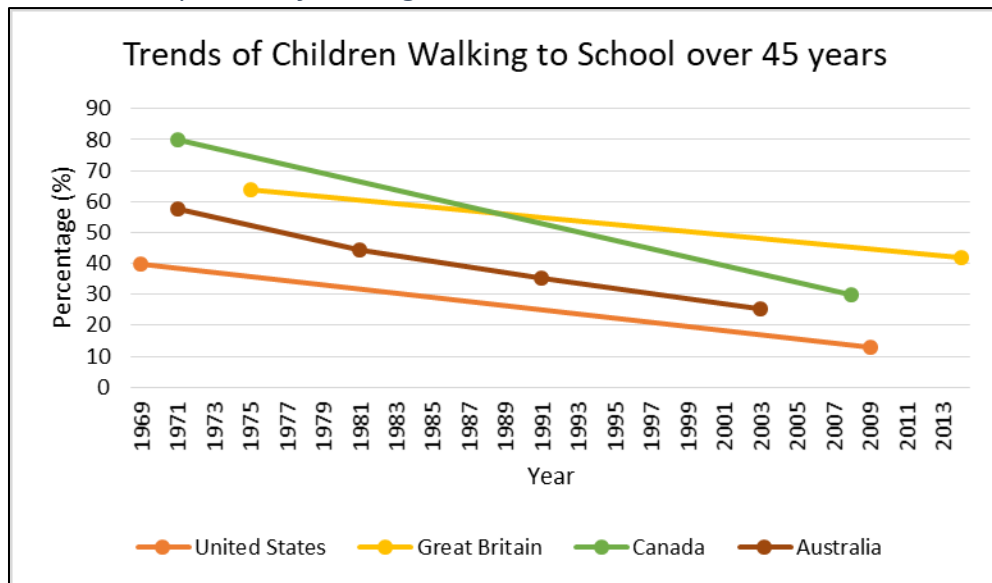
Parental fears of crime prevent children from walking to school as parents are worried about child kidnapping and assault. However, only 2% of reported missing children were non-family abductions (Safe Routes Info, n.d.). An increase in the fear of crime could be linked to the presence of media, creating fear for the safety of children walking or biking to school.

Some schools have policies in place that prohibit children from walking and biking to school, possibly due to safety concerns for parents (Safe Routes Info, n.d.). Unfortunately, this

policy would instill fear in children from a young age that it is not safe to walk or bike outside. Addressing the safety concerns by building sidewalks or starting Walking School Bus programs, could increase safety, but also allow children to walk or bike to school.

A combination of these factors -- traffic dangers, weather, crime, and school policies -- have impacted the number of children that are allowed to walk or bike to school. We have entered into a never-ending cycle. Driving because of the perception that it is unsafe to walk creates more safety concerns due to the additional vehicle traffic. Addressing safety concerns by building more sidewalks, centrally located schools and adult supervision, could decrease the number of children getting driven to school, and increase walking and biking.

*Table 1. Comparison of walking to school trends.*



The factors affecting the number of children walking to school is not occurring only in North America. As shown in Table 1, there has been declines in the number of children walking to school in the United States, Great Britain, Canada and Australia. In the United States, the

percentage of children walking to school dropped from 40% in 1969 to 13% in 2009 (Kang & Diao, 2018). In 1975, 64% of children in Great Britain walked to school, compared to 42% in 2014 (Department of Transport, 2014). Canada's percentage of children walking to school decreased from 80% of children in 1971 to 30% in 2008 (CTV News, 2008). In Australia, there was a steady decline of the number of children walking to school, with 57% of children walking in 1971 compared to 25% in 2003 (van der Pleog et al, 2008, p. 60)

## **1.2 Research Questions and Methods**

This practicum seeks to answer three research questions.

- 1) How are other communities using the Walking School Bus program to promote active transportation to school?
- 2) What is the perception of the Walking School Bus program of those participating?
- 3) How do the insights of the children participating enrich planning Walking School Bus programs and the literature on active transportation for children?

The research methods used to answer these three research questions are:

- Literature Review and Precedent Analysis
- Observations of the Walking School Bus and a Brainstorm Session
- Semi-Structured Interviews with Parents/Guardians, Leaders and the Principal

### **1.2.1 Literature Review**

A literature review is done to find out what already exists in the subject area of research (Hart, 1998). A researcher must know about the contributions others have made to the

knowledge on the topic. This is important, as “It is the ideas and work of others that will provide the researcher with the framework for their own work” (Hart, 1998, pp. 27-28). Literature reviews share the results of other studies closely related to the research being studied (Creswell, 2003). Relating the study to the larger ongoing research on the topic fills in the gaps and extends prior studies (Creswell, 2003). Literature reviews also provide a framework for establishing the importance of the study and a benchmark for comparing the results of the study with other findings in the field (Creswell, 2003).

The literature review is an exploration of literature found in academic journal articles and books relating to the chosen topic. The review comprises of four sections: Public Health and Active Transportation, Walking to Ensure Health and the Walking School Bus, Child-Friendly Communities and Engaging Children in Research. The first two sections focus on the many benefits associated with walking to school. The third section focuses on how to build child-friendly communities that allow children the opportunity to engage in active transportation. The final section considers how children can be included in research.

### **1.2.2 Precedent Review**

The precedent review explores how other communities are using the Walking School Bus program in their community. Every community and school is different; therefore no two programs are the same. Walking School Bus programs can be easily modified to do what works best for each school. Precedents were identified through publicly available online resources. This precedent review looked at six examples of programs in Canada and the United States. Unfortunately, little information was available online about Walking School Bus programs in

rural communities, possibly due to few rural programs existing. Precedents were found by doing internet searches for Walking School Bus programs and active transportation to school programs. To bridge the gap between urban and rural programs, a rural community's active transportation program was included. The Walking School Bus programs that were included were chosen because they were all different and something could be learned from each program. These programs also offer sufficient information publicly available to access.

### **1.2.3 Observation**

This study uses participant observation to collect data by participating in the Walking School Bus in the morning and afternoon over multiple days. Observations allowed the researcher to see how the children interact with one another, with the supervisors and with their surroundings while participating in the program. The researcher can understand the children's insights and what could be changed or improved in the program to make it more enjoyable and more successful, by being part of the program over multiple days.

Participant observation involves the researcher observing from within the context that is being studied, by being accepted as a member of the group and using this status to gather information about the group (Crano & Brewer, 2002). The goal of participant observation is to actively interact with the subjects and becoming 'one of them' (Mitchell & Jolley, 1988). Researchers who use participant observation suggest you gain more 'inside' information by using this method of observation rather than other types of observation (Mitchell & Jolley, 1988). However, a downside to this method is, as a participant you are in a position to potentially influence what the subjects do (Mitchell & Jolley, 1988). Participant observation is

open to criticisms of subjectivity and bias; however, it has become one of the most popular and important ways of collecting data about the lives of children (Montgomery, 2014).

In order to study and understand how the Walking School Bus works and the children's perceptions of the program in a rural setting I needed to be immersed into the daily activity to be able to make observations, even while blending in and becoming part of it (Montgomery, 2014). As stated by Montgomery (2014, pg. 124),

“Participant observation with children involves many of the same processes as doing such research with adults. It involves engagement and ‘deep hanging out’ with children, understanding their lives, their experiences and how they make sense of the world. But doing participant observation with children also raises particular challenges and it is unwise to pretend that children are a subject like any other, or that as a technique for researching children, participant observation is without problems”

There are four possible roles an adult outsider can play when researching children: Leader, Supervisor, Observer, and Friend. The observer is the ideal form, requiring neither positive contact with the subjects, nor authority. The observer simply records the events, without becoming personally involved (Montgomery, 2014). Participant observation is a good fit for this study because it allowed me to get close to the children being studied to learn about their world, their feelings, and understandings (Montgomery, 2014). There are also drawbacks, as such work is time-consuming, and it can be difficult to find children willing to talk and let you become part of their lives (Montgomery, 2014).

During the week of observations, the teachers who led the Walking School Bus organized a Brainstorm Session, to ask students what they thought of the program and what could be done differently. The Brainstorm Session was planned to take place during the week of observations so I could be in attendance and gather additional information from the children. A

teacher acted as facilitator asking questions on how the children feel about walking to school with the Bus, why they feel this way, what could be done differently to make it safer, and what could make the walk more fun. During this session, I observed and wrote down notes on the children's responses.

A Brainstorm Session in a classroom setting, set up similar to a Focus Group, allowed the children to express their experiences and attitudes in a setting they are comfortable with. Focus groups are an effective way of conducting research on people's experiences and attitudes as the participants are able to speak to one another and the researcher, making comments and asking questions (Kitzinger, 1995). Rather than talking to the children individually, the strength of a focus group is interaction between participants to produce the data (Morgan, 1997). During a group discussion, various modes of expression could be used to convey information that may not have been revealed through questionnaires or interviews (Kitzinger, 1995).

A group brainstorm allowed children to hear about each other's experiences and to draw comparisons with their own experiences on the Walking School Bus (Morgan, 1997). A group discussion provided direct evidence about similarities and differences in their opinions and experiences, rather than talking to the children individually and reaching conclusions from separate statements (Morgan, 1997).

#### **1.2.4 Semi-Structured Interviews**

Interviews were conducted with the leaders, the principal, and parents of children in the program to gather insight into the children's perceptions of the Walking School Bus and how a child's perceptions affect the program. A semi-structured interview model was used for these

interviews, as this offered a more flexible approach, allowing the interviewer to start with some main questions, but also have some the flexibility to ask new additional questions where appropriate (Flewitt, 2014). With semi-structured interviews, the interviewer is free to formulate new questions spontaneously in response to the interviewee's answers, similar to a normal conversation (Flewitt, 2014). When an interview feels more like a conversation, it encourages the interviewee more relaxed and comfortable (Flewitt, 2014).

Researchers use interviews for different purposes, depending on the researcher and the research question being asked as well as the research approach that is being used (Flewitt, 2014, p. 138). Interviews can give a better understanding of the participants' lives, to understand why a person has a certain attitude or feeling, or to understand why certain choices are made (Flewitt, 2014).

Interviews help to gather additional information about the children's perceptions because there is a risk during observations the researcher's own values, life experiences, and understandings could affect the interpretation and shape the research account (Flewitt, 2014). Relying on observational data alone could run the risk of falsely attributing intentions and motives to actions or conversations observed (Flewitt, 2014). Conducting interviews allows the researcher to speak to the people whom the children spend the most time with and with whom they feel comfortable. Through the interviews, the researcher learns what they are telling those people, as this might be different than the actions under observation (Flewitt, 2014).

When research involves multiple methods, focus groups often add to the data collected through other qualitative methods, like participant observation and interviews (Morgan, 1997).



By using a combination of participant observation, focus groups and interviews for this research project I ensured the children's perceptions are interpreted correctly. By seeing how they act, how they say they feel, and asking their parent/guardian what the child has said about the program I could have a better understanding of their perceptions.

### **1.3 Importance of Research**

As the rate of child obesity grows and children are becoming less active while spending more time in front of screens, the importance of being physically active becomes integral to a child's health. One way to become more active is by walking to school. Parents may want their child to use active transportation to school, but it may not be possible due to the parent needing to go to work or having other commitments. The Walking School Bus allows children to walk to school safely, while allowing the parents to put in very little time, allowing them to get to work or fulfill their other commitments. The research done presents the opportunity to see how the Walking School Bus is perceived through the eyes of the children participating in the program. This knowledge could increase the number of programs in school divisions and within communities to allow all children to have the opportunity to participate in the program and become more physically active.

### **1.4 Overview of the Practicum**

This practicum begins with a literature review in Chapter 2 about other research done on the topics of active transportation, the Walking School Bus, and children in research. This review provides a foundation for the study to assess what has already been researched in the field to give a base for this research topic. Following the literature review, Chapter 3 will offer

background about the research site, including the community, school, and transportation. This background information gives the reader some context about the community and the program being studied. The precedent study in Chapter 4 looks at five Walking School Bus programs in Canada and the United States, as well as one rural school that has an encouragement program for active transportation. This chapter examines how other communities are encouraging active transportation to school. Chapter 5 is about the observations of the Walking School Bus and Brainstorm Session, analyzes these observations, and highlights themes arising. The interviews with parents/guardians, leaders and the principal are covered in Chapter 6, along with analysis of each to understand similarities and themes common amongst those interviewed. Chapter 7 compiles the analysis and information gathered, to develop the findings in which research questions are addressed. Finally, Chapter 8 wraps up the document in the conclusion and summarizes the findings for each research question. The concluding chapter also considers any implications and limitations of the research and potential for further study on this topic.

## **2.0 Literature Review**

This literature review examines the research that has been done in four topics related to the research of the Walking School Bus. The four topics are:

- Public Health and Active Transportation
- Walking to Ensure Health and the Walking School Bus
- Child Friendly Communities
- Engaging Children in Research

These topics were chosen for this literature review because they will work together to give an understanding of what is currently available in research literature in the topics related to children's perceptions of the Walking School Bus program.

### **2.1 Public Health and Active Transportation**

According to the World Health Organization, "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (World Health Organization, 2007). In Canada, 31% of children and youth aged 5 to 17 are overweight or obese; this is partially due to not getting enough physical activity. Only 7% of children and youth in Canada are getting the recommended 60 minutes of moderate to vigorous intensity physical activity per day (Heart & Stroke Foundation, 2015). This physical activity could be done through activities such as sports and school-based physical education classes, or through an active lifestyle, by walking and biking as a form of transportation. Physical education classes in school have traditionally been seen as a primary source of a child's physical activity for the day. However, evidence has suggested children only do about 8 minutes of moderate to vigorous

physical activity during a 40-minute class (Tudor-Locke, et al., 2001, p. 310). This stat could vary greatly from school to school or even between classes within the same school. Depending on the teacher and the day's activity, some sports require everyone to be active the entire time, while others only need a portion of the group to participate at once.

Children today are spending more time inside, watching TV or using electronics and less time outside interacting with nature and being physically active. Children and youth ages 6-17 are spending an average of nine hours a day sedentary (Heart & Stroke Foundation, 2015). According to the report card on physical activity for children and youth by Active Kids Healthy Kids, 84% of 3-4 year olds in Canada meet the recommendation of 180 minutes of physical activity of any intensity per day. However, as they get older this percentage decreases substantially. Of children 5-11 years old, only 7% are meeting the daily recommendation of 60 minutes and only 4% of 12-17 year olds are getting 60 minutes of exercise. However, this does not mean children and youth are never getting the recommended amount. They are just not getting the recommended amount every day. Some children aged 5-17 years old (40%) meet the recommendation at least 3 days a week, but this needs to be met every day in order to achieve optimum health benefits (Active Healthy Kids Canada, 2014, p. 19).

One study by Cooper et al. (2003) found children who walk to school are significantly more active than those who travel by car. Major physical activity differences between travel groups were only seen in boys though. Boys who walk to school are also more active after school and throughout the evening than those who travel by car. The study found active transportation may contribute to a more physically active life, at least for boys. The girls in the sample were less physically active than the boys by about 20%, and girls who walked home did

not participate in any more physical activity after getting home than those who got a ride home. This shows walking to school initiatives could increase the level of physical activity in boys more than just walking to school, as they are then more likely to be active in the evening after walking home (Cooper, et al., 2003, p. 275). A study by Pabayo et al. also found boys who walk to school are more active after school and throughout the evening than those who are driven (Pabayo, et al., 2012).

Another study on the importance of active transportation to school for children's physical activity, found children who use active transportation to and from school accumulate more steps over the course of the whole day as well. This same study found students who use active transportation to get to and from school are more physically active in comparison to those that do not; however, these findings only apply to those living in urban regions and do not extend to those living in small towns or rural areas. When children walk or bike to school they are able to obtain a significantly larger proportion of their daily physical activity by traveling to and from school in comparison to those who do not. If a child lives within walking distance of school, the use of active transportation to school can be incorporated into a daily routine, making it easier for a child to meet the daily physical activity recommendations (Pabayo, et al., 2012). When children use active transportation to get to and from school, research has shown there are significant increases in average daily physical activity and a greater likelihood of meeting the daily recommendation, compared to those who do not use active transportation to get to school (Pabayo, et al., 2012).

There has been a decline in the number of children using active transportation to school, while the proportion of children being driven to school in cars has increased (Pabayo, et

al., 2011). In the United States, active transportation to or from school among Kindergarten to Grade 8 children declined between 1969 and 2001 from 40% to 13% (Kang & Diao, 2018, p. 1). Over half the children in Australia, Sweden, England, Russia and Scotland usually walk or bike to school, while data from Ontario and Prince Edward Island shows only a third of Canadian children do the same (O'Loghlen, et al., 2011, p. 364).

Children who live close to school are more likely to walk or bike to school than those who live farther away, but road safety and personal safety concerns are important barriers to active transportation to school. Interestingly, children in primary school are more likely to walk or bike to school than those in secondary school, although younger children generally have less independent mobility, so parents must be accompanying them on the route, or they are trusted enough to walk themselves. A parent's perceptions can also decrease a child's ability to walk or bike to school if the parent believes driving is faster, which also grants the child less independent mobility. In Manitoba, 27% of children and youth 5-17 years old always use an active mode of transportation to get to and from school, and 62% only use inactive modes. Manitoba is slightly better off than Canada, as a whole as only 24% of children 5-17 across the country always use active transportation to get to school (Active Healthy Kids Canada, 2014, p. 36).

By incorporating active transportation into daily life, children can greatly increase the amount of physical activity they are getting on a daily basis. If children walked all trips that were less than 1 kilometer rather than being driven, they would take an average of 2,238 more steps each day. Between 2007 and 2009 approximately 4 times more boys than girls reported doing at least 1 hour of cycling per week to get to and from school, work or doing errands. Only

10% of schools in Canada have fully implemented policies to promote active transportation. If more schools were promoting active transportation, children may be more encouraged to find an alternative method to getting to school, rather than getting a ride (Active Healthy Kids Canada, 2014, p. 39).

## **2.2 Walking to Ensure Health and the Walking School Bus**

Walking or biking to school has many benefits for children as it improves their health and gets them more active, but is also just a great way to get to school (Active Healthy Kids Canada, 2014). The many benefits of regular physical activity for adults is well known to reduce your risk of cardiovascular disease, type 2 diabetes, and some cancers. Regular exercise also helps control weight, strengthen bones and muscles, improve mental health and improve your chances of living longer (U.S. Department of Health and Human Services, 2015). Children can have similar benefits when they are physically active. Although chronic diseases are not common among children, the immediate benefit of being regularly active is the prevention and treatment of childhood obesity (Tudor-Locke, et al., 2001). Being active can also have positive effects on cognitive function, as research has revealed a positive association between physical activity and academic performance in children and youth (U.S. Department of Health and Human Services, 2010).

Heelan et al. (2005) studied the association between active transportation methods to and from school and body mass index in children 9-11 years old. The research found a positive correlation between the method used to get to school and BMI, suggesting the more physical activity accumulated from active commuting, the higher the BMI. The researchers pointed out it

is expected children would gain weight over the course of 6 months, although it was expected the children who were physically active on their commute to school would gain less weight than those being driven. They found the positive correlation was due to the overweight sample, those who actively commuted to school gained as much weight as their driven peers and 34% more than their normal weight peers. This indicated overweight children are becoming more overweight, and using active transportation is not necessarily enough to keep them from continuing to gain weight (Heelan, et al., 2005). A flaw in this research is the fact that children can grow a lot over the course of 6 months, which was addressed in the article, however not all children grow at the same speed. Children go through growth spurts, they may grow 5 inches in one year, and only an inch in the next. This would be a large difference in weight gain which could have somewhat contributed to the results. Girls also tend to have their growth spurt earlier in life than boys and depending on the age of the children and their individual bodies this could also be a limitation.

Using active transportation to get to school helps with the health of the children being active, but also with the environment. Active transportation is non-polluting, and forms of active transportation are very environmentally friendly. By leaving the vehicle parked and choosing to walk or bike to school reduces air pollution, greenhouse gases, and energy consumption. Approximately 40% of the hazardous air pollutants in urban areas are from the transportation sector. By reducing the number of vehicles on the street making regular trips around town the amount of pollution entering the air we breathe would decrease. Replacing short vehicle trips with active transportation could make a big impact on air quality as the emissions are highest when the vehicle is first started. During an 11 km trip, 90% of the



emissions are in the first 1.6 km while the engine warms up (Transport Canada, 2011, p. 11). By reducing the amount of short trips, like driving to school, the amount of vehicle emissions would decrease greatly in the area where children spend the majority of their day. Air pollution is associated with the development of asthma in children. Decreasing the amount of vehicle emissions going into the air, fewer children could develop asthma, and those with asthma already could spend more time outdoors (Committee on Environmental Health, 2009).

Programs like Safe Routes to School are working to reverse the trend of children being driven to school. Safe Routes to School has funded over \$1 billion of infrastructure improvements, law enforcement, and school education and activities in the United States. However, this has made little impact on the habits of active transportation to school as there was only a 3% increase among participating schools between 2007 and 2013. Safe Routes to School has found through evaluation studies, infrastructure is not the barrier to active transportation to school, safety and parents' inconvenience is the barrier (Kang & Diao, 2018).

The Walking School Bus allows children to be active on their route to school while being safe and having the opportunity to socialize with other children. The Walking School Bus program serves as a stepping stone for children by helping them acquire road safety skills and gradually gaining independent mobility. A Walking School Bus involves a group of children who walk to school together with at least one adult. Children are picked up at their house or designated "bus stops" along the route. This allows them the opportunity to walk to school when they may not have been able to before due to safety issues or a parent's other commitments. A variation on this program is a "bicycle train" which works in the same way, while riding bikes. Alternative active transportation options for Walking or Cycling School Buses

could be rollerblading, skateboarding, snowshoeing or skiing. Having more options for active school bus programs could attract more students if an activity they enjoy is part of the program, which would be a great way to meet other children who enjoy those same activities. Programs like the Walking School Bus are a fun and creative way to get children to be more physically active, while getting them to and from school every day (Walking School Bus, n.d.).

Walking School Bus programs can vary greatly depending on the community, school, and volunteers. Technology is now being used for Walking School Bus programs to notify parents of the group's location. In Cordoba, Spain, a mobile app allows parents to register their child's participation and provides the real time location of the group (Perez-Martin, Pedros, Martinez-Jimenez, & Varo-Martinez, 2018). A similar Walking School Bus app was part of a Sixth Sense Transport initiative in the United Kingdom to develop apps which encourage more sustainable travel options. The app was tested at a school in Manchester, United Kingdom and allows parents to track their child's arrival to school (Sixth Sense Transport, n.d.). In North America, the Utah Department of Transportation launched a Walking School Bus app in August 2014, in the first year more than 500 Walking School Bus groups were created across the state. The app allows parents to create walking groups or join existing walking groups with students who live nearby. If a parent is escorting children, they sign into the app which sends a notification to other parents notifying them when the trip to or from school has begun or ended (Jacobsen, 2015). The introduction of technology into a program that is meant to get children more active, may increase participation numbers as parents may feel more comfortable with their child walking to school without them. Mobile apps designed to give location of a Walking School Bus would reduce parent's safety concerns as they can see where

their child is, it also ensures the child is on time for the bus in the morning, and the parent is on time to meet the child in the afternoon, as you would be able to see if the bus is earlier or later than scheduled.

### **2.3 Child-Friendly Communities**

A Child-Friendly Community represents a “system of local governance, committed to fulfilling children’s rights.” The community seeks to fulfill children’s rights in the spaces that affect them the most, their neighbourhoods or communities. A child’s experiences in the early years have a profound effect on their future success and their adult lives (Society for Children and Youth of BC, n.d.). In a Child Friendly Community the children have the right to influence decisions about their community, express opinions on the community they want, walk safely in the streets on their own, meet friends to play, have green spaces for plants and animals, live in an unpolluted environment, and be an equal citizen with access to every service and more (Society for Children and Youth of BC, n.d.).

Improving the child friendliness of a community varies depending on the community. General things to consider when looking at the child friendliness of a community is: housing, the areas around homes, parks and open space, family support and services, childcare and schools, security, transportation, recreation and community services, sport and physical recreation, arts and culture, health services, social and justice services, local businesses, workplaces, local government, and media (Society for Children and Youth in BC, 2001). A Child-Friendly Community is important for the health of a community because it sets the stage for a good start in life, leading to healthy mental, social and physical development and a healthy

lifestyle for children as they grow (PlanH, n.d.). When opportunities to engage in sport and physically active play, learning opportunities at libraries and community events, and civic engagement and leadership opportunities are provided to children they build confidence, knowledge and the skills needed to thrive (PlanH, n.d.).

The local environment can have significant effects on a young person's physical, mental, emotional and social development, or providing opportunities for them to explore, grow and engage with the world (Sipe, et al., 2006). Physical and mental health can be influenced by the built environment. If unsafe to walk to school, children may be limited to being driven to school or taking a bus when biking or walking would normally be an option, decreasing their physical activity each day. This fear of being on the streets could cause mental health issues. A child's ability to socialize and make friends can also increase their mental health. Having children around the same age in the neighbourhood they can play with on weekends or in the evenings can greatly affect a child's development for the better and improve their mental health (Sullivan & Chang, 2011). Children are more likely to meet other children in their neighbourhood by being outside and by walking or biking to school and seeing other children do the same.

A community that supports integrating physical activity into daily routines for an active lifestyle is improved with neighbourhoods that are designed to promote physical activity and healthier lifestyles. As McCallister said, "Children have an intense relationship with their environments. This means that a community's design and land-use decisions have a significant impact on their physical, social and mental health" (McAllister, 2008, p. 56). If housing is located close to a school children have more opportunity to walk or bike to school every day. A

nearby school not only gives children the opportunity to use active transportation to get to school, but also provides them with a space to play when not in school.

The built form of a neighbourhood is very important to the lives of people living in the area, especially to children as they cannot hop into a car to drive themselves to school or to go to the park. Children are dependent on walking, biking, other forms of active transportation, and if available, public transportation, if they want to go anywhere on their own. If the park, school, and store are nearby children do not have to rely on a parent driving them everywhere. This freedom to be able to get to places on their own increases the amount of time children spend outside being physically active. Research done in the United States has found urban sprawl is to blame for the decline in children's health (Sipe, et al., 2006). Designing new communities to be less car-dependent and increasing the density in existing communities are two ways to make it easier for people to walk to their destination during daily life. Designing safe neighbourhoods should be a priority: roads, sidewalks, and crosswalks that make a street safe for children can increase the number of children who walk and bike in the neighbourhood.

A parent's fear of traffic, 'stranger danger' and crime can result in a child having less independent mobility within their neighbourhood (McAllister, 2008). Restrictive supervision impacts how children learn about their surrounding environment and can impact how they increase their home range as they grow older (Sipe, et al., 2006). A child's freedom in their neighbourhood can also be influenced by a number of factors including sex, age, the presence of courtyards, distance to parks, age of the neighbourhood and the bond amongst neighbours (McAllister, 2008). A child living in a neighbourhood where they feel safe is less likely to need to be driven or to take the bus to school rather than biking or walking, increasing their level of

physical activity. A study of parents found the second most common reason why their children do not walk to school is because of traffic dangers (Committee on Environmental Health, 2009).

The constant presence of media, and everyone's connection to the internet and what is happening in the world, has caused parents to overestimate rare dangers while underestimating common dangers. The five causes to most likely cause injury to a child under 18 years old are: car accidents, homicide (usually by someone they know), child abuse, suicide and drowning. However, parents are most concerned about kidnapping, school snipers, terrorist, dangerous strangers and drugs. As these worst case scenarios are shown on television and the internet on a daily basis, parents feel they are the biggest concern to their child's safety. Meanwhile, their child is more at risk of getting hurt when the parent is driving them to school (Belkin, 2010). These worst case scenarios do happen; however, it is much less common. Although the media instills fear of kidnapping and dangerous strangers, children are more likely to be hurt in a car accident than be kidnapped. With knowledge of street safety, a child is in less danger when walking to school than they are when being driven by a parent.

## **2.4 Engaging Children in Research**

When doing research on children, it is important to interact with the children to collect the required research. Relying on books or third-party information to conduct a study in order to understand the perceptions of a child, can be difficult. Engaging children in the research allows a researcher to understand their research interests first hand, better understand the lives of the children, and why they make the decisions they do.

A child's decision to participate in research is often mediated by adults as the parent or guardian wants to ensure the child's safety while participating (Bucknall, 2014). Bucknall explains power inequalities in adult-child relationships will always be present in one way or another. However, in some social science research, children more frequently have the opportunity to take an active part in the research process as participants and as co-researchers (Bucknall, 2014).

It is important to attend to the voices of children in the writings of sociologists, historians, and anthropologists because they have lacked a voice historically (Bucknall, 2014). In the past, adults had to describe the lives of children and their experiences. In more recent years, children's rights have received increasing recognition and there has been a move towards attending to the voices of children (Bucknall, 2014). When child-related research is studied, it is now more common for the children to express their views on the matter at hand and give their own experiences (Bucknall, 2014). Bucknall has found in participatory research with children, they are more aware of community, national and global issues, and they are interested in being involved in finding a solution to the problems (Bucknall, 2014).

When children are given the opportunity to participate in research, often the children that are well spoken, confident and are interested in the research volunteer to participate (Bucknall, 2014). This could mean, when a sample of children is collected for research, the sample may not be representative of the population, as the children who are well spoken, confident and interested, are more likely to be willing to participate. Informing the children on the focus and purpose of the research and how they could help solve the problem and offering

participation as a choice, allows the children some control, an important element of ethical behaviour for a researcher (Bucknall, 2014).

No matter how hard a researcher tries, an adult can be guilty of misunderstanding, misrepresenting and disregarding children's perspective. The child's perspective may conflict with the researcher's own experiences, interests, and interpretations which no longer allows them to see the world through the children's eyes (Bucknall, 2014). Just as children cannot see the world from an adult's eyes, an adult can no longer understand the world from a child's eyes, because an adult has had experiences change their viewpoint. A researcher must, therefore, position themselves as best they can to build a relationship with the children to make the best out of understanding the views of the children while being an adult (Bucknall, 2014).

Children are curious. When a new adult comes into their school or group activity, they often ask many questions, to find out who they are and what they are doing (Bucknall, 2014). Being honest and open with children builds trust and can position the researcher in a better position when observing their daily lives, as the children feel more comfortable with the new person around (Bucknall, 2014).

## **2.5 Summary**

The literature review has given a summary of the research that has been completed on children's active transportation, transportation to school, the Walking School Bus, walking for health and involving children in research. As vehicles have become the dominant mode of transportation in today's world, people are using active modes of transportation less often,



even for short trips which could be easily walked. Incorporating active transportation into a person's daily life, whether they are young or old, has many benefits. Using an active mode of transportation to go to school or do errands is good for your health, the environment and saves money. The Walking School Bus is just one program that is working on encouraging families to allow their children to walk to school, to get more exercise in a day while also forming relationships with their peers.

The next chapter examines the current context of the community where the study program is located. A community can have a large impact on active transportation for children and adults. If there are no sidewalks and a lot of traffic, safety can be a concern. If people do not feel safe, they will be discouraged from walking or biking as a form of transportation over driving. The chapters following look at how other communities are utilizing the Walking School Bus program, the data collection completed and how conclusions were found to answer the research questions.

## **3.0 Research Site**

### **3.1 Study Community**

The study community has a population of approximately 1,200 people with approximately 16% of the community between the ages of 0 and 14 (Statistics Canada, 2016). The school also services the surrounding rural area which includes some small villages. The rural municipality immediately surrounding the community has a population of 7,823 people, however, the municipality is large and encompasses four communities that have elementary schools, the subject school does not service the entire municipality (Statistics Canada, 2016). As the area serviced by the school is not defined there is no accurate census data available.

The community is within an hour drive of Winnipeg, Manitoba. Being within commuting distance of Winnipeg and other larger bedroom communities allows parents the ability to work outside the subject community. Working outside the community could increase travel time to and from work, potentially making it not possible to walk a child to school if timing does not work with the parent's work schedule. To work with parent's schedules the town daycare has a before and after school program at the school, children can be dropped off as early as 7:00 am and picked up as late as 5:45 pm (Government of Manitoba, 2011).

The commercial and retail area of the community is centrally located with mainly single-unit residential built around the main streets. The busiest streets have sidewalks, however, most of the community is without sidewalks. A lack of sidewalks makes active transportation a safety concern in the community, as children and adults are forced to travel on the street. In recent years the town has installed a couple of new sidewalks one of which connects the

schools to the park on the other side of town. The creation of new sidewalks is not only beneficial to people who want to go for a walk but also helps with the Walking School Bus program in the community, as they are able to safely walk farther distances to access more children who want to participate.

### **3.2 School**

The study school has a student population of 280 students in kindergarten to grade 6. Children attending the school range in age from 4 years old to 12 years old. The school operates on a Balanced School Day which divides the day into three 100 minute blocks of instructional time. Two nutritional/activity breaks of 40-55 minutes allow children to eat and be active in both the morning and afternoon. This schedule allows for quality exercise time which energizes students and helps them to concentrate on school work while promoting a healthy lifestyle. The old schedule of two 15 minute recesses, as well as a lunch/recess, did not allow children the time to have a snack in the morning or afternoon while having time to get exercise. The nutrition breaks during the balanced school day provide 20-25 minutes for eating and 20-30 minutes for uninterrupted play (Interlake School Division, 2010).

When students arrive at school in the morning, whether they are dropped off, walk by themselves, take the school bus or the Walking School Bus, they walk the fitness trail before class starts. The fitness trail is a walking path around the perimeter of one of the school's playgrounds. The students walk every day except the school day that is related to their grade, when they are able to play. Grade 1's play on day 1, grade 2's play on day 2, grade 3's play on day 3, and kindergarten plays on day's 4 and 5, everyone walks on day 6, and grades 4-6 walk

every day. When the weather is bad, they walk the halls inside the school. To ensure everyone has the opportunity to eat breakfast, there is a breakfast program, students can choose to go have something to eat instead of walking or playing before class. The addition of the Walking School Bus program at the school is a good addition, as the school is already promoting active lifestyles, encouraging children to walk to school and providing a safe way for them to do so.

The school is located at the corner of two of the busiest streets in town, Main Street and a two-lane highway which runs through the town as shown in Figure 1. The highway is no wider than other main roads within the town, but it is the only road in town that spans east/west through the whole town. As it is the only route spanning east and west, it is a thoroughfare to travel through the community. The road is classified as a provincial highway outside of the community. The location of the school at a three-way intersection means there is a lot of traffic passing by when children are arriving at school in the morning and leaving in the

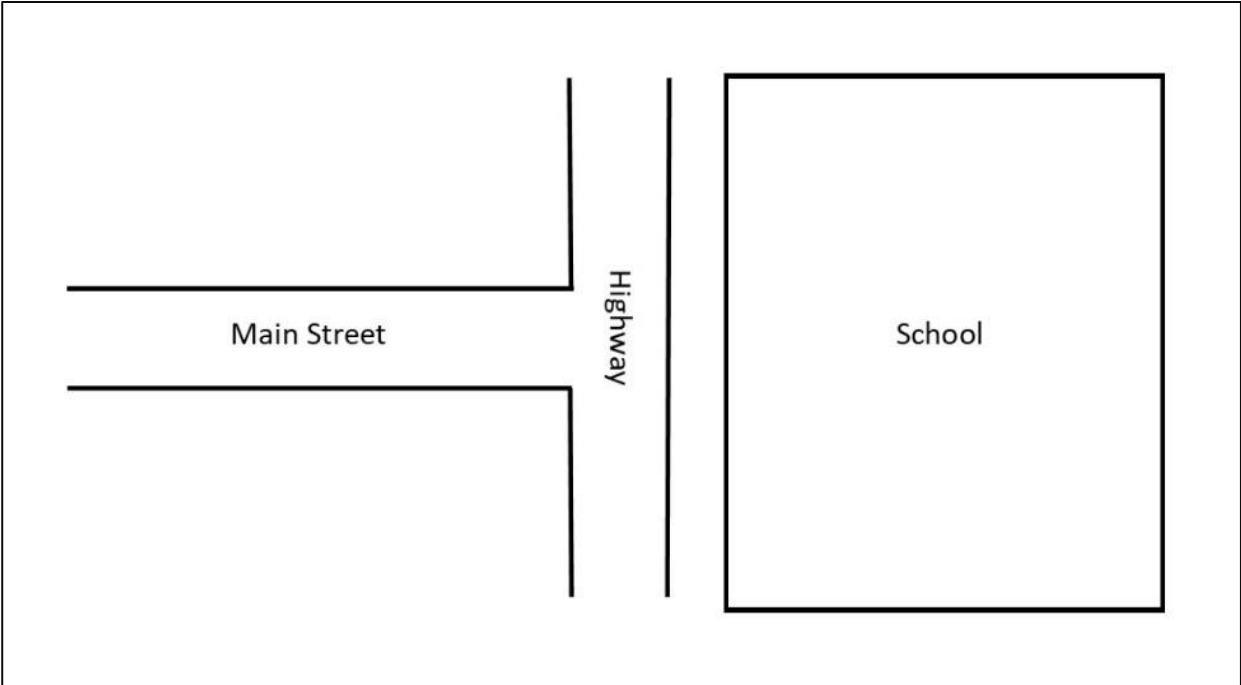


Figure 1. Location of the school at intersection.

afternoon. There is one stop sign at the intersection for vehicles travelling north on Main Street, the highway does not have any stop signs to slow traffic. To slow traffic in the area the speed limit is reduced from 50 km/hr to 30 km/hr from 7:30 am to 5:30 pm Monday to Friday. At the intersection, right in front of the entrance to the school, there is a pedestrian crosswalk to help children and parents cross the highway safely at any time of day as shown in Figure 2. During the morning and afternoon, there are also crossing guards at the intersection to increase safety. Figure 2 shows the location of the crossing guards at the intersection, their placement allows children to have assistance to cross the street going north/south and east/west. There is no sidewalk on the school side of the road, to access a sidewalk running along the highway, children must cross at the crosswalk.

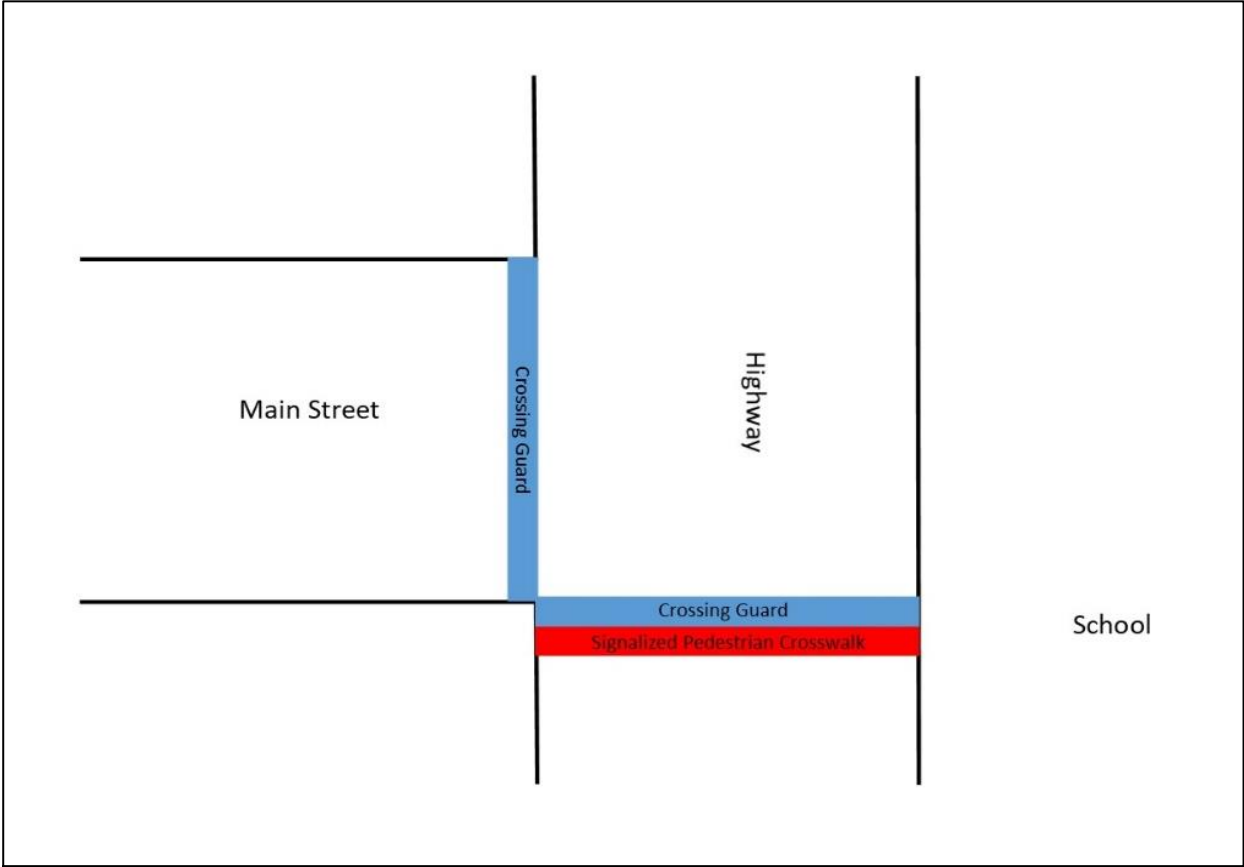


Figure 2. Pedestrian Crosswalks and Crossing Guards at school entrance.

### **3.3 Transportation**

Many of the children that attend the school take the school bus as they are not within walking distance of the school. The school division has a policy in place that allows any student living 1.6 kilometers away from the school or further to take the school bus. Children living closer than 1.6 kilometers from the school must find an alternate method of transportation, or make arrangements to ride the bus for a fee (Interlake School Division, 2010). There are no public transportation options for children to take to school other than the school bus. If parents have not arranged for their child to take the school bus then they are responsible for finding an alternate way to get their child to school, there is no transit buses or taxis. If children do not take the school bus the parents may take them to school by vehicle or by walking or biking with them, or they may allow their child to get to school on their own. The Walking School Bus introduces a new alternative in the community that can be more convenient for the parent and also ensures the child gets to school safely.

Bike racks at the school encourage students to use another form of active transportation to get to and from school other than the walking or participating in the Walking School Bus.

### **3.4 Summary**

The subject community is within commuting distance of Winnipeg, Manitoba, allowing many residents to commute to larger communities for work, however, residents are also employed in and around the town. Numerous streets in the community do not have sidewalks, so the town is not very walkable, recently some new sidewalks have been built, including one

connecting the school to the park across town. The subject school encourages its students to live a healthy lifestyle by using the balanced school day schedule, providing a breakfast program and requiring students to walk before school starts. The combination of these ensures students are fed, awake and ready to learn for the day, but also incorporates physical activity into their daily habits.

The next chapter examines how other schools are using the Walking School Bus program or active transportation programs to encourage students to use an active mode of transportation to get to and from school every day, fostering a healthy and active lifestyle.

## **4.0 Precedents**

Precedents for Walking School Bus programs in rural settings were difficult to find. Using precedents of other rural programs would be ideal, as they would be more likely to be similar to the program studied. Rural programs would probably deal with similar issues and be roughly the same size as the study program. As rural programs were hard to find for the precedent study, programs in cities were used and active transportation programs in general were looked at in smaller communities. Although not all of the precedents studied are rural, lessons can be learned from each that could apply to a Walking School Bus program located anywhere. Walking School Bus programs can vary from school to school, so knowledge can be gained from any program because each school can adapt the program to meet their needs. Key precedents that can be learned from to expand the program to more rural communities include:

- Shaughnessy Park School in Winnipeg, Manitoba
- Kitchener-Waterloo, Ontario
- Ottawa's Walking School Bus Program
- Iowa's Walking School Bus programs
- Rupert Elementary in Pottstown, Pennsylvania
- Isle La Motte School in Vermont.

### **4.1 Winnipeg, Manitoba (population: 729,500)**

Shaughnessy Park School, located in Winnipeg's north end has had a Walking School Bus program for the kindergarten to grade 8 school since April 2016. In the three years since the program started, it has grown to serve 30 families and more than 65 children. The program is



aimed at increasing attendance rates for the school. According to the principal Pat Graham, between September 2018 and January 2019, the program helped five students with attendance rates below 85 percent increase their attendance by 7 to 16 percent. Three routes are walked each day by volunteers and educational assistants to make sure children that need help getting to school, do so safely, and are returned back home at the end of the day (Crabb, 2019).

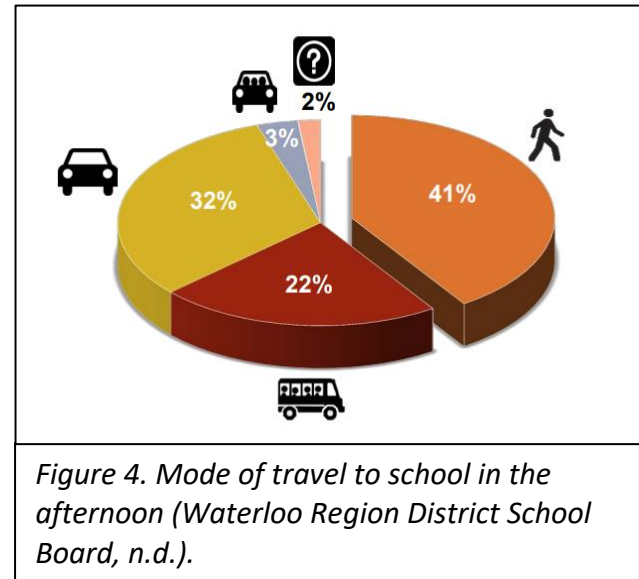
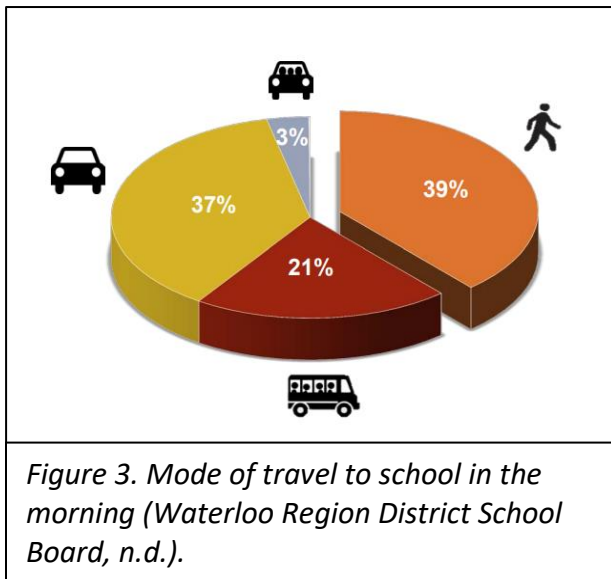
The program has received funding through grants since the program started. The funding is used to provide an honorarium to volunteers, \$17 is provided to those that walk both the morning and afternoon routes, and \$8.50 to those that do one route per day. In total, the program costs about \$15,000 to run three Walking School Bus routes for the school year (Crabb, 2019).

Unfortunately, due to the unreliable funding of grants, at the time of writing, the programs ability to continue was in jeopardy. The program only had funding until the end of May 2019, whether the program continues until the end of the school year, or next year, is unknown. The school asked the school board for permanent funding during the 2018/2019 school year. The request was denied due to the province's request school divisions limit the special requirements in their budget to two percent. The school plans to ask the school board for ongoing funding in September 2019, to hopefully secure permanent funding for the program, to continue a successful program at the school (Crabb, 2019).

## 4.2 Kitchener-Waterloo, Ontario (population: 523,894)

Westvale Public School, in Waterloo, Ontario started a Walking School Bus program, known as the Westvale Trailblazers, in the spring of 2005 to address parents' safety concerns around children walking to school; however, school administrators did not want the program to depend heavily on parent volunteers (Safer Routes to School, 2006). The program features older students walking with younger students along designated routes (Safer Routes to School, 2006). This not only allows all of the children to get exercise, gain a greater sense of community and self-confidence; but also allows the older students to gain leadership skills (Safer Routes to School, 2006).

During the 2014/2015 school year, Sustainable Waterloo did a family survey through four schools over five consecutive school days. Between January 27 and February 9, 2015, during the morning travel to school, the largest cohort of students responded they walk to school, however fewer than 50% walk. As shown in Figure 3, approximately the same number



of students said they drive to school as those that said they walk on the morning route to school. During the afternoon the responses were approximately the same, with a few more students walking and taking the bus, and less driving, while some students were unsure. In Figure 4, you can see how the afternoon mode of travel compares to the morning. In the survey, parents of children ages 4-10 said they would allow their children to walk to school if they were older, they did not have to walk alone, there were fewer traffic dangers and if there was a safer way to get there. Parents of children 11 years and older, said they would allow their child to walk to school if there were fewer traffic dangers, they did not live so far away, they did not have to walk alone and if there was a safer way to get to school (Waterloo Region District School Board, n.d.).

The Canadian Cancer Society introduced the Walking School Bus program in Ontario in 2015 and was piloted by 3 schools during the 2016/2017 school year. As a result of this pilot project, the Canadian Cancer Society announced in December 2017, they would receive \$246,000 over 3 years to implement the program in 30 schools in the Waterloo region. This region was chosen to receive the funds for a program because the region already had a very strong school travel planning group that works with schools on how to get children to school safely. The schools determined what programs would work for them, a common program identified was the Walking School Bus (Ponciano, 2018).

Wellesley Public School, located in Wellesley, Ontario, approximately 19 km west of Waterloo was one of the schools to pilot the Walking School Bus program in the 2016/2017 school year (Ponciano, 2018). With a population of 11,260, Wellesley is a smaller community compared to other surrounding communities like Waterloo (DaCosta, 2017). The school wanted

to be part of the pilot project in order to address the growing amount of vehicles on school property. Wellesley Public School found the program brought the school community closer and students were also alert and ready to learn, while staff saw fewer safety issues in the parking lot as there were fewer vehicles. Although the pilot program brought benefits to the school it was challenging for the school in the rural community because they did not have access to a larger volunteer base and available people to run the program (Ponciano, 2018). Programs such as the Walking School Bus can be difficult to operate in smaller communities because they heavily rely on volunteers to be reliable and consistent to show up for their shifts in order to keep the program going. At a smaller school, in a smaller town, there are fewer parents, teachers and community members available to make the commitment to the program. However, it is possible to run a successful Walking School Bus program at any school, in any size of community, you do not necessarily need multiple volunteers, you just need a couple fully committed to volunteering every day.

During the 2018/2019 school year, the Canadian Cancer Society website showed there were seven schools participating in the program in the Kitchener-Waterloo region of Ontario. Among the seven schools in the area, there are 14 Walking School Bus routes, with the schools ranging from 1-3 routes each (Canadian Cancer Society, 2019).

#### **4.3 Ottawa, Ontario (population: 934,243)**

Ottawa is far from a rural community, with a population of nearly 1 million people in 2016, however, lessons can be learned from Ottawa that could be applied in other communities, big or small (Statistics Canada, n.d.). During the 2014-2015 school year, a Walking

School Bus Pilot Project was started in Ottawa to offer Walking School Buses to a select amount of schools over a 12 week period. The pilot project was started to allow more schools to benefit from Walking School Buses and to reduce the barriers when starting and sustaining the routes.

The barriers they wanted to reduce were:

- Over-reliance on parent volunteers
  - Many parents are not able to commit to leading a route while ensuring daily operation.
- Coordination and support
  - Not all schools have the capacity and staff to create and manage a daily Walking School Bus program as there are many other priorities and activities fighting for limited time and resources.
- Managing risk
  - Schools hesitate to promote or permit a Walking School Bus due to concerns over potential risk (Beaton, 2015).

The Ottawa Walking School Bus project involved a joint effort among Green Communities Canada, Ottawa Student Transportation Authority, Ottawa Safety Council and Ottawa Public Health. These organizations shared the responsibilities of starting and running the program with a budget of \$45,000 (Beaton, 2015). Eight schools were selected for the pilot project and routes were created to serve as many students as possible, while requiring under 30 minutes of travel time and arriving at the school no later than 5 minutes before school started (Beaton, 2015). The funding available allowed the project to hire Walking School Bus leaders, distribute promotional flyers and do a media launch to promote the project. Each route

had one leader if there was 1-10 registered students and 2 leaders if there were 11-20 registered students. When registration reached 11 or more a waiting list was used until a second leader could be assigned to the route (Beaton, 2015).

Before the end of the pilot, two of the eight routes were permanently cancelled due to low registration; however, one route did grow during the pilot and required a second leader. A protocol was in place for weather-related cancellations. The Walking School Buses were cancelled in the event of freezing rain making sidewalks unwalkable, when there was 10 cm or more of snow and sidewalks had not been plowed or during severe winds, severe storms or tornado warnings (Beaton, 2015).

At the end of the pilot project, the Ontario Student Transportation Agency committed to funding the remaining Walking School Bus routes until the end of the school year. In March 2015 it was decided the pilot project would transition into a program led by Ontario Student Transportation Agency and would be funded for another school year (Beaton, 2015). The Walking School Bus program is still active in Ottawa, with leaders paid by the Ontario Student Transportation Agency. During the 2018-2019 school year, there were 13 schools participating in the program, with 2 of these schools starting new programs during the 2018-2019 school year (Ottawa Safety Council, 2015).

#### **4.4 Iowa, United States (population: 3,156,000)**

There are active Walking School Buses in 14 Iowa counties with over 52 schools offering some sort of a Walking School Bus program (Iowa Safe Routes, n.d.). The programs vary from school to school, some run only once a week while others operate on a daily basis.

Riceville, Iowa has a population of under 800 people, however, the school district population is over 3,000. Most of the children live outside of town and are unable to walk to school. To increase physical activity at the school a program called 'Walking Wednesday' was started for the first Wednesday of every month. School buses drop the children off at a church in town just under a half mile from the school, children of all ages from kindergarten to high school then walk to the school. The older children walk in the front, the youngest children at the back. This is so the youngest children do not have to struggle to keep up with the older children. There is an adult supervisor for each grade plus a high school volunteer for the younger grades (Iowa Safe Routes, n.d.). This Walking School Bus model is great for other rural communities. Although many students take the bus, there is a way for them to get exercise by being dropped off at a safe location by the school bus, and walking as a group to school.

Atlantic, a community in Iowa, with a population of 6,689, has a Walking School Bus program. The program serves four school districts, up to four routes per district and 200 student participants. The program runs on a daily basis with 2 volunteer leaders per route, using the high school sports teams as the volunteers (Iowans Fit For Life, n.d.).

#### **4.5 Pottstown, Pennsylvania (population: 22,741)**

During the 2015-2016 school year, the Pottstown School District piloted a Walking School Bus program at Rupert Elementary School (Mitsdarrfer & Becker, n.d.). Pottstown is located approximately 40 miles northwest of Philadelphia and had a population of 22,661 people in 2016 (Neighbourhood Scout, 2018). Research was done on the Walking School Bus program by the University of the Sciences in Philadelphia to understand the overall impact of

the program. The study found a positive correlation between the Walking School Bus and student attendance, academic success, positive student behaviours, and increased social capital (Mitsdarrfer & Becker, n.d.).

The Walking School Bus program began in Pottstown during the 2015-2016 school year because High Street, a busy street located nearby, was de-classified as a hazardous road, eliminating the need for a traditional bussing system. The Walking School Bus program was proposed as a substitute for the traditional school bussing system, matching well with the Pottstown School Division mission and wellness goals to promote a culture of health. To understand if the Walking School Bus program made an impact on students' attendance, health, academic success, behaviour, and social capital, a quasi-experimental case study was designed for Rupert Elementary School (Mitsdarrfer & Becker, n.d.).

Volunteers for the Walking School Bus were recruited from local businesses, community organizations and parents/family members of the students. The local newspaper aided in the recruitment of business and community volunteers, and workplace wellness programs were shown the incentives and benefits the employees could gain through participation. At 48%, almost half of the volunteers identified as work/organizational volunteers while 33% were community volunteers. Parent/family members made up only 14% of the volunteers. The volunteers shared the work of the Walking School Bus, 75% of the volunteers walking with a route once a week and 25% walking twice a week. No volunteers did the Walking School Bus more than twice a week (Mitsdarrfer & Becker, n.d.).



Student recruitment for the Walking School Bus began August 20, 2015, and ran until September 20, 2015, however, students did join later on as well. During the initial recruitment, 32 students from Pre K to Grade 4 signed up, as more students registered later in the fall the total was 68 students. In June, at the end of the school year, there were 48 students participating in the program (Mitsdarrfer & Becker, n.d.).

Three routes were established: pink, orange and yellow. Each route had stops in a different area of the community and were different lengths. During the course of the year, a total of 424.8 miles were walked between the three routes. The pink route walked 190.4 miles, the orange route walked 115.4 miles and the yellow route walked 119 miles (Mitsdarrfer & Becker, n.d.).

For the quasi-experimental case study, the Rupert Elementary School was compared to Lincoln and Franklin Elementary schools to give a better understanding of the differences between schools with a Walking School Bus versus those without. Lincoln and Franklin schools were chosen because of their geographic layout, student population, and relative size. Student attendance, grade reports, behavioural referrals, and body mass index were used to compare the three schools. Teachers, Walking School Bus volunteers, and crossing guards were also given perceptions surveys at the beginning and the end. The surveys were to gauge perceptions of student health, behaviour and social interactions as well as environmental factors and safety concerns (Mitsdarrfer & Becker, n.d.).

The study looked at attendance, academics, behaviour and social capital. Although the students were arriving at school on time, or early each morning they were still reported late to

their classroom. On the end of the year survey, 67% of the volunteers and 35% of the teachers agreed or strongly agreed students appeared to be on time for school. The students arrived at school on time, however, they were late to their classroom because of morning activities and socializing in the hallways which the teachers noticed. Academic success in math and English literature arts was part of the study for students in grades 2-4. The students that participated in the Walking School Bus were consistently in the 80<sup>th</sup> percentile for both subjects throughout the school year. The comparison of the three schools did not show that overall the students at Rupert Elementary had better behaviour compared to the other schools. Franklin and Lincoln schools had more fighting, disruption to the educational process, bullying and disrespectful behaviour. However, Rupert Elementary was found to have the highest number of defiant behaviours, which were considered as disturbances or problems that interrupt regular class activities, bus infractions, and other infractions. Other infractions included a student smacking another student, leaving class without permission and using curse words. On the surveys completed by volunteers and teachers, the respondents indicated they perceived the students' behaviour had improved from the start of the Walking School Bus program to the end (Mitsdarrfer & Becker, n.d.).

The social relationships formed during the Walking School Bus featured in the surveys. On the pre-test surveys, 64% of volunteers responded that students interact with others in different grades, this increased to 71% on the post-test survey. This shows the Walking School Bus allows children to form friendships with children of different ages, when they may not have done so otherwise.

The Walking School Bus program runs on a daily basis in the morning and continued for at least 3 school years since beginning in October 2015. The program continues to use community members as the leaders and allows the volunteers to decide on how much time they can commit, even only once a week (Pottstown School District, 2017). If other schools are interested in starting a Walking School Bus program but do not have enough staff interested in participating, they could ask for community volunteers. However, this would require additional work prior to the program starting in order to do background checks and training.

#### **4.6 Isle La Motte, Vermont (population: 471)**

Isle La Motte School, located in the Town of Isle La Motte in Grand Isle County in Vermont, began a Safe Routes to School Initiative in early 2012. The initiative began after the town stopped providing bus transportation during the 2011-2012 school year. At the time of the census in 2010, the town had a population of 471 residents, 96 of which were school age youths under the age of 18. The school is pre-k to grade 6, during the 2011-2012 school year there were 32 students enrolled. There is no high school in Isle La Motte, students can choose where to attend school for grade 7-12, and buses are provided to take students to two schools approximately one hour away (National Center for Safe Routes to School [NCSRS], 2012).

There are no sidewalks in Isle La Motte with no plans to construct any. The lack of active transportation infrastructure puts children's safety at risk when they are walking and biking to school. The school did a survey to see how far the students live from the school. Eight students live up to one mile from school, three students live from one to two miles away, and five students live more than two miles from the school (NCSRS, 2012). Most of the students (82%)

were driven to and from school in either their family vehicle or in a carpool, while 17.5% biked. No children walked to and from school. The amount and speed of traffic were the most common issues affected the parents' decision to not allow their child to walk or bike to school. Through the survey, they discovered 59% of children have asked to walk or bike to and from school, however, due to parental concerns they are not allowed.

During the 2011-2012 school year, Isle La Motte School came up with encouragement programs to help make walking, biking, and carpooling more appealing to families and to reduce the amount of traffic around the school. The encouragement programs were:

- Plan and implement a minimum of one Bike Train and/or Walking School Bus before the end of the school year
- Plan and implement at least three Bike Trains and/or Walking School Buses in future years
- Parent incentives – coffee for parents biking with their children to school
- Walking incentive program – rewarding with water bottles, lanyards, banners or pedometers
- Coordinate a “Story Walk” – reading a few pages of a book at different stations
- Encouraging after school program organizers to assist parents in forming carpools
- Free or reduced cost reflective vests, helmets, bike flags, odometers, and other safety gear
- Ensure every child who wants a bike has one

- Encourage families that walk or bike to school to start walking school buses or bike trains
- Profiling biking students in the local newspaper (NCSRS, 2012)

Information is not available on the programs that are still ongoing, however, the school has continued to be active. In October 2017, Isle La Motte School participated in the Vermont Way to Go Challenge. The challenge encourages families all over Vermont to battle carbon pollution by biking, rolling, walking or carpooling to school. Isle La Motte School was awarded three awards through the program for having the highest participation rate, highest participation for a rural school, and for having the best riders, rollers, and walkers (Tregan, 2017). After the encouragement programs began the school's physical education teacher taught the students bike safety skills and started a bike train which they led to school. After a few years, this activity became part of the school's culture, and students began creating their own informal bike trains (State of Vermont, n.d.)

#### **4.7 Summary**

The six precedents are all different and use the model of the Walking School Bus program in different ways from the way they recruit leaders to the number of routes. Table 2 below compares the precedents in the areas of funding and type of leaders. No two programs are the same, what is successful at one school, may not be successful at the school down the

street. The program can be modified in many ways to work within the school resources, whether funding is available or not.

<i>Table 2. Precedent Study Programs</i>				
<b>Comparison of Precedent Study Programs</b>				
	# of Routes	Funded Program	Leaders	
			Adult	Older Students
Winnipeg, Manitoba	3	✓	✓	
Kitchener-Waterloo, Ontario	14	✓		✓
Ottawa, Ontario	13	✓	✓	
Iowa, United States	52		✓	✓
Pottstown, Pennsylvania	3		✓	
Isle La Motte, Vermont			✓	

Five lessons can be drawn from the precedents and may apply to other programs or in communities across the world.

1. The Winnipeg and Ottawa precedents were examples of how funding can support a Walking School Bus. Winnipeg’s Walking School Bus program at Shaughnessy Park School is an example of how grants can financially support a program over multiple years. Without such funding, the program may not have the number of volunteers needed to operate 3 routes. Ottawa’s Walking School Bus program is a city-wide initiative that unlike many other programs, has funding for Walking School Buses and is able to hire leaders. If a community has a program that gives funding to support green initiatives, healthy lifestyles or active transportation projects, the school could make a case that a Walking School Bus program would meet the requirements and receive funding to hire leaders.

2. The Kitchener-Waterloo and Iowa precedents are examples of not relying on adult volunteers to lead Walking School Bus routes. The Westvale Trailblazers Walking School Bus program in Kitchener-Waterloo does not need to depend on adult volunteers, whether that is parents, teachers or community members. A program can be a success by utilizing older students. This may work best when an elementary school is close to a middle or high school, as the older students would be going in that direction anyway, and would not make them late for school. Older students could be given incentives for leading a Walking School Bus such as leadership hours contributing to school credits. Similar to the program in Waterloo, a program in Iowa uses high school sports teams as volunteers for the Walking School Bus. If coaches required their athletes to volunteer, there could be a lot of leaders in a program, allowing them to have a rotation and not be required to walk every day.
  
3. The Pennsylvania precedent is an example of how the community can be involved in the Walking School Bus. In Pennsylvania, the Walking School Bus is run with the help of the community. Leaders do not all have ties to the school, they were recruited from local businesses and community organizations as well as parents or family members of the students. Opening up the possibility of using volunteers which are not directly associated with the school could increase the number of volunteers. Someone may be interested and available at those times, but not be aware they could volunteer for the program. Posting ads in the local newspaper is a good way of recruiting community members not affiliated with the school.

4. The Vermont precedent is an example of how even a very small, rural community can encourage active transportation and create healthy habits in children. Although there was little information on the success of the Walking School Bus, the precedent showed if you continue a program it eventually becomes the norm. As seen with Isle La Motte's bike train where students began forming their own bike trains to travel to and from school in groups rather than individually.
  
5. The rural Iowa precedent is an example of how students that live out of town and must take the school bus, can still participate in before school active transportation. The unique Walking School Bus program allows students who live out of town and ride the bus, to still get some physical activity before school in the morning. By dropping them off at a designated location and walking the rest of the way, bus students still get exercise. This concept could easily be incorporated into rural Manitoba schools to allow bus students the chance to walk to school.

The precedent study provided a small glimpse into how other schools, communities and regions are encouraging active transportation to school through Walking School Bus programs or other active transportation programs. This list of precedents is nowhere near a complete list of Walking School Bus programs in the World.

Table 3 summarizes common problems that are faced when organizing and maintaining a Walking School Bus program. Solutions to these problems are provided to give new and existing programs ideas of how to overcome problems that arise at any stage of the program.



Table 3. Common problems and solutions for Walking School Bus programs

<b>Problem</b>	<b>Solution</b>
Finding volunteer leaders	Allow community members to volunteer
	Advertise in the local newspaper
	Target retirees, shift workers, stay at home parents
	Use high school students
Funding	Community organization
	School Board
Bus Students	Drop bus students off to walk the rest of the way to school
Retaining Leaders	Offer payment for their time
	Non-monetary incentives (ex. school credits)
Low Participation	Newsletters sent home with students with WSB info
	Incentives for participation
Lack of information and knowledge to start a program	Organizations around the world provide information on how to start and maintain a Walking School Bus program. Information and resources can be found at: <a href="http://www.walkingschoolbus.org">http://www.walkingschoolbus.org</a> <a href="http://guide.saferoutesinfo.org">http://guide.saferoutesinfo.org</a> <a href="https://greenactioncentre.ca/asrts/">https://greenactioncentre.ca/asrts/</a> <a href="https://www.actionforhealthykids.org">https://www.actionforhealthykids.org</a> <a href="https://www.saferoutespartnership.org/">https://www.saferoutespartnership.org/</a>

After learning about how other Walking School Bus programs work, it is time to learn how the program works at a rural Manitoba school. The next chapter explains how I completed observations of a Walking School Bus program to learn how a program in rural Manitoba works compared to the precedents studied.

## **5.0 Observations**

This chapter is about the completed observations— participating in the Walking School Bus and listening to a Brainstorm Session between the leaders and some of the Walking School Bus students. This chapter discusses how each type of observation was completed, who participated in the observations and my experience conducting the research. The results were then reviewed and analyzed to find common themes.

During the week of October 23-27, 2017 I arranged to participate in the Walking School Bus program in both the morning and afternoon over the five-day period. On Thursday, October 26, 2017, I attended a Brainstorm Session with the Walking School Bus leaders and some of the students. The Brainstorm Session was organized by the school to ask the students questions about the program, what they like most, what they do not like and if they would change anything. I was familiar with a teacher at the school, therefore it was easy to organize a week to do the observations and to attend the Brainstorm Session.

Prior to conducting research at the school, approval was required from the school division. A letter was sent to the acting superintendent outlining the intent of the research, the steps being taken to ensure confidentiality, and the methods to be used to gather information. The letter to the school division can be found in Appendix A. Consent was required to conduct observations of the Walking School Bus and the Brainstorm Session. A letter was sent home for the student to read, or have read to them, informing them of what I wanted to do and why (See Appendix B). Along with the letter, a Parent/Guardian Consent Form was sent home for the parent to read over and sign if they were giving consent for their child to participate (See

Appendix C). The consent form was to get consent for both the Walking School Bus observations and the Brainstorm Session. Parents and guardians were able to check off whether they were giving permission for one form of observation or both. If the consent form was not returned, this was considered as no consent given and the child was not included in the observations.

### **5.1 Walking School Bus**

The observations of the Walking School Bus were conducted 10 times, in the morning and afternoon over a five-day period. The purpose of the observations was to observe how the children interact with each other, the leaders and their surroundings, to gauge their perception of the Walking School Bus program. Letters were sent to children in advance, informing them and their parents of when I would be joining the bus and why I was interested in the Walking School Bus (See Appendix B). The letter asked the children to come up with a top-secret name to be used on the Bus during the observations. The purpose of the top-secret name was to ensure the children's identity was unknown and to increase the level of confidentiality. Sticker name tags were used to write the top-secret names on with marker so the child could easily be identified when writing an observation about them. Most children did not have a name previously picked out on the first day, but they quickly came up with something. Names ranged from superhero names like Superman and Super Girl to foods like Strawberry and Corn. Observations were recorded in a notebook and by doing quick sketches in order to remember patterns later on to draw more detailed sketches of the observations.

Walking School Bus observations were conducted with 19 students from a rural Manitoba public school. Most of the students that walk with the Bus were given permission for the observations. Students who did not return permission slips were able to continue to participate in the Walking School Bus over the course of the observations; however, they were not observed. The students ranged in age from kindergarten to grade 5. Not all students participated in both the morning or afternoon walks, or every day. The number of participants varied from day to day depending on after-school activities, weather, parents' work schedule, and other reasons. The total number of children participating in each walk was recorded to further analyze participation.

The leaders, who are teachers at the school, met at the school at 8 AM each morning. There was a 10-minute walk to the first 'bus stop'. On the way the leaders would talk about what they did the night before, or what they have planned for the school day. They wore bright pink safety vests which were brand new for the



*Figure 5. Leaders in pink safety vests.*

Walking School Bus that year, as shown in Figure 5. As the Bus made stops and the group grew, the students would ask me questions or talk amongst themselves. On the first couple of days, some students would ask me who I was, what I was doing and why. I told them my name and described the project and my interest in writing a paper about the Walking School Bus and how the program works. Once the students became more familiar with me and were used to me being there (which for some students was on day 1, others a couple of days in) they would talk about what was going on in their life, like Halloween costumes or what they were doing in school. Although I was there to observe and write notes, I was treated like a 3<sup>rd</sup> leader, being asked to tie shoelaces and hurry students along, if they were falling behind.

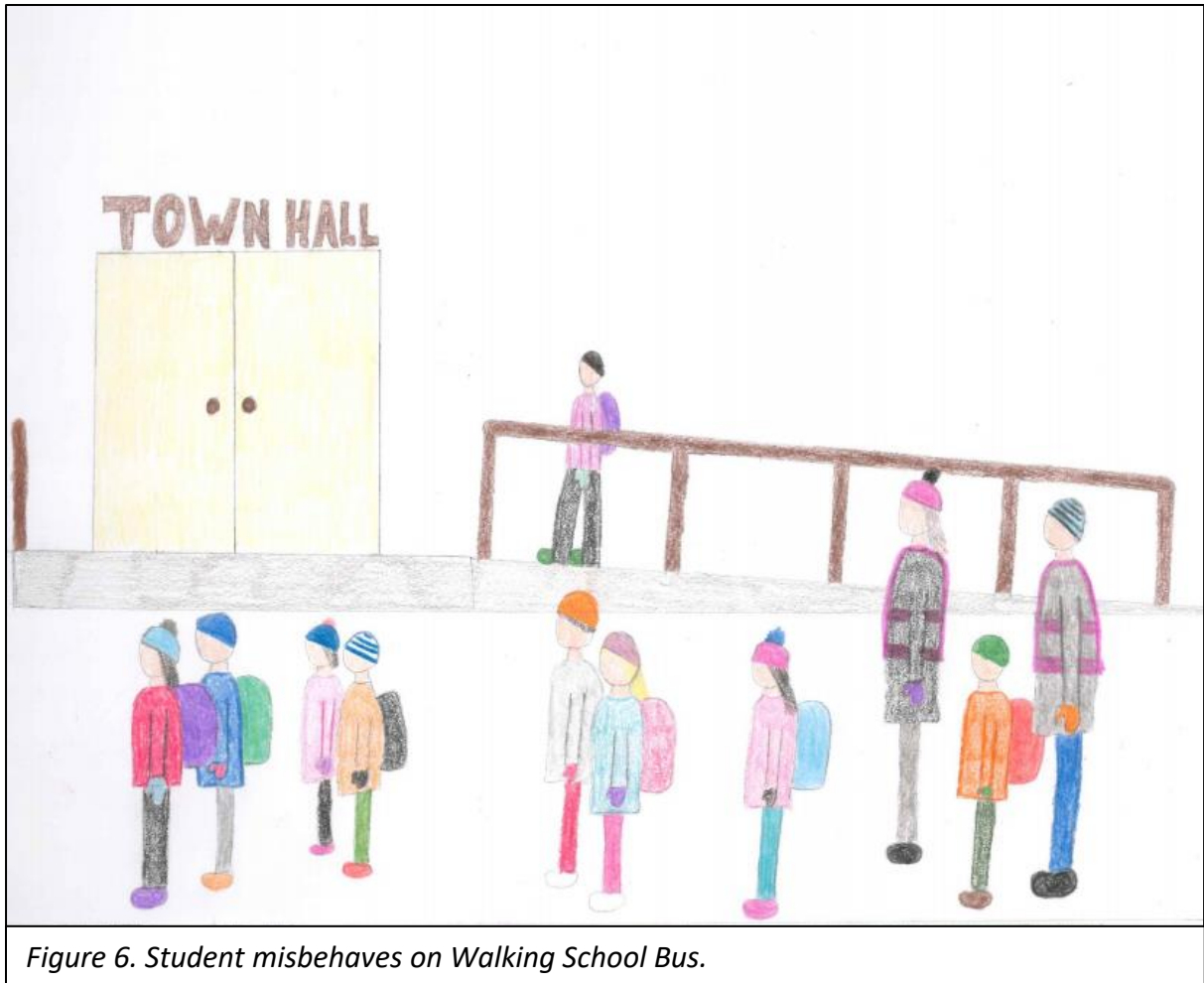
As the observations were conducted in Manitoba in October, there was a mix of weather during the five day period. Some days required a fall jacket, other days a winter coat, toque, and mitts. During the course of the five days, the temperature varied from the coldest morning of -9°C with a wind chill of -13°C, to the warmest afternoon of 7°C. On the Thursday there was snow on the ground in the morning, the first snowfall of the season. The children were always dressed appropriately for the weather and would wear either runners, rubber boots or winter boots depending on the weather for the day. On warmer days they would wear fall jackets, and on the cold, snowy days they would wear winter jackets and some sort of water resistant pants like ski pants or slush pants. The walk to and from school was not the only time the children would be outside during the day. They would play outside on their two breaks, therefore it was important they dress for the weather. One morning one of the youngest students was dressed so warmly you could barely see his eyes. He was in winter boots, ski

pants, winter jacket with the hood up, toque, mitts, and a scarf. He looked like he was ready for -30°C.

The Walking School Bus started for the year a few weeks before the observations. Any kinks in the timeline seemed to have been worked out before the observations began. The children were almost always ready and waiting in the morning. During my five days of observation, there were only a couple of instances when kids were not waiting for us at the stop. One morning three girls that got picked up at a house were not waiting for us like the other mornings, another morning a boy was not outside waiting at an intersection. Although they were not waiting like they normally were, they all ran to meet up with the group so that the Bus was not late to the next stop. However, kids could have been late on other days and the parents or guardian decided to take them to school by themselves and that was not witnessed. Parents have the phone number of a leader to contact if there are any changes in the student's schedule. If a parent knows they are not going to make the morning walk, they can text the leader to let them know ahead of time. If a child was not ready when the group arrived and wasn't running to catch up with us, the Bus kept going, the leaders assumed they were not coming that day. In the afternoon if a child got dropped off at a house the Bus would wait to make sure they got inside, or if they were at a 'bus stop' an adult would pick them up. Parents were also mostly on time in the afternoon. There was only one instance in the five days when a parent was not at the stop waiting. The location of the stop allowed the Bus to walk past this stop and return later because it was near the end of the route and was on the way back to the school. Upon returning to the stop the parent was waiting, the student did not mind the extra walk, he was able to see where his friends lived.

There was a lot of chatter going on during the walk to and from school. The children would talk amongst themselves, to the leaders and to me. There was no one topic discussed in particular. They talked about what they had done the night before or their day at school, discussed Halloween costumes, ask where another student was that day and why they weren't walking, or just random child conversations. During the walk to and from school, many of the kids talked to one another or to the leaders. There was a mix of siblings, friends, and acquaintances on the bus as there was a large age gap from the youngest to the oldest. They may see each other at school, but this was likely the only time they really spend together. When a new student was picked up along the route one or both of the leaders would say 'hello' and sometimes ask how they are doing. At the beginning of the route, before too many students had joined, the leaders would sometimes ask them more questions, getting the kids talking, other times we walked silently to the next stop. Once more kids had joined there would be more talking. For the most part, the kids mostly stayed in their general age group, for the littlest ones, this could just be due to not being able to walk as fast as the older ones.

While the students walked they looked around and interacted with their surroundings. One student noticed a new sign in a store window, they walk past this store every day, but noticing a new sign, in a window filled with multiple signs, is quite observant. Another rubbed his arm against a stucco building making a noise as he walked past, one of the leaders asked him not to do that, he had done that before, he may like the noise it makes or the feel of the rough material against his arm. Students liked running up and down wheelchair ramps we passed as shown in Figure 6, when they did this and got caught they would be scolded by one



*Figure 6. Student misbehaves on Walking School Bus.*

of the leaders, because the students knew they were not supposed to be doing that. Another favourite activity as the students walked the route, which was allowed, was balancing on the concrete parking barriers which separate the sidewalk from a parking lot as illustrated in Figure 7 and following the jagged path of the edge of the sidewalk. Students balanced on the concrete barriers and along the sidewalk edge most days, morning and afternoon. When an animal was spotted a leader or one of the students would point it out so everyone could get a chance to see as we passed. Children enjoyed the opportunity to interact with their surroundings, whether it was doing something they were allowed to or not. When walking the same route



daily, they found ways to entertain themselves while they walked, whether they were talking to a friend or not.



*Figure 7. Students balance on the concrete barriers.*

The students seemed to make some use of things they learned at school. One afternoon one of the youngest girls started singing “O Canada” before the Bus even left the school grounds, and she continued to sing the whole walk home, she said she just learned the song that day. On the way to school one day, a boy yelled “We are going north”, he was right, but he admitted he did not really know directions. One of the leaders discussed directions with a

couple of students and told them which way is what. A girl learned a trick from a teacher to remember directions, “never eat soggy wieners.” Although they weren’t at school, the Walking School Bus was able to provide opportunities for learning or utilizing what they have learned.

It seemed like for the most part, the leaders did not have to constantly be hurrying students up to keep up with the group. Without the students, before picking them up in the morning, the leaders were able to walk pretty quickly. After the first stop, the pace slowed down as the students are not

able to walk as fast. The oldest students were often at the front, leading the group, either by walking faster or running ahead as shown in Figure 8. If they were ahead, they would always stop before crossing the next intersection. The group always waited for the last person and would cross together. The youngest children would sometimes trail behind, being the youngest meant they could not walk as fast as the others. When they



*Figure 8. Older students walk ahead of the rest of the group.*

did trail behind a leader would ask them to hurry up, or run to catch up, because the bus had to stay on schedule in order to make it to the next stop and to school on time.

The Walking School Bus gives children the opportunity to spend more time with their friends, or meet new friends. One day some girls were using the walk as a chance to play “I Spy”, using the things around them (people’s clothes, backpacks, buildings, street signs, etc.) as the objects. The students were not the only ones that had fun on the Walking School Bus, one senior citizen, on his way to breakfast every morning, stopped on the sidewalk and waved as the group walked past. One morning he waited for a while, he had reached his destination, but he did not go inside until after the group had gone by, he most likely enjoyed seeing the kids walk by on their way to school and became a part of his morning ritual.

### **5.1.1 Analysis of Walking School Bus Observations**

To analyze the observations from the Walking School Bus, I went through the field notes, which were taken while participating in the Walking School Bus, and the thick descriptions, which are detailed descriptions of each observation. The actions that were observed and written down in the notes or thick descriptions were written on post-it notes and stuck to a poster board. Using post-it notes allowed the actions to easily be moved around while categorizing them into themes. The most common themes found, which had the most action post-it notes were: Conversation, Engaging with the Surroundings, Expressions of Joy and Negatives. Some actions could fit into more than one theme. Someone saying “I love the Walking School Bus!” after they asked why they were being observed, could be categorized

under Conversation or Expressions of Joy. Two students discussing if the snow will stay or melt could be categorized under Conversation or Engaging with the Surroundings.

*Table 4. Comparison of student participants to temperature and weather conditions.*

<b>Walking School Bus Participation and Weather Comparison</b>			
<b>Day and Time</b>	<b># of Participants</b>	<b>Temperature</b>	<b>Weather Conditions</b>
Monday Morning	20	5°C feels like 1°C	Cloudy
Monday Afternoon	13	5°C feels like 5°C	Cloudy
Tuesday Morning	19	-4°C feels like -8°C	Partly cloudy
Tuesday Afternoon	18	6°C feels like 3°C	Partly cloudy
Wednesday Morning	20	3°C feels like 1°C	Partly cloudy
Wednesday Afternoon	16	7°C feels like 7°C	Partly cloudy
Thursday Morning	8	0°C feels like -8°C	Snow/rain and windy
Thursday Afternoon	11	-1°C feels like -8°C	Cloudy
Friday Morning	15	-9°C feels like -13°C	Clear
Friday Afternoon	15	0°C feels like 0°C	Clear

During observations, the number of participants, temperature and weather conditions was recorded for each morning and afternoon walk, as shown in Table 4. Participation numbers changed throughout the week, depending on the day and whether it was morning or afternoon. Kindergarten students attended school every second day, some days there would be students from one kindergarten class, the next would be students from the other. School attendance and the family’s schedule would contribute to the daily participation numbers, without considering other factors. On three out of the five days, there were more participants in the morning than in the afternoon. There are many reasons why this may have happened. Students may have had after school activities which required them to be picked up from school if there was no time to walk home. Fewer participants in the afternoon could also be attributed to childcare, if parents are working or have other commitments, they may not be at home in time to meet the student.

If this is the case the student may be attending the daycare's after-school program or be picked up by a caregiver. Students could also go to another parent's house after school if their parents do not live together.

From Monday to Wednesday there were between 19 and 20 students walking with the Bus each morning when there were average fall temperatures and good weather conditions. The temperature dropped below freezing on Tuesday morning, however, students were dressed for the colder weather. From Wednesday night to Thursday morning, the community received its first snowfall of the season. In the morning the ground was snow covered and the snow/rain continued. On Thursday morning, just 8 students walked, less than half than the previous 3 days. One could assume, the drastic decrease in participation was due to the bad weather and parents choosing to drive their child or children to school. Although snow and rain are not uncommon for Manitoba, it was the first snowfall of the year. The sidewalks were snow covered, everything was wet and the wind, snow, and rain continued during the morning walk. Although many parents drove their child or children to school that day, it may not have been a regular occurrence every time it snowed during the winter. Eventually, people get used to the snow again and require more than a couple centimeters for them to change their daily routine. Thursday was the only day that had more participants in the afternoon than in the morning. More parents had their child walk home from school than walked to school, however it was the lowest afternoon participation during the observation week. The day after the snow, Friday, there were more students participating, but still fewer than earlier in the week. Based off of one, five day week of observations, bad weather does impact the Walking School Bus, but only in attendance numbers, the Bus continued to operate and was on time.

During the Walking School Bus observations, there was a lot of repeated actions, which was not surprising as the same route was taken every day, walking to and from school, with many of the same people.

#### **5.1.1.1.1 Theme- Conversation**

The most prominent theme observed over the course of the 10 observation periods, was conversation. Every day the group was filled with chatter as we made our way to and from school. The students would talk to myself, the leaders, and most often, they would talk to one another. In the morning, at the beginning of the route, the group would be fairly silent, but students did answer when leaders asked them questions, whether about their weekend or what they are doing in school. However, once more students were picked up and the group grew larger, there would be more conversations happening amongst the group as they walked. There was a range of topics discussed amongst the students, including what they were doing in school, television shows they watch, whether they wear short or long socks, what they had for supper the night before and what school day it was. When talking to a leader, topics included what they did on the weekend, how their birthday party was, how the leader gets to school since she does not live in town and asking about why another student was not with the Bus that day. The leaders also taught the students when there was an opportunity, observations included teaching directions and encouraging a student to read a street sign.

The second most common activity was the students' engagement with their surroundings. This theme could be split into 3 separate categories: physical engagement with natural elements, physical engagement with man-made elements, and observing.

### 5.1.1.1.2 Theme- Engaging with Surroundings

The theme of Engaging with Surroundings is categorized into three sections: Physical Engagement with Natural Elements, Physical Engagement with Man-Made Elements and Observing the Surroundings.

#### A. Physical Engagement with Natural Elements

Physical engagement with natural elements includes observations of students interacting with nature.

Although only two out of the five days of observation had snow, it was a major element in the walks to and from school on those two days. The students ran through ditches of snow and walked through the snow on the grass, marking a trail as shown in Figure 9.

Being the first snowfall of the year, there was a lot of puddles along the route during those two days. The final

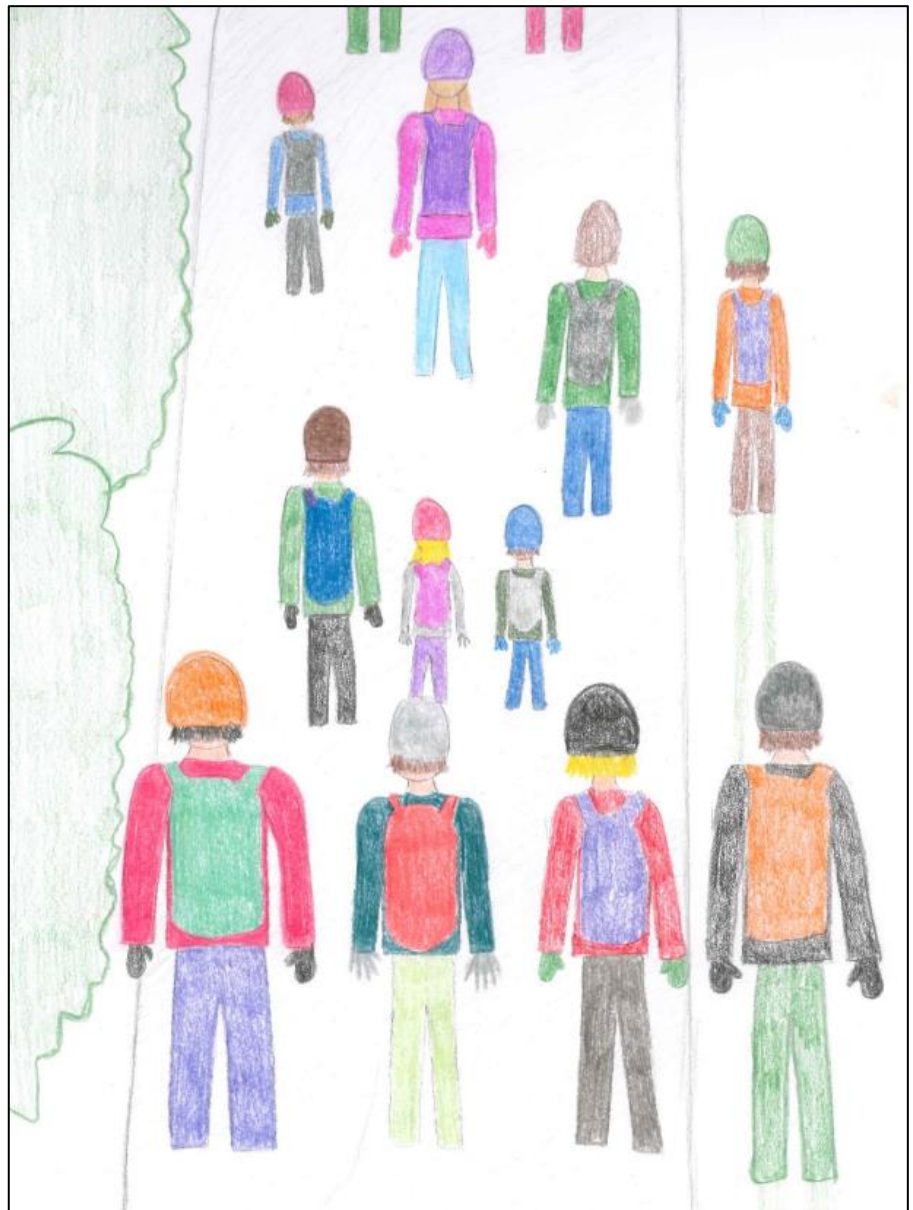


Figure 9. Students walk in the snow beside the sidewalk.

interactions with natural elements that were observed were the students interacting with animals. When a rabbit was spotted, a student chased it while they ran to their house after being dropped off at their stop. The group met a dog and its owner out for a walk one day, a few of the students petted the dog on the way past, however, no one stopped long enough to hold up the group.

## **B. Physical Engagement with Man-Made Elements**

The students also physically engaged with man-made elements along the route. Man-made elements are considered anything not natural or living such as buildings and sidewalks. The route taken included walking down Main Street, a street with wide sidewalks, buildings, and storefronts. The most common activity observed within the physical engagement with man-made elements theme was walking on concrete barriers separating parking spaces in a parking lot from the sidewalk. Most days, at least one, if not multiple students would walk along the barriers as if they were balance beams. They were only at one location along the route, but we walked passed every morning, and on some afternoons depending on who was walking with the Bus.

On more than one occasion students were also spotted interacting with the buildings they walked passed. More than once students were observed holding or touching the railing of a deck and the railing on a ramp/staircase. Walking past they would reach out to the railing as they walked past without stopping. Students were also seen touching the side of buildings, either touching the fresh snow on the side or rubbing an object against the wall, creating a noise. A student was seen running up or down the wheelchair ramp on a building, this was not



allowed, but over the five days of observation, was observed twice. Students were also observed physically interacting with the man-made surroundings by climbing on a concrete flower pot and following the jagged edge of the sidewalk.

### **C. Observing the Surroundings**

The final theme within the engagement with the surroundings category was observing. Observing includes looking at the surroundings and possibly discussing them, but not physically engaging by touching. The most common action within this theme was observing buildings and signage. Students would look at the buildings, and notice a new sign in a store window, point at a sign or comment on a building that is undergoing renovations. This probably happened more often than I could see because the students were walking and watching where they were going. When doing this you look at your surroundings, whether visible to another person or not. Similar to looking at the buildings, students would also look at the vehicles parked along the street or driving past. One student pointed out a red van in a parking lot, he recognized it because it was his neighbour's van. Students would also observe people we passed on the sidewalk, when walking past the senior that would wait on the sidewalk to wave to the group, the students would say hello or wave to him. A snowman alongside the sidewalk caught the attention of many students one day, they looked at as they walked past and discussed it with one another as we walked away.

#### **5.1.1.1.3 Theme - Expressions of Joy**

Another common activity observed on the Walking School Bus was Expressions of Joy, which were observed as actions which typically represent having fun, or were observed in a

way that gave the appearance of them being fun and joyous actions. The most observed action within the Expressions of Joy theme was running, jumping and skipping. These observations were not in relation to puddles or ice like in the Physical Engagement with Natural Elements theme because the students were not focusing the action towards anything in particular, they were simply doing these actions, because they are children. Students would run or skip to catch up to a friend further up in the group than them or challenge a leader to a race- first to the next street wins. Another common action was girls holding hands, either with another girl or with a leader. Holding hands was observed as an expression of joy because young girls often hold hands with their friends, it is possible they could have done this out of sadness, however that did not seem to be the case. When the girls were holding hands with a leader, it was not because they were in trouble, it was out of love, similar to two friends holding hands, the leader and a student would hold hands out of love.

#### **5.1.1.1.4 Theme - Negatives**

Although there was a lot of perceived positive actions observed during the Walking School Bus, there were also some negatives. The final theme that was observed was Negatives; these actions were not positive, such as a student getting in trouble, being late or negative comments. The most common negative action observed during the week was being cold. On a cold morning, some students had cold feet. I overheard one student say, 'My feet are ice' and another say, 'I can't feel my socks.' As the observations were conducted in October, the weather was starting to get colder, and after the snow, it was cold and damp outside. Although the students may have been dressed for the colder weather, they were not yet accustomed to the colder temperatures.

During the week of observations, there were three instances when students or parents were late for the bus, however, this did not hold up the group. When the students were late in the morning and not at their bus stop when the group arrived, they were not far away and were able to run and catch up. When a parent was not at the bus stop for the afternoon pick up, it was not a problem because the student was able to join the group for the last drop off, and come back to the stop location after, which was on the leaders' route back to the school.

Students would also have to run when they were walking too slow and trailing behind the group, a leader would ask them to run and catch up. Often the youngest students would have to catch up because they could not walk as fast as the older students. The group mostly staying together was important for safety reasons, and so the entire group could cross the street at the same time.

Students would get in trouble while walking with the group occasionally. Although students liked to physically interact with the streetscape, it was not all allowed. Students would run up the ramp of the town hall, which was not allowed. When a leader saw one student walking on the ramp, she yelled at him not to do that because he knew it was not allowed, he had been in trouble for it in the past. When caught a leader would ask them not to do that and they may have to walk beside a leader for the remainder of the route. When a student was seen climbing on concrete flower pots they got in trouble because they could fall or damage the pot. Their punishment was holding hands with a leader for the rest of the walk. A student also got yelled at when they almost went into the street, when they dropped a piece of paper and it blew onto the street. A leader spotted the student almost run onto the street without checking for cars and yelled at her to stop, there was a car coming, so she could have been in danger if

she went out onto the street. Once safe, the student was able to pick up the paper and was lectured about how it is not worth running onto the street without checking for traffic. When kicking a plastic bottle found on the street, a leader asked the boy to pick it up, as when you find litter, you should not kick it, you should pick it up and find the nearest garbage can.

There is some overlap between these themes. Overlap observed was students talking about something involving nature or an expression of joy, or overlap between observing the surroundings and nature when a snowman is spotted. Although there is overlap and some actions could fall into more than one category, most actions fall strictly within their theme and would not fit within another.

## **5.2 Brainstorm Session**

The Brainstorm Session was led by the two leaders in a classroom at the school on the Thursday afternoon and lasted approximately 30 minutes. The session was organized by the teachers so they could get some feedback from students on the program, and to see if anything could be done differently. The students who had permission to participate were called down to the classroom using the school intercom. Of the 19 children that had permission to be observed during the Walking School Bus, 18 had permission to attend the Brainstorm Session. Twelve students attended the session, some were not at school that day, and one did not want to leave class. The students sat on the floor in front of the Smart Board which was used to project a Microsoft Word document of questions. The leaders asked the questions and one of them typed up responses. I sat on the nearby couch, observing and writing notes. When the leaders

asked a question the students would yell out an answer or raise their hand. Some of the answers were expected, others were surprising.

The following questions were asked during the Brainstorm Session:

- What do you think of walking to and from school with the Walking School Bus?
- What if it is cold or raining, do you still feel the same way?
- What do you like about it?
- What do you not like about it?
- What is your favourite thing about the Walking School Bus?
- What is the worst thing about the Walking School Bus?
- What would make the Walking School Bus more fun?
- What would make the Walking School Bus safer?
- How do you get to school on days when you do not walk with the bus? What do you like more? Why?

After observing the Walking School Bus 7 times already that week, I did not find the answers to some questions surprising; however, others were more surprising. Most comments during the Brainstorm Session were positive, with some unsurprising negative comments such as not liking walking when it is cold or windy. It is not surprising students would not enjoy walking to school as much when it is cold or windy as when it is nice out; most people would rather be outside on a nice day than on a day with bad weather. Other than bad weather, the students mostly enjoyed walking to school, they thought it was fun, they got to be outside getting exercise and they could be with their friends and teachers. Their favourite things about

the Walking School Bus varied from being with friends and teachers to not having to walk alone, jumping in puddles and walking past one of the restaurants on Main Street, most likely because of the smell of deep fried food when you walk past. To make the Walking School Bus more fun, the leaders and I were expecting the students to want to listen to music or play games while they walked. Instead, the students would like more students to participate, drinks and treats along the route, if no one ever hurt themselves, and to not walk as far. To make the Bus safer, the students said they could cross the road safer, follow instructions, stay together with a teacher, and have more crosswalks. With only one crosswalk in town, the route would be safer with more, however, this is unlikely to happen. The only major road the route crosses has the existing crosswalk. The other streets crossed along the route are probably not busy enough for a crosswalk. When asked how they get to school when they are not walking with the Bus, the majority said they still walk, but they are just by themselves or with a family member; the rest said they are driven to school. Most said they would rather go on the Walking School Bus. Most of the students attending the Brainstorm Session wanted the Walking School Bus to continue, and preferred walking with the teachers more than their parents.

### **5.2.1 Analysis of Brainstorm Session Observations**

Analysis for the Brainstorm Session could not easily be grouped into themes as the observations were not natural, the students were answering questions, so responses were somewhat fabricated due to the questions limiting what is said. Most of the responses during the Brainstorm Session were positive and almost all of the students wanted to continue walking with the program.

When asked what the students think of walking to and from school with the Walking School Bus all of the responses were positive. Students said they thought it was fun, gave them exercise which they enjoyed, they liked walking outside and they liked who they got to walk with, their friends and past teachers. When the question was asked, there were no negative comments about the Walking School Bus, no one said they did not like walking with the Bus to and from school. Surprisingly, when asked if they would still feel the same way during cold temperatures or rainy weather, there was only 'yes' answers. Even in cold or rain, the students said they would still like the Walking School Bus.

The next questions were about what the students liked and did not like about the Walking School Bus. The students said they liked walking, and they liked that teachers picked them up so they could walk to school. They liked walking with teachers because it was safer than walking alone. A couple of students said they did not like when it was cold because it can take longer to get picked up, and when you have to wait their legs and face get cold. Other responses were not liking when they see giant spiders or when they get sick on the Walking School Bus.

When asked what the favourite thing and the worst thing about the Walking School Bus was, there were nine favourite things mentioned, compared to four worst things. Out of the nine favourite things, seven of those were related to being with a group and friends. The favourite thing for the majority was being able to walk with their friend or multiple friends, their teachers and how it was more fun when you walk with a group. Walking with friends also gave you someone to talk to. The other favourite things mentioned about the Walking School Bus were as discussed before, walking past a restaurant that serves deep fried food and always

smells good outside, and jumping in puddles when it is raining, which was observed during the course of the week. Out of the four responses for the worst thing about the Walking School Bus, three of the responses were related to weather. Students thought the program was the worst when cold outside, when really windy, and when so windy they thought there was a tornado. These are not surprising, walking outside in the cold and wind, is not a pleasant experience for a lot of people. The other worst thing mentioned was when they had to walk too much.

Almost half of the students that responded about what would make the Walking School Bus more fun, said if there were more people and if a specific friend participated. The program is one way the students make friends, one student said if there were more people that participated, they would make more friends. Two students thought the bus would be more fun if they got treats, or even if they could stop somewhere to get a drink and a treat along the route. Students also said it would be more fun if they did not have to walk as far, or if no one ever hurt themselves.

The students had a few ideas about how the Walking School Bus could be safer. They thought if there were more crosswalks and if they crossed the road safer. More crosswalks in town would allow the group to cross roads safer than they are able to at roads without crosswalks; however, this may not be possible in the small community. Suggestions to increase safety were made that could be applied, following instructions and everyone staying together with a teacher would make the Walking School Bus safer because students would be behaving and near a leader at all times.



Just over half of students (four students out of seven) that said how they get to school on days when they do not walk with the bus, said they still walked. Of the four students that would still walk if they were not with the Walking School Bus, three of those four would walk by themselves, and the fourth would walk with their mom. Two of the students gave reasons for why they would not be with the Walking School Bus, one said if they are late they have to go by themselves, and the other has to walk to hockey after school sometimes. Of the four students that would still walk, three preferred being with the Walking School Bus and one preferred walking with their mom. Three of the seven students said if they are not on the Walking School Bus, they are driven to school. One of those students said if it is cold, their aunt sometimes drove them, the others said their moms sometimes drove them to school. Of these three students, two preferred participating in the Walking School Bus over being driven, the other liked when their mom drove them. Out of eight students saying which method of transportation they preferred to get to school, six would rather walk with the group, one would rather walk with their mom, and one liked when their mom drove them.

Almost all of the students participating in the Brainstorm Session said they wanted the Walking School Bus to continue, out of twelve students, just one said they did not want to continue. This response was comparable to the other responses that most students enjoy the Walking School Bus, but some would rather get to school another way. It was unanimous the Walking School Bus was better with teachers as leaders rather than parents, however, parents had never been leaders, so students could not really compare experiences between the two.

Although the questions did have some overlap, the overlap allowed me to gain a greater understanding of the children's true perceptions of the Walking School Bus. In the first

question, all of the responses were positive and it seemed everyone enjoyed participating in the program because it was fun, you got to be with friends and you got exercise. However, by asking more specific questions, the negative perceptions were brought up later when asked how they preferred getting to school and whether they wanted the program to continue.

It was interesting to see what the students came up with for ideas on how to improve the walking school bus, although the ideas may not be practical, or at least practical for every day, it is good to see what they think could improve the experience and increase safety.

### **5.3 Summary**

The observations of the Walking School Bus and the Brainstorm Session gave an idea of the children's perceptions of the program and how the program works on a day to day basis. Observations have an important role in participant research because the researcher is able to see firsthand how something works, which cannot be fully understood by reading or hearing about it from the point of view of another person. Through the observations of the Walking School Bus, I was able to see how the children interacted with everyone in the group and their surroundings as they walked through the community, picking up and dropping kids off on their way to and from school each day. The Brainstorm Session gave me a look into what the children were actually thinking, rather than basing the research solely on observations of the students. Although the children seemed to enjoy themselves and most said they enjoyed the Walking School Bus during the Brainstorm Session, they may tell their parent or guardian differently. The next chapter on interviews looks at the perceptions of parents/guardians, leaders and the

principal to see what they think of the program, to see what they think the children think and learn more about its benefits and what could be improved.

## **6.0 Interviews**

### **6.1 Interviews**

Interviews were conducted with 10 people in total: 7 parents/guardians, the principal, and the two leaders. They were done either in person or over the phone, whichever was more convenient for the interviewee during the week of observations. Each interviewee signed a consent form which can be found in Appendix D, Appendix F and Appendix G. If an interview was to be done over the phone, a consent form was sent home with the child for the parent/guardian to sign and return prior to the interview. Consent forms were signed before beginning in-person interviews. Each interview was voice recorded so I could listen to the recording afterward and write transcripts of each interview.

Parents/Guardians, the principal and the leaders were chosen for interviews because they all have different roles in the Walking School Bus program. These 3 interviewee groups were chosen because something different can be learned from each to better understand the children's perspectives and how the Walking School Bus works.

The parents/guardians are who the students go home to at the end of the day, telling them about their day and would likely talk to if there was anything wrong. It is possible students acted differently when they knew they are being watched or gave false answers in the Brainstorm Session. To ensure the children's perceptions were being understood correctly, and were not skewed, interviewing the parent/guardian solidified observational findings and gave some background to what children said at home. Parent/guardian interviewees were found through a Parent Recruitment Letter (See Appendix E) sent home with the students along with

the Student Letter and Observation Consent Form. If a parent or guardian wished to give an interview, they provided their name and contact information. During the week of observations, I contacted the parent/guardian and set up a time and location for the interview, which was mutually decided on. Prior to the interview, a consent form was signed (See Appendix D).

The principal is the head of the school, for a Walking School Bus to start, they would need to give approval and sort out any organizational issues that came along. It was important to interview the principal because they could provide insight into anything that affected the program either during the planning stages or in practice. I saw the principal at the school one day and asked if they could do an interview, a phone interview was set up for a later date. Prior to the interview, a consent form was emailed to the principal for their signature (See Appendix F).

The leaders led the Walking School Bus every day, they saw how well it worked or did not work, they dealt with disciplining the students during the walk and kept the bus on schedule to get everyone to school on time. Leaders ran the day to day operations of the program, they are responsible for getting the kids from their stop to school and back again. During these walks, they saw how the children behaved and had the opportunity to gauge whether the children enjoy the program or not. The two leaders were asked in person if they could participate in an interview. Consent forms were emailed to them for signatures and interviews were conducted over the phone (See Appendix G).

The semi-structured interview model allowed me to ask the same questions to each grouping of interviewees (parents/guardians, principal, and leaders) but also gave the

opportunity to ask follow up questions when appropriate to gather more information from the interviewee based off of their responses. The standard questions asked for each group can be found in Appendix H. These questions were approved through the Ethics approval process.

### **6.1.1 Analysis of Parent/Guardian Interviews**

In order to do an analysis of the data collected during interviews, the different groups of interviewees were looked at separately, as the parents/guardians, leaders and principal were all asked different sets of questions. To start, the answers from each question asked to parents/guardians were grouped together, in order to see similarities and differences. Excess information provided by the parent/guardian that did not specifically answer a question was grouped together to see common themes in the parent's thoughts about the Walking School Bus.

Seven parents or guardians were interviewed, of those interviewees, most families had more than one child participate in the Walking School Bus. Two families had three siblings that walked with the bus, four families had two children, and one family had one child participate. Three of these families had children not participate, however they did not participate because the children were not old enough to go to school yet. No families reported having separate modes of transportation to school for each child with one child being dropped off in a vehicle and one going on the Walking School Bus. Of the parents who gave interviews, all of their school-aged children participated in the Walking School Bus together. Prior to the program starting at the school in the fall of 2016, none of the parent interviewees had ever heard of the program.

Each family had a different schedule that works for them and their child to participate in the Walking School Bus. Out of the seven families, five of them used the Walking School Bus on an everyday basis, either in the morning, afternoon or both. Three families indicated they mostly participated every day in the morning and afternoon. However, for one family rain impacted their ability to walk due to medical reasons and one had hockey or other after-school activities that require the children to be picked up at school in a vehicle. The rest of the families had arrangements that students would only take the Walking School Bus in the morning or the afternoon or only on certain days due to living outside of the community and getting dropped off or picked up at parent's work, or living arrangements between mom's house and dad's house. One parent commented on how flexible the program was and how accommodating the leaders were with a family's schedule. Families were able to find a schedule that worked to allow their children to participate in the program, whether they had an ever-changing schedule of a couple of mornings a week, a set schedule or every day.

Parents and guardians had multiple reasons for choosing to enroll their child or children in the Walking School Bus program. The reasons brought up more than once during the interviews were to give the child or children some independence and responsibility, the exercise and having younger children at home that would not need to be woken up to do a school drop off. The parents liked that the program would give their child some responsibility by requiring them to be ready to leave at a certain time, if they were not ready, they would be late and the Bus would leave without them. Children gain some independence through the program because they are not being escorted to school by a parent, yet they are still supervised and safe. One mother found before utilizing the Walking School Bus, she would walk her

children to school and they had a hard time leaving her, once at the school she would have to walk the fitness trail with them, they would not talk to their friends, and she would have to take them to their door. The Walking School Bus made it easier for the children to leave their mom because they meet the Bus at the end of the street, they go with the group, and the mom goes back home. Students also gain independence in the form of learning street safety including how to safely cross streets as a pedestrian and the route to school. Providing this program in the community gave young students the opportunity to have a bit of freedom in today's world because they are not with a parent, however, they are still supervised. Four parents said they had some concerns when enrolling their child in the program, all of those concerns disappeared once the program started and they were able to see the program in action. Concerns included whether the students would be well supervised, if their children would run away or get lost, lack of sidewalks on a street and whether a child would be too lazy to walk. All of these concerns were diminished when parents saw teachers were the leaders and students that live on streets without sidewalks were picked up at their driveway. Fortunately, there was no mention of any children running away or getting lost from the Walking School Bus group, and although a child may be lazy, they walk if they need to.

The observations were conducted in the second year of the program. Four of the families used the Walking School Bus the year before, three on a regular basis and one just a bit. The family that used it a bit the year before mostly used the regular school bus to get to and from school most days. Three families were participating in the program for the first time, two of these families used the before and/or after school daycare program, where students would be picked up and dropped off by car. One family would walk to school and get picked up



in a vehicle, however, due to another child being born, there was no longer room for all the kids in one vehicle. Parents indicated without the Walking School Bus, four families would be driven to and from school, and three families would either drive or walk. The program directly influenced less traffic around the school at pick up and drop off times, as between four and seven more vehicles would drive to the school, but because the students walked, they did not need a ride. These students also got more exercise than they would without the program because those that would not otherwise have the chance to walk to school, were able to walk to and from school.

Every parent interviewed said they found the Walking School Bus more convenient than their alternate mode of transportation, either walking or driving. Parents with younger children appreciated they did not have to get the younger ones up and into the car, or walk with them to do the school drop off and pick up, they saved time for what would be a short drive to school. Some students walked with the Bus to their parent's workplace, which allowed the parent to continue working rather than leaving early to pick up the child. Parents also found they saved time in the morning, not only did they not have to drive their child to school, but due to the set schedule, the children had to get into a routine because if they were late, the bus would leave without them. When comparing the Walking School Bus to the family's alternate form of transportation to and from school, all of the parents said their children liked the Walking School Bus. Not surprising, a couple of students would rather be driven home in the afternoon because they are lazy after school, and two others do not exactly love walking in the winter, but like when it is warm. However, all of the parents said for the most part, their

children preferred the Walking School Bus, some even begging to go on it, enjoying being with their friends and being around people.

Winters in Manitoba can be harsh, between extreme cold temperatures and blizzards, walking outside requires appropriate clothing to stay warm. During the interviews, two parents mentioned the previous winter had been mild and the Walking School Bus was not affected. Parents said as long as children were bundled up in warm clothes, they were fine, as they go outside for recess as well. Four parents said they would probably drive them to school on really cold days, however one did say if the children said they were able to walk, they would. Another said she walked to school in the cold and survived, they could too. One parent did not see winter being an issue for her family, her kids like playing in the snow, with snowbanks on either side of a sidewalk, it is more fun for them. However, basing how winter impacts the Walking School Bus may not be accurate when comparing to the winter of 2016/2017 due to the mild temperatures, a harsher winter could have an effect on the Walking School Bus, even if it is just a drop in attendance.

When asked what they think their child's feelings are towards the Walking School Bus every parent had a positive response and said their children love it, like or very much enjoy it. During the seven interviews, there were ten instances when a parent brought up their child's feelings towards the program, more times than the question was asked. Reasons for why they liked the program was getting to walk and play with their friends and be outside. Two parents did say one of each of their kids, out of multiple that participate, do not enjoy it as much as the others. One mother said her daughter thinks she is too old for it now as she is in grade 4 and is too cool for it. Another said her son is not always impressed with it, but he does not mind it.

To gauge how much students talk about the Walking School Bus at home the question was asked to the parents to see if it is a big event in a student's day, or whether it is just something they do that they do not think about once they get home. No parents said their child talks about the Walking School Bus constantly, but it seemed to be more of a topic that would sometimes come up when discussing their day. Five out of seven parents said their child or children sometimes talk about the Walking School Bus, and tell them about who they met, how they met a child, what someone did, other kids, where they stopped, or how it would be cool to be in the class of one of the leaders. Two parents said their children do not really talk about the Walking School Bus at home, one of them had even asked their son about it.

Parents only had positive things to say about the Walking School Bus when asked what they thought of it. They said they 'like it', 'love it', 'it's wonderful', 'an awesome program', 'a fantastic idea', '100% recommend it' and 'a smart idea for a small town to offer.' Reasons parents like the program so much include that it is great for a mom with younger kids, the kids still have something active to do on days that they do not have extracurricular activities and a parent does not have to drop what they are doing to drop off or pick up the kids. One mother said she has heard several people in the community commenting on the parade of children walking to and from school, not only are parents a fan of it, the whole community enjoys seeing it.

It is a parent's decision how their child gets to and from school. The parents interviewed had mixed feelings on how their decision would be affected by their child's perception of the Walking School Bus. Three parents said no matter how their child felt, they would go on the Walking School Bus even if they did not like it. The other four parents would consider

alternative options if their child did not enjoy it. Two parents knew what they would do if their child did not like the Bus, one would drive to pick them up, the other would walk with them. The other two parents were not sure how they would get to and from school, but they would try to come up with something. One mom said she would consider finding an alternative option as long as they had a legitimate excuse, not just not wanting to walk. The other said she would figure out something because it would be a lot harder to get the kids out of the door in time if they did not want to go.

Only one parent would change something about the Walking School Bus, they would like it to come past their house, so they did not have to walk to the stop at the end of the street. If the route went past the house, they would not need to get the younger children dressed for the walk to the stop. The rest of the parents were happy with the program and the route.

Multiple parents discussed how their child had met friends through the Walking School Bus. As the group was open to all grades at the school, there was a mix of students from kindergarten to grade 5, which gave the opportunity for students to become friends with people in other grades or classes they may not otherwise have the chance to talk to. Like bus students, the program gave the students the chance to be a part of a group, they are the Walking School Bus students.

Parents liked that the leaders are teachers at the school and have found it can be easier to make sure the students are ready in time because their teachers are coming and they cannot be late. One mom was glad to have teachers leading the group because her children had another person at school they could trust and feel comfortable going to if they ever had a

problem. Another mom said her daughter really likes having teachers there and loves to fill the teachers in on everything happening at home including when the parents are fighting, when her sisters make her mad, and giving updates on what is going on in grade 2.

### **6.1.2 Analysis of Leader and Principal Interviews**

The leaders and principal had different sets of questions, however, there were questions that were asked to both groups, and therefore they are being analyzed together. As the principal and the leaders have different roles, they did have some conflicting answers, although the principal is the head of the school, they are not dealing with the everyday tasks involved in the Walking School Bus and therefore may not be as knowledgeable in those areas as the leaders.

The introduction of the Walking School Bus program to the school encouraged students to live an active lifestyle, provided a safe way to get to school and the opportunity for students to connect with staff in a positive, meaningful and consistent manner. The leaders thought it was important for students to use a form of active transportation to get to school because getting more physical activity in a day is better for anyone. As some children go home and play video games or watch television in the evening, it is more important to encourage active forms of transportation. Exercise in the morning wakes students up, preparing them for a day of learning. Through the Walking School Bus at the school, children also have the opportunity to socialize with other students as well as teachers before school starts.

The leaders and principal said there was no resistance to the program when in the planning stages, everyone thought it was a great idea and it received positive feedback from

teachers, parents and the school division. One of the leaders brought the idea to the principal, who was immediately on board. There were no major physical or regulatory barriers to planning the Walking School Bus mentioned. Most of the barriers identified by the leaders were in relation to planning the walking route.

The route was picked based off of interest, however, due to time and distance, the route could not go past everyone's house that was interested. If families were interested in participating but were not directly on the route, stops were added to pick up those children along the way. While planning the route, leaders also had to take into account streets that do not have sidewalks and try to avoid the busy streets that do not have them. Another barrier was the inability to connect the route to all interested children. If a child lived too far from the majority of the interest, the Walking School Bus would not be able to pick them up, and this lowered the participation numbers, as more students would have joined if they did not live in a different area of town.

A barrier that affected the leader's work commitments was being 30 minutes late for staff meetings which were hosted once a month, however, this was said to be a minor inconvenience.

After the program was introduced to the school a presentation was given to the school board with an overview of the program and an article was written in the local newspaper. The school board was supportive and on board with the program, however, the principal did not know of any other programs within the school division that had begun as a result of learning about the success of the program.

Both leaders said participants ranged in age from kindergarten to grade 5, with between 15 and 20 students in the morning, and 10 to 15 students in the afternoon, depending on the day. The policies of the Walking School Bus program changed between the first and second year of the program. In the first year, the bus ran on early dismissal days, in the second year, the leaders were asked to not do the route on those afternoons in order to participate in staff meetings. The program also changed when new students would join or students would stopped going, as that occurred the route would be adjusted to accommodate.

When asking the principal if there were replacements for when a leader was not at work or sick, he said there were two teachers that act as spares and would step up when needed. However, when asking the leaders about finding replacements they said it was a major downfall of the program and it can be hard to find a replacement when there is notice, never mind when it is short notice like the day of. Last minute replacements were difficult to find because of people not seeing text messages, the usual replacement being away, not being able to get to the school in time or having other work to do in the morning before school. The leaders said it would be difficult to supervise the Walking School Bus alone because of all of the students of different ages and when watching for students being unsafe or breaking the rules it is easier with two people watching.

When students misbehaved on the Walking School Bus, the leaders would discipline them by reminding them of the rules and asking them to stop. If the student continued to misbehave they would have to walk with a teacher and hold their hand or the hand of another student. If a student was being unsafe and not following the rules the leaders would tell them they may have to call their parents and the student may need to have a few days off of the

Walking School Bus. Leaders said they had never had to call a parent about a student's behaviour on the Walking School Bus, but they would remind students it would be the next step if they continued to misbehave.

The principal and leaders confirmed the Walking School Bus was not majorly affected by winter, the leaders drove the bus regardless of the weather, though it may have taken slightly longer in the winter months due to the snow. Leaders said on very extreme cold weather days many parents would drop off or pick up their children, however, there was always some kids to walk with the bus in the morning and afternoon. When it was -25°C or colder recess would be inside, however, the Walking School Bus continued. The leaders thought if children would be walking anyways, it would be safer to be walking with them than alone, and if the leaders were there, they could at least hurry the students along. During other bad weather like rain and wind, the bus continued, however, similar to cold winter days, some parents would choose to drop off or pick up their children at the school. A storm with thunder and lightning would cause the Walking School Bus to be cancelled as that is a safety concern, which occurred one afternoon.

The leaders and principal perceived the program as a good program, valued by students and parents and another good thing the school could do for its students. They thought the program was great because it kept students active, was safer than walking alone, allowed students to interact socially with one another, and established positive relationships between the leaders, who are teachers at the school, and the students. The program was also good for families with younger children not yet in school, school-age children get picked up rather than bundling all of the children up to walk or drive students to school.



Given the chance to change something about the program the leaders and principal would like more kids and staff to be involved in order to have the interest and resources to have another route in a different area of town and to find coverage easier when sick or away. One leader also suggested incorporating a cold weather plan into the program, to have a plan in place for extreme cold days such as if it is  $-38^{\circ}\text{C}$  or colder with the wind, the bus is cancelled. Without a plan in place, they must do the route no matter what. However, as many students were driven on very cold days, the leaders only picked up a handful of students, if parents knew the bus was cancelled on those days, they would drive their child to school.

The leaders had many reasons for deciding to lead the Walking School Bus. It is a good program, they wanted to incorporate more exercise into their day, encourage students to be more active, help parents, help save the environment by cutting down on vehicles driving to the school and they also received extra-curricular hours for their time.

The leaders and principal thought the children liked the Walking School Bus for the most part. The program allowed the students to socialize with their friends and teachers every day and they feel safe and welcome in the group because of the adult leaders. According to the leaders, on cold or stormy days, some students say they would rather be driven; however, they mostly enjoy walking. Leaders said students did not often talk about the Walking School Bus during the day. Occasionally it would be talked about on school announcements or when a new student was starting they may mention it, but it was brought up more in the beginning when the program first started. One leader talked to a student who was given a choice by their parent to walk alone or with the Walking School Bus and they chose alone because they did not like waiting for the Bus at the end of the day, which waits 5 minutes until the town kids are gone.

This was the only child the leaders mentioned did not want to be on the bus, other than students sometimes wishing their parent had picked them up.

## **6.2 Summary**

The interviews that were conducted helped to give a better understanding of how the Walking School Bus works and the perceptions of the program from those involved, the students, parents, and leaders. Initial analysis of the interviews found, for the most part, the Walking School Bus program is a well-liked and appreciated program within the community. Other than some issues when finding replacements, the program seems to work fairly seamlessly, thanks to the dedicated leaders that have volunteered their time to the program. The next chapter, Findings, looks at comparing the precedent studies and analysis of the observations and interviews to come up with findings in order to answer the research questions.

## **7.0 Findings**

Multiple research methods were used in this study in order to gain a better understanding of the children's perceptions of the Walking School Bus program in the rural community. To ensure a full understanding of the perceptions, and to ensure observations were not misinterpreted, the perceptions of the children were looked at from multiple angles, through observations, the brainstorm session, parent interviews, and leader/principal interviews. This technique was used because observations could be incorrectly interpreted. However, by using three methods of data collection, the brainstorm session and interview data can confirm the interpretation of the observations.

Observations of the Walking School Bus found the students enjoyed participating in the program. This analysis was derived from the children's actions. Children were seen engaging with the streetscape, playing with the snow, talking to one another and the leaders, singing and playing games. Based on the observations, it did not appear students disliked participating in the Walking School Bus because they did not verbally say so or do actions to show that emotion, at least while I was observing. The negative actions that were observed, were not necessarily related to not enjoying the program. When students said their feet were cold, it was most likely because it was the time of the year when the weather was getting colder, and people were not yet used to the colder temperatures. Students also could have been cold if they were not prepared with the right clothing or footwear for the temperature that day. Students misbehaving could be seen as them not enjoying the program; however, it could also just be kids acting up because they are kids. During the week of observations, for the most part, it seemed the student enjoyed participating, and they were almost always on time in the

morning and would be at the designated meeting spot on time in the afternoon because they knew if they were late they would miss it, and they did not want that.

The Brainstorm Session gave a more in-depth look at what the children actually thought of the Walking School Bus as they were able to voice their opinions of the program by answering the questions. Most students said they enjoyed the program and wanted to continue walking with the group. They liked that it gave them the chance to spend more time with their friends, get exercise, and be outside. The most common favourite thing mentioned about the Bus was getting to walk and talk with friends because it is not as lonely and more fun being with a group. Just over half of the students said they would still walk to school if there was no Walking School Bus, with the remainder being driven. Of the students attending the Brainstorm Session, most said they would rather walk with the Walking School Bus than walk alone or be driven. According to the students, the program eliminated at least four vehicles from doing drop-offs and pickups at the school every day.

Interviews with parents, leaders and the principal looked into the children's perceptions more in depth, as well as the adult's perceptions of the program and its benefits and downfalls. All of the adults interviewed thought the Walking School Bus was a great program and a great service for the school to provide to families. The parents said the students really liked the program, except for a couple of students who were not always impressed with walking or thought they were too old to walk with the group. The parents said all of the kids would be driven to school at times, with three of their kids either walking or being driven to school if there was no Walking School Bus. Students were enrolled in the program by their parents for various reasons; however, the most mentioned reasons were for the children to get more

exercise and gain some independence. Although the parents did not have any downfalls of the program, the leaders said the downfall is finding coverage when one or both of them are sick or not at work. Finding someone to cover for a leader could be difficult when there was notice and was especially difficult on the day of because staff members are busy or cannot make it to the school in time.

One of the most observed actions during the Walking School Bus was the children interacting with their surroundings in some way. The students were constantly looking at the buildings they walked past, commenting on a new sign in a store window, playing with the fresh snow, following the jagged path of the sidewalk or balancing on the concrete barriers in a parking lot. It seemed interacting with the environment as they walked past was enjoyable, but also a natural and an automatic reaction to walking down the street. Although it was one of the most observed actions, only one student mentioned interacting with their surroundings during the Brainstorm Session. The student said one of their favourite things about the Walking School Bus was jumping in puddles when it was raining, which was observed over the five days of observations. These actions may not have been brought up in the Brainstorm Session because they are not things children think of doing - they do them out of habit.

The other most commonly observed action was talking, which was also well noted throughout the Brainstorm Session and the interviews. During the observations, the students were seen talking to one another and the leaders. They discussed what they were doing in school, what they had for supper the night before, their birthday party on the weekend, what they were dressing up as for Halloween, what kind of socks they were wearing, and anything else going on in their lives. During the Brainstorm Session, the students said their favourite

thing about the Walking School Bus was walking and talking with their friends. This was evident in the observations because the children were seen walking in groups and talking with their friends every day. The parents said the program has allowed their children to meet new friends, including friends from different grades and other students they may not normally spend time with. The group of students, of ages ranging from kindergarten to grade 5, became friends with one another by talking to each other while walking to and from school. Through the observations, Brainstorm Session and interviews, it was clear the students enjoy talking to one another and the leaders while with the Walking School Bus.

As the observations were conducted towards the end of October, there were no really cold days when comparing the temperature to a cold winter day in Manitoba. However, because it was fall and the weather was getting colder and it snowed on the Wednesday night/Thursday morning, it felt very cold. Thursday was the first wintery day of the year and the observations gave an indication of what the Walking School Bus would be like on stormy or cold winter days. On the Thursday morning, there were only eight students, compared to between nineteen and twenty on other mornings earlier in the week, before the snow. The observations found on cold winter days, some parents chose to drive their children to school instead of them walking with the Walking School Bus.

During the Brainstorm Session, a question about how winter affects the program and if they were driven to school on cold days was not asked; however one student did say when it is cold, their aunt sometimes drove them. No other students mentioned getting driven on cold days, but they did mention they did not like it when it was cold and they had to wait or when their legs and face get cold.

Four of the parents interviewed said winter would impact the program, they would drive the child if it was really cold. Others said cold weather would not have an impact because their children could bundle up. The previous winter had been fairly mild and had little impact to the program except for a couple of days when parents said they drove their children. One parent said their children walked every single day because of the mild winter.

The bus operated every day and there was always someone to pick up along the way or drop off in the afternoon. The leaders said some parents would drive their children on extreme cold days, but they figured it is safer for them to continue the route so the students were not walking alone. With the leaders walking with them they could be hurried along to get to school and home safely. One of the leaders said something she would change about the program would be to create a cold weather plan. It would be about what would happen on really cold days, such as if it was  $-38^{\circ}\text{C}$  or colder with the wind the Walking School Bus would be cancelled. This would let parents be able to plan ahead by knowing the bus was cancelled for the day because of the weather, and they could drive the child to school. If students are being kept inside for recess on cold days, it may be better to be driven on those cold days, as some students have a 15-20 minute walk in the morning.

The Walking School Bus was not majorly impacted by winter; however, there was a decrease in attendance on some days as parents chose to drive their children if it was extremely cold out. On extreme cold days, it is not safe for anyone to be outside for long periods of time. Therefore, having a plan in place for when the Walking School Bus is cancelled during the winter, would be safer for the leaders and the students. On these days the leaders

would not have to be out in the cold to pick up only a handful of students, and students could be driven to school.

The Walking School Bus program decreased the number of vehicles dropping students off in the morning and picking them up in the afternoon. The observations and interviews were conducted in the program's second year at the school. Of the parents interviewed, three families had not participated in the program the previous year. These three families drove their children to and from school the previous year, but because of the Walking School Bus, the children were then able to walk. Parents indicated without the Walking School Bus, two of these three families would have had to take the real school bus or be driven and one family would have either walked or drove. Decreasing the number of vehicles around the school during the time before and after school creates a safer environment for students walking home. Fewer vehicles idling while they wait also benefits the planet and decreases greenhouse gas emissions.

Compared to the alternative option of getting to school if there was no Walking School Bus, six out of eight students said they would rather walk with the Walking School Bus. The students that preferred the Bus chose it above being driven and when they have to walk by themselves if they are late or going to an after-school activity. One student said they liked it better when they walked with their mom, and one said they liked it better when their mom drove them to school. All of the parents interviewed said their child liked the Walking School Bus more than the alternative. Two parents said their children did not always want to walk, and they were sometimes lazy in the afternoon, or did not enjoy it as much when it was cold out.



By using the Walking School Bus to get to school, the students increase their daily activity by as much as 40 minutes. As the recommended amount of physical activity for youth is 60 minutes a day, the Walking School Bus helps students reach this recommendation, just by walking to and from school daily (Heart & Stroke Foundation, 2015). By utilizing the Walking School Bus daily, children are more likely to meet the recommended amount of physical activity in order to achieve the best health benefits (Active Healthy Kids Canada, 2014). It is unknown whether the students in this study meet or surpass the 60-minute recommendation. However, as the program is directly related to some students walking to school instead of being driven, it has increased their activity levels and either helped them meet the recommendation or further surpass it. If children adopt healthy lifestyle habits when they are young, such as walking to school, it can have health benefits for them in the long term if they continue those habits into adulthood (U.S. Department of Health and Human Services, 2015).

As explored in Chapter 2: Literature Review, a barrier to parents allowing their children to walk or bike to school is safety (Active Healthy Kids Canada, 2014). Incorporating a program that encourages children to walk to school, but also provides increased safety and supervision, helps to ease a parent's mind. Some parents responded they were initially nervous about their children taking the Walking School Bus, but once they saw how the program operated and the children were supervised by trusted adults, they were no longer concerned. In recent years the community has installed a couple of new sidewalks, increasing safety for the Walking School Bus and all community residents that choose to walk. The route used for the Walking School Bus did not have sidewalks on every street, where there were no sidewalks, students were picked up at their driveway, as it would not be safe for them to walk down the street alone. The

group would then walk along the edge of the street and on the grass, to stay off the road until the next sidewalk.

Providing children with some independence and teaching them street safety was mentioned by parents on why they chose to enroll their child in the Walking School Bus program. Through the program, students were able to learn how to get from their house to school and how to do so safely. Although the Walking School Bus is supervised, it teaches students about traffic dangers and their community. As the children get older, they are more likely to feel comfortable in their community and their parents to feel comfortable allowing them to walk alone. If the parent and the child are comfortable walking or biking on their own, they are more likely to continue using active modes of transportation to get to and from school or elsewhere as they get older because they feel safe (Committee on Environmental Health, 2009).

## **8.0 Conclusion**

How did we get to the point where very few children walk to school? It didn't happen overnight, but it happened over the course of many years and most likely is the cause of multiple factors. People have become more reliant on cars as their main mode of transportation, less people are walking as a form of transportation, even for short trips. By not associating walking as a form of transportation to get to school or work, people are relying on vehicles. As the reliance on vehicles grew, the amount of pedestrian infrastructure in communities decreased. Child-friendly community design was not taken into account when designing some suburban neighbourhoods and other streets without sidewalks, which encourage vehicle traffic and discourage active transportation. A change in built form as communities have become more spread out also affected the number of children walking to school. By locating schools on the outskirts of a community, where more land is available for a cheaper price, fewer children are within walking distance. Schools located on the edge of town further decrease the number of children that would be allowed to walk to school. If the school is centrally located, children on the opposite side of the community could walk or bike to school; if it is located across town, however, it may be too far to walk. By changing where we build schools, increasing pedestrian infrastructure in communities and changing the perception that walking or biking to school is dangerous, the number of children that walk or bike to school could increase. However, comparable to the shift to using inactive modes to get to school, the changes that could reverse this apparent "norm", will not happen overnight.

Implementing more child-friendly street design strategies in communities (e.g., narrowing streets to slow traffic, or building sidewalks and crosswalks) could encourage more

children and their families to walk as a form of transportation, and may result in more Walking School Bus programs. When residential neighbourhoods do not have sidewalks, though, schools officials may be reluctant to start a Walking School Bus (i.e., if they do not feel comfortable walking with students on roads without sidewalks).

My research set out to answer three research questions: 1) How are other communities using the Walking School Bus program to promote active transportation to school?; 2) What is the perception of the Walking School Bus program of those participating?; and 3) How do the insights of the children participating enrich planning Walking School Bus programs and the literature on active transportation for children? This chapter summarizes the answers to these three questions.

All over the world, other communities are using the Walking School Bus program to encourage students to use an active mode of transportation to get to and from school, in a safe, and supervised way. The precedent study in Chapter 4 answered the first question **How are other communities using the Walking School Bus program to promote active transportation to school?** Each precedent was slightly different. Each found a way to use the Walking School Bus program or another way of encouraging active transportation to school, in a way that works for them and their community.

One way the programs differ is who the leaders are and how they are recruited. Of the precedents studied, three of the programs pay the leaders for their time. The Winnipeg program receives grant funding to pay volunteers and educational assistants that lead the Walking School Bus routes. The Ottawa leaders receive payment from the Ottawa Student

Transportation Agency or their time. Some programs in Kitchener-Waterloo receive funding from the Canadian Cancer Society for Walking School Bus programs. The rest of the Walking School Bus programs utilize volunteers. Kitchener-Waterloo programs that do not receive funding, do not want to rely on parent volunteers, so older students are the leaders. Iowa has a similar program, where high school sports teams volunteer to be route leaders. There was no information about whether or not older students are given incentives to be a route leader; however, a school could use the volunteer hours for school credits. In Pottstown, Pennsylvania, the Walking School Bus utilizes a mix of volunteers from local businesses, community organizations and parent/family members of the students for the route leaders. Broadening the scope to those not affiliated with the school may have increased the number of volunteers. By searching for volunteers outside of the school, community members that would otherwise not have known about the program or had the chance to volunteer, are given the opportunity. The leaders of the rural program studied received extra-curricular hours. The large time commitment required by the Walking School Bus means they receive two extra days off of work per year for leading the program.

The size of the community, student interest and leaders determines the number of routes that can be accommodated at a school and in a community. Each program looked at in the precedent study was of a different size. In Winnipeg, there is no city-wide Walking School Bus program, so every school is responsible for their own program, if they want to offer it. The program at Shaughnessy Park School in Winnipeg offers three routes in the neighbourhood surrounding the school. Other programs are run by organizations, making the Walking School Bus a city, province or state-wide program. In the Kitchener-Waterloo area of Ontario, the

Canadian Cancer Society organizes the Walking School Bus and has 14 routes in seven schools within the region. Ottawa's Walking School Bus program is run by the Ottawa Student Transportation Authority and has 13 schools participating and one route at each school. Iowa's state-wide Walking School Bus program is organized by Iowa Safe Routes to School with participation by 14 counties and over 52 schools offering some sort of Walking School Bus program. Walking School Bus programs run by an organization are more well-known and spread knowledge of the program further, because it is not occurring on an individual school basis. Having an organization in charge of the program in every city or province in Canada could increase the number of programs. It would be easier to get the information out to the schools and they would have support when starting a program.

The Isle La Motte, Vermont precedent helped answer the first research question, because it is a rural community without bus service. Without this key service, families must ensure children get to school safely and on time. This resulted in most students being driven due to the lack of active transportation infrastructure. To make walking and biking safer in the community, the school started an encouragement program to decrease the number of vehicles around the school and make walking, biking and carpooling more appealing. If a community does not have the interest or resources to sustain a Walking School Bus, they can promote active transportation in other ways, as Isle La Motte School has done.

Chapter 5: Observations and Chapter 6: Interviews collected the information required to answer the second research question, **What is the perception of the Walking School Bus program of those participating?** Through the observations of the Walking School Bus and the

Brainstorm Session and the interviews with parents, leaders and the school principal, it was found the perception of those participating in the program is good, for the most part.

The students' actions while they were walking with the Walking School Bus were positive. They talked to their friends and to the leaders, they played games, and they played with the streetscape and nature as they walked to and from school. Although there were instances when students acted out and misbehaved. This was not a regular occurrence and the students mostly behaved and followed the rules during the week of observations. Following the rules was important because if they did not they could be putting their safety or the safety of others at risk. If there was a safety concern, the leaders did not tolerate it and would immediately deal with it by making the student hold a leader's hand or threatening to call their parents if necessary. During the Brainstorm Session, the students that attended said the program is fun and they liked that they got exercise and could walk with their friends and teachers. Almost all of the students said they wanted the program to continue and they preferred it over their alternative options of school transportation.

Through interviews with the parents, leaders, and principal every person interviewed said they really liked the program. The Walking School Bus was more convenient for parents than driving or walking their children to school because most students got picked up at their house or at the parent's place of work. Families liked the independence their children gained through the program and learning street safety in a safe and supervised setting.

Parents said the children really enjoyed the Walking School Bus, with some requesting to participate more often. According to the parents, the children liked walking with the Bus

because they got to be outside, spend time with their friends and be active. The leaders and principal also thought it was a great program that was valued by the students and parents and a good service the school provided to its students. They liked the program because it keeps students active, is safer than them walking alone and establishes positive relationships. The children's perceptions of the Walking School Bus from the point of view of the leaders and principal, was that most really enjoy it, but there are days when some students would rather have been driven because of cold or bad weather. They thought the children like the chance to connect with their friends and they feel safe and welcome due to the adult leaders. The leaders were the only ones to mention a large downfall of the program, finding coverage when one of them is sick or off work. Although there were other staff members that would provide coverage when needed, it could be hard to find, especially at the last minute.

The interviews and literature review were used to answer the third research question, **How do the insights of the children participating enrich planning Walking School Bus programs and the literature on active transportation for children?** Through information gathered in the interviews, the students did not appear to have input in the Walking School Bus program at the subject school. Over the course of the week and interviews, there was no mention of discussing the program with the participants to see if they had any insights or ideas on how to improve the Walking School Bus, or to promote active transportation for children.

The leader led Brainstorm Session was the first formal sit down between the leaders and participants, however, it is possible suggestions were made in an informal setting and were not mentioned. Two questions asked during the Brainstorm Session could have affected the future of the program, asking what would make the program more fun and what would make it safer.



As observations were only collected over the span of a week, it is unknown whether the ideas brought up in the Brainstorm Session were incorporated into the program or not. With this program, I am not sure the children's insights are really taken into account; however, the concept of the program as a whole is to benefit the children and their families, so it is built around the children, taking them into consideration from the start. A program could easily incorporate student's insights into their Walking School Bus by encouraging students to come forward with ideas or comments about the program. The school could assess the possibility of incorporating these comments and ideas into the program if they are doable and would not affect the program in a negative way (for example slowing it down).

The literature on Walking School Bus programs and active transportation for children does not generally focus on asking children for their insights, to see how programs could be improved. Research on these topics focus on the numbers of children using active modes versus driving to get to school, the health benefits of being active and what can be done to promote active transportation to school. Although all of these topics are important, there appears to be little to no research on what the students think of these programs and their insights about how they could be improved or planned to encourage more participation. None of the research studies about Walking School Bus programs spoke to participants to ask what they think of the program, whether anything should be modified or what could increase participation. Due to the difficulties in getting ethical consent when working with vulnerable participants like children, it is possible researchers have been dissuaded from conducting this research because of the obstacles that could be faced.

Walking School Bus programs could implement an educational component by heightening learning during the walk. Leaders could speak about the community and what is around them with the children, or having guests lead the walk, to teach the children about a variety of topics related to the route. Topics that could be discussed along the route could feature community history, changing seasons and nature. A community can vastly change in the course of 10-20 years. Teaching children about what the community was like before they were born could be really interesting to them, if the community has grown and changed a lot. As the seasons change there are things that children could spot to identify the changes: snow melting, trees budding, flowers, leaves changing colors. Spotting these seasonal changes while on the walk to and from school, could be a good learning opportunity for children. Children could also learn a lot by talking about the nature they see while on the walk (e.g., plants and animals, how they grow, what they eat and where they live).

The program studied appeared to be a success in the rural community. Upwards of 20 students were participating in the program on a daily basis. The program allows students to get to school safely, interact with their peers and teachers, increase their physical activity and gain some independence. This is directly related to fewer parents driving to the school to drop off and pick up their children every day, which increases safety around the school because there are fewer vehicles.

The school's Walking School Bus program operated for two years. With only two teacher volunteers doing the program every day, they grew tired of the time commitment required of the program before and after school. Teachers value these key times they have before and after school because it gives them opportunities to prepare lessons, mark assignments or do

other tasks related to their job. If the Walking School Bus were less of a time commitment through having more staff volunteers to share the days, it may have been possible to continue. A schedule of just mornings or only certain days of the week may work for the program in the future; however, for the 2018/2019 school year, there was no Walking School Bus.

### **8.1 Implications and Limitations**

This research was limited in that only one program was observed, limiting the observations to a small sample size. With a small sample size, there is a greater margin of error, when coming to conclusions for an entire population. In this instance, there is also the possibility, because only a small sample of the children participating in Walking School Bus programs were observed, that the observations and conclusions are not a representation of the entire population of Walking School Bus participants. However, due to little research being done on rural Walking School Bus programs, the sample size could itself be a large portion of the population. There could be none or very few other rural programs to study in a particular region.

There was very little information available online about Walking School Bus programs in rural areas. This limited the precedent studies to urban Walking School Bus programs. To bridge the gap between these programs and the program being studied, rural communities with programs encouraging active transportation were also used as precedent studies. This is a limitation of the study, because rural programs could be different than urban programs due to the urban structure of the community, size of the population demographics, and density.

The most difficult part of the research collection was the observations. When observing as many as 20 children at a time, it is impossible to see everything happening. Observing this many people becomes harder, when everyone is walking or running. It is difficult to walk, watch where you are going, take notes and observe the group at the same time. Due to the group being large and spread out at times, I could not hear what was being said amongst everyone in the group. During the observations, I could only hear what was happening between the students and leaders nearby.

The students were aware they were being observed and knew the purpose of the observations. This could certainly have caused them to act differently around me, because they knew they were being watched and notes were being taken. If they did act differently than normal, the findings could be compromised. With observations, one hopes participants are acting as they normally would in that situation.

During the Brainstorm Session, students were not required to answer each question. Therefore, there may be some students' responses not recorded because they chose to not answer the question. The responses that were missed could have added more input into the discussion and possibly affected the results, if those children had a different opinion than the others. The group dynamic of the Brainstorm Session could have made students nervous to answer, if they felt differently than the others. The group setting could also have produced false or mimicking responses from students (e.g., by students agreeing with the others) even if that is not how they truly felt.

## 8.2 Further Study

Further research on rural Walking School Buses could be about more programs in rural areas, in order to gain a greater understanding of the children's perceptions of the program from a larger sample size. The small sample size of this study was a limitation. By furthering the research on the topic, more programs could be studied in order to gather a larger sample size. Studying the perceptions of more children would ensure the findings in this study represent the perceptions of all children participating in Walking School Bus programs in rural communities.

An interesting topic for further research would be to study Walking School Bus programs in rural and urban communities to see how they differ. Due to the differences in the communities in terms of size, population, density and school size, the programs could differ markedly. Studying how the Walking School Bus program works in each type of community could help organizations seeking to promote active transportation, and provide a guide and information to schools and communities on the Walking School Bus about how to start a program. Information specific to rural or urban communities with methods and techniques proven to work in their community could greatly benefit new programs, programs that are struggling, or programs that are successful but could use improvement. Studying programs in multiple sizes of communities individually and then comparing the findings, could uncover things that work for an urban program but not a rural, or vice versa.

There are ample opportunities to continue the research on how to encourage children and their families to use active modes of transportation to get to school and in other areas of their life. A lot of research has already been done on how inactive children have become,

possibly due to the advances in technology. Doing more research on methods that would encourage people to use active transportation, and schools to promote it through programs like the Walking School Bus, could help increase children's activity levels and their health. The inactivity levels of children are not news in today's world; it is now time to find more ways to encourage active lifestyles, so their activity levels rise. The Walking School Bus is a great program to encourage a healthy lifestyle from a young age; however, not all schools offer the program to their students. If Walking School Bus programs, or other active transportation programs, were offered at every school, all children would at least have the opportunity to participate and be more active.

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**Appendices**

**Appendix A: Letter to School Division**



# UNIVERSITY OF MANITOBA

Department of City Planning  
201 Russell Building  
Winnipeg, Manitoba  
Canada R3T 2N2  
Telephone (204) 474-9458  
Fax (204) 474-7532

[REDACTED]  
Acting Superintendent  
[REDACTED] School Division

September 18, 2017

Dear [REDACTED],

I am writing to you to request permission of the [REDACTED] School Division to conduct research for my Master's practicum in City Planning with the Walking School Bus at [REDACTED]. My research focuses on the children's perceptions of the Walking School Bus and how the program can be used in rural communities. This research will be informed by a precedent review of other Walking School Bus programs across the world, observations of the Walking School Bus, observing a brainstorm session with the children about what they have thought of the program over the year and how it could be improved, and interviews with the principal, Walking School Bus leaders and parents. This work is being supervised by Dr. Rae Bridgman ([REDACTED]).

I have been engaged in the process of planning, writing and obtaining permissions for this project since September 2016 and have received full approval through the Joint Faculty Research Ethics Board at the University of Manitoba. A certificate of this approval is enclosed. I have passed both a Criminal Record Check and Child Abuse Registry Check, both are enclosed.

I have proposed to participate in the Walking School Bus program over the course of 5 days in the morning and afternoon. During this week the school is hosting a brainstorm session to ask the children who walk with the bus what they have thought about the program, what they like about it, what they do not like, and how it could be improved in the future. Questions will be asked by a teacher or member of staff, my role during this session will only be writing notes for my own use.

Ultimately, this research is meant to uncover a primary understanding of children's perceptions of the Walking School Bus program and how this affects their method of transportation to school. If the perceptions are positive, this research could be used in other rural communities to encourage active transportation to school.



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No photographs including children or adults will be taken, and none of the insights gathered will compromise anonymity, confidentiality or individual identities. Nor will the name of the community, school, administration or students feature in any of the published research.

Written consent from children and parents will be sought, and during informal conversations, I will self-identify as a University of Manitoba researcher. All participants will be informed that they may decline to participate or withdraw from the study at any time. Children will have the opportunity themselves to decline being observed during the Walking School Bus or during the brainstorm session. If they do decline to the observations the children may still participate in the Walking School Bus and the brainstorm session if they choose, their actions and anything they say will not be recorded.

I am seeking your written permission to work with the students at [REDACTED]. If you have any questions, please do not hesitate to contact me at [REDACTED] or [REDACTED].

Thank you for considering my request. I look forward to hearing from you.

Sincerely,  
Breanne Jack  
Master of City Planning (Candidate)  
University of Manitoba  
Faculty of Architecture  
Department of City Planning

## **Appendix B: Letter to Students**



Dear Student,

My name is Breanne and I am a student at the University of Manitoba in City Planning. I have been thinking about how children in rural communities get to school. I heard about the Walking School Bus at your school and would appreciate your help with my research.

I would like to participate in the Walking School Bus from **October 23-27, 2017** to see how it works and to see how you feel about participating in the program. This will not be any extra work or you. I will come along on the Bus to observe and draw some simple sketches of what I see. Along with Miss Jack and Miss Hunt I will join a brainstorm session with you and your friends to learn more about what you like and do not like about walking to school and how you would change the Walking School Bus to make it better. The brainstorm session will be during school hours and be located at the school. Mr. Lee will work with your teacher to ensure you are able to leave class to participate in the Brainstorm Session if you would like to participate.

#### **Why do I want to join the Walking School Bus?**

My school work at the University is about how children feel about the Walking School Bus in small communities and how Walking School Buses could help other schools.

#### **What is a thesis?**

It is a book that I will write about this project. Part of the book will use the sketches that I have drawn while participating on the Bus.

You do not have to participate in the observations or the brainstorm session. If you prefer not to participate in the observation, you will not be observed while on the Bus, but you can still take the Bus to school. You can also choose to come to the brainstorm session if you want and if it is okay with you I will listen to what you say and write notes. If you do not want me to write notes about what you have said that is also okay, you can still participate in the session if you want. This is your choice, you can participate in both activities, only one or none. You can decide not to participate at any time during the project and you can ask the Walking School Bus leaders or me questions at any time about this research.

If you are interesting in helping me with my work you will create a top secret name to be used when I am on the bus and during the brainstorm session. This name will help to keep your real name a secret from me, I do not want to include your name, your school or your town in my project, so keeping your name a secret will make sure that I do not include it in my work. If you do not want to participate in the observations but you would still like to have a top secret name to use while I am on the bus, that is okay too!

Thank you very much for helping with my project!

**Breanne Jack**

## **Appendix C: Informed Consent for Student**



# Observation Consent Form

## CONFIDENTIAL PARTICIPATION



UNIVERSITY  
OF MANITOBA

Active Transportation: Children's Perceptions of the Walking School Bus Program in a Rural Manitoba Community

*Masters of City Planning Practicum Student: Breanne Jack*

*This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your child's participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.*

### **Dear Parent/Guardian:**

Your child's assistance is desired in the practicum project work of Breanne Jack, a Masters of City Planning Student from the University of Manitoba. In order for your child to participate in this project, your permission is required for observations.

### **Please read through the following information:**

#### ***Description of the project***

The proposed research focuses on the Walking School Bus program in a rural community in Manitoba. A Walking School Bus is a group of children walking to school with one or more adults. The 'School Bus' follows a route with meeting points and a timetable where children join the bus to safely walk to school. Providing safe and active routes to school for children to participate in allows them to be physically active while getting to school on time. The Walking School Bus Program allows children to be picked up at a designated location, to socialize with other children, to be active and to learn more about their community. The focus of this practicum will be on the perceptions of the children participating in the program and how those perceptions affect the program and affect the literature on Walking School Bus programs. [REDACTED] is planning a Brainstorm Session to talk with the children who participate in the Walking School Bus to learn more about what they like and do not like about the program and what they would change about the program if they could.

#### ***Observations***

Observations will be completed by the researcher over a 5 day period (October 23-27, 2017). The researcher will participate in the Walking School Bus program in the mornings and afternoons. The researcher will write notes about what they observe during the walk from children as well as the leaders. Simple stick figure sketches may also be drawn which will not include any identifying features of participants. The final document will not include any personal information including names, the school, the route or any other confidential information about participants. Observation will also be conducted during the school organized brainstorm session where the researcher's only role will be to listen and take notes. The researcher will observe the brainstorm session in order to gain a better understanding of the children's perceptions and to ensure that what is observed during the Walking School Bus is accurate to how the children actually feel. If needed the school will work with your child's teacher to allow them to attend the brainstorm session which will be located at [REDACTED] during school hours.

#### ***Photography or Video-Taping***

No photographs or videos will be taken of participants during observations of the Walking School Bus or during the brainstorm session.

#### ***Confidentiality***

Personal information will be kept confidential. This means that your name, your child's name, school name, community and/or any other information that would give confidential information away will not be included in any presentation, or the final document. To ensure confidentiality your child will be asked to create a top secret name, this name will be written on a name tag and the researcher will use this name when writing observational notes, this

will ensure that no confidential information will be included in the final document, as the researcher will not have known the children's names.

**Data Storage and Eventual Destruction**

All data, including digital data, research field notes, etc. will be stored in a private and secure place. This research material, including digital material, will be stored until the publication of the final document, at which point, the material will be destroyed, or deleted.

**Feedback**

An exhibition of the projects and information will be held at the completion of the process. The final document will be published and available for viewing at the University of Manitoba Architecture/Fine Arts Library and on the University of Manitoba's MSpace (<https://mspace.lib.umanitoba.ca/>) no later than March 2020.

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**Your signature on this form indicates that you have understood to your satisfaction the information regarding your child's participation in the research project and agree to allow your child to participate as a subject. In no way does this waive you or your child's legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. Your child is free to withdraw from the study at any time, without prejudice or consequence. Your child's continued participation should be as informed as the initial consent, so you and your child should feel free to ask for clarification or new information throughout their participation.**

**CONTACT INFORMATION:**

Breanne Jack- Masters of City Planning Practicum Student, University of Manitoba

Telephone: [REDACTED] Email: [REDACTED]

Dr. Rae Bridgman- Practicum Advisor, Department of City Planning, Faculty of Architecture,

University of Manitoba, 201 Russell Bldg., Winnipeg, MB, R3T 2N2

Telephone: [REDACTED] Email: [REDACTED]

**This research has been approved by the Joint-Faculty Research Ethics Board (JFREB) of the University of Manitoba. If you have any concerns or complaints about this project you may contact any of the above-named persons or the Human Ethics Coordinator, Crop Technology Centre, 208-194 Dafoe Road, Winnipeg, MB R3T 2N2, Ph: (204) 474-7122, Fax: (204) 269-7173, [humanethics@umanitoba.ca](mailto:humanethics@umanitoba.ca). A copy of this consent form has been given to you to keep for your records and reference. The University of Manitoba may look at your research records to see that the research is being done in a safe and proper way.**

Thank you for participating in this project. Your cooperation is greatly appreciated.

-----  
Please check one or more of the following points if you AGREE with them:

- I agree to allow my child to participate in the observations during the Walking School Bus.
- I agree to allow my child to participate in the observation during the brainstorm session.
  
- I do not want my child participating in the observations during the Walking School Bus or the brainstorm session.

I, \_\_\_\_\_, wish to allow/not allow my child, \_\_\_\_\_, to participate in the research being conducted by Breanne Jack. My signature indicates that I have read the information above and give/do not give Breanne permission to use the information gathered during the observations under the conditions stated above.

Participant's Signature \_\_\_\_\_ Date \_\_\_\_\_

**Appendix D: Parent/Guardian Interview Informed Consent Form**

**Interview Consent Form**  
**CONFIDENTIAL PARTICIPATION**



**UNIVERSITY**  
**OF MANITOBA**

Active Transportation: Children's Perceptions of the Walking School Bus Program in a Rural Manitoba Community

*Masters of City Planning Practicum Student: Breanne Jack*

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*This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.*

**Dear Participant:**

Your assistance is desired in the practicum project work of Breanne Jack, a Masters of City Planning Student from the University of Manitoba. In order for you to participate in this project, your permission is required.

**Please read through the following information:**

***Description of the project***

The proposed research focuses on the Walking School Bus program in a rural community in Manitoba. A Walking School Bus is a group of children walking to school with one or more adults. The 'School Bus' follows a route with meeting points and a timetable where children join the bus to safely walk to school. Providing safe and active routes to school for children to participate in allows them to be physically active while getting to school on time. The Walking School Bus Program allows children to be picked up at a designated location, to socialize with other children, to be active and to learn more about their community. The focus of this practicum will be on the perceptions of the children participating in the program and how those perceptions affect the program and affect the literature on Walking School Bus programs.

***Length of the Interview***

The interview will take approximately 10-20 minutes.

***Recording of the Interview***

The interview will be audio-recorded. This will allow the material to be analyzed at a later date with greater ease and efficiency. If at any time during the interview session, you do not feel comfortable commenting on an issue or question, you are not obligated to do so, or if you would like to stop the interview at any time, you are welcome to do so without prejudice or consequence. The recorded data will be kept in a safe and secure location, and destroyed once the interview has been transcribed.

***Photography or Video-Taping***

Photographs and/or video recordings will not be required for an interview.

***Confidentiality***

Personal information will be kept confidential. This means that your name, your child(ren)'s name, home address, and/or any other information that would give confidential information away will not be included in any presentation, or the final document.

***Data Storage and Eventual Destruction***

All data, including digital data, research field notes, etc. will be stored in a private and secure place. This research material, including digital material, will be stored until publication of the final document but no later than March 2020, at which point, the material will be destroyed, or deleted.

**Feedback**

An exhibition of the projects and information will be held at the completion of the process, which you will be invited to attend. The final document will be published and available for viewing at the University of Manitoba Architecture/Fine Arts Library and on the University of Manitoba’s MSpace (<https://mspace.lib.umanitoba.ca/>) no later than March 2020.

**Potential Withdrawal**

If you decide to participate, you have the right to refuse to answer any question or to refuse participation in any activity, at any time. This includes the withdrawal of your participation after the interview is completed. However, once the practicum has been submitted to the Faculty of Graduate Studies, you may no longer withdraw your participation.

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**Your signature on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and /or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation.**

**CONTACT INFORMATION:**

Breanne Jack- Masters of City Planning Practicum Student, University of Manitoba

Telephone: [REDACTED] Email: [REDACTED]

Dr. Rae Bridgman- Practicum Advisor, Department of City Planning, Faculty of Architecture,  
University of Manitoba, 201 Russell Bldg., Winnipeg, MB, R3T 2N2

Telephone: [REDACTED] Email: [REDACTED]

**This research has been approved by the Joint-Faculty Research Ethics Board (JFREB) of the University of Manitoba. If you have any concerns or complaints about this project you may contact any of the above-named persons or the Human Ethics Coordinator, Crop Technology Centre, 208-194 Dafoe Road, Winnipeg, MB R3T 2N2, Ph: (204) 474-7122, Fax: (204) 269-7173, [humanethics@umanitoba.ca](mailto:humanethics@umanitoba.ca). A copy of this consent form has been given to you to keep for your records and reference. The University of Manitoba may look at your research records to see that the research is being done in a safe and proper way.**

Thank you participating in this project. Your cooperation is greatly appreciated.

I, \_\_\_\_\_, wish to participate in the research being conducted by Breanne Jack. My signature indicates that I have read the information above and give Breanne permission to use the information gathered during this interview session under the conditions stated above.

Participant’s Signature \_\_\_\_\_ Date \_\_\_\_\_

**Appendix E: Parent Recruitment Letter**



Dear Parent/Guardian,

My name is Breanne and I am a student at the University of Manitoba in City Planning. I am doing research on how children in rural communities get to school. My research is going to be on the Walking School Bus at [REDACTED]. I chose this as my topic because I have an interest in active transportation, children’s health, rural communities and because there is very little research on Walking School Buses in rural communities.

My research will consist of two parts- observations and interviews.

I will do be doing two forms of observation. The first will be participating in the Walking School Bus to learn more about how it works and how the children perceive the program. The second will be observing a brainstorm session that the school is hosting, the purpose of the brainstorm session is for the school and program organizers to get a better idea of what the children like and do not like about the program, what they would change if they could and overall how they feel about walking to school with the Walking School Bus.

Interviews will be done with the Walking School Bus school staff and parents who wish to participate. The purpose of the interviews is to ask staff and parents how they believe the children think of the program as well as their own perceptions. Interviews will take approximately 10-15 minutes and can be done in person or over the phone, whichever is preferable to the interviewee. If the interview will be done in person a convenient public location will be mutually decided upon.

If you would like to participate in an interview please fill out the information below and return it to Miss Hunt or Miss Jack. I will contact you to set up an interview time and location.

If you have any questions or concerns please feel free to contact me at [REDACTED] or [REDACTED].

Thank you so much for helping with my project!

**Breanne Jack**

\_\_\_\_\_  
Name

\_\_\_\_\_  
Phone Number

## **Appendix F: Principal Interview Informed Consent Form**



**Interview Consent Form**  
**CONFIDENTIAL PARTICIPATION**



**UNIVERSITY  
OF MANITOBA**

Active Transportation: Children's Perceptions of the Walking School Bus Program in a Rural Manitoba Community

*Masters of City Planning Practicum Student: Breanne Jack*

*This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.*

**Dear Participant:**

Your assistance is desired in the practicum project work of Breanne Jack, a Masters of City Planning Student from the University of Manitoba. In order for you to participate in this project, your permission is required.

**Please read through the following information:**

***Description of the project***

The proposed research focuses on the Walking School Bus program in a rural community in Manitoba. A Walking School Bus is a group of children walking to school with one or more adults. The 'School Bus' follows a route with meeting points and a timetable where children join the bus to safely walk to school. Providing safe and active routes to school for children to participate in allows them to be physically active while getting to school on time. The Walking School Bus Program allows children to be picked up at a designated location, to socialize with other children, to be active and to learn more about their community. The focus of this practicum will be on the perceptions of the children participating in the program and how those perceptions affect the program and affect the literature on Walking School Bus programs.

***Length of the Interview***

The interview will take approximately 10-20 minutes.

***Recording of the Interview***

The interview will be audio-recorded. This will allow the material to be analyzed at a later date with greater ease and efficiency. If at any time during the interview session, you do not feel comfortable commenting on an issue or question, you are not obligated to do so, or if you would like to stop the interview at any time, you are welcome to do so without prejudice or consequence. The recorded data will be kept in a safe and secure location, and destroyed once the interview has been transcribed.

***Photography or Video-Taping***

Photographs and/or video recordings will not be required for an interview.

***Confidentiality***

Personal information will be kept confidential. This means that your name, the name of the school, community and/or any other information that would give confidential information away will not be included in any presentation, or the final document.

### **Data Storage and Eventual Destruction**

All data, including digital data, research field notes, etc. will be stored in a private and secure place. This research material, including digital material, will be stored until publication of the final document but no later than March 2020, at which point, the material will be destroyed, or deleted.

### **Feedback**

An exhibition of the projects and information will be held at the completion of the process, which you will be invited to attend. The final document will be published and available for viewing at the University of Manitoba Architecture/Fine Arts Library and on the University of Manitoba's MSpace (<https://mspace.lib.umanitoba.ca/>) no later than March 2020.

### **Potential Withdrawal**

If you decide to participate, you have the right to refuse to answer any question or to refuse participation in any activity, at any time. This includes the withdrawal of your participation after the interview is completed. However, once the practicum has been submitted to the Faculty of Graduate Studies, you may no longer withdraw your participation.

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**Your signature on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and /or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation.**

### **CONTACT INFORMATION:**

Breanne Jack- Masters of City Planning Practicum Student, University of Manitoba

Telephone: [REDACTED] Email: [REDACTED]

Dr. Rae Bridgman- Practicum Advisor, Department of City Planning, Faculty of Architecture,  
University of Manitoba, 201 Russell Bldg., Winnipeg, MB, R3T 2N2

Telephone: [REDACTED] Email: [REDACTED]

**This research has been approved by the Joint-Faculty Research Ethics Board (JFREB) of the University of Manitoba. If you have any concerns or complaints about this project you may contact any of the above-named persons or the Human Ethics Coordinator, Crop Technology Centre, 208-194 Dafoe Road, Winnipeg, MB R3T 2N2, Ph: (204) 474-7122, Fax: (204) 269-7173, [humanethics@umanitoba.ca](mailto:humanethics@umanitoba.ca). A copy of this consent form has been given to you to keep for your records and reference. The University of Manitoba may look at your research records to see that the research is being done in a safe and proper way.**

Thank you participating in this project. Your cooperation is greatly appreciated.

I, \_\_\_\_\_, wish to participate in the research being conducted by Breanne Jack. My signature indicates that I have read the information above and give Breanne permission to use the information gathered during this interview session under the conditions stated above.

Participant's Signature \_\_\_\_\_ Date \_\_\_\_\_

**Appendix G: Leader Interview and Observation Informed Consent Form**

# Observation and Interview Consent Form

## CONFIDENTIAL PARTICIPATION

Active Transportation: Children's Perceptions of the Walking School Bus Program in a Rural Manitoba Community

*Masters of City Planning Practicum Student: Breanne Jack*

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*This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.*

### **Dear Participant:**

Your assistance is desired in the practicum project work of Breanne Jack, a Masters of City Planning Student from the University of Manitoba. In order for you to participate in this project, your permission is required for observations and/or an interview.

### **Please read through the following information:**

#### ***Description of the project***

The proposed research focuses on the Walking School Bus program in a rural community in Manitoba. A Walking School Bus is a group of children walking to school with one or more adults. The 'School Bus' follows a route with meeting points and a timetable where children join the bus to safely walk to school. Providing safe and active routes to school for children to participate in allows them to be physically active while getting to school on time. The Walking School Bus Program allows children to be picked up at a designated location, to socialize with other children, to be active and to learn more about their community. The focus of this practicum will be on the perceptions of the children participating in the program and how those perceptions affect the program and affect the literature on Walking School Bus programs.

#### ***Observations***

Observations will be completed by the researcher over a 5 day period. The researcher will participate in the Walking School Bus program in the mornings and afternoons. The researcher will write notes about what they observe during the walk from children as well as the leaders. Simple stick figure sketches may also be drawn which will not include any identifying features of participants. The final document will not include any personal information including names, the school, the route or any other confidential information about participants. Observation will also be conducted during the school organized brainstorm session where the researcher's only role will be to listen and take notes.

#### ***Length of the Interview***

The interview will take approximately 10-20 minutes.

#### ***Voice Recording***

The interview will be audio-recorded. This will allow the material to be analyzed at a later date with greater ease and efficiency. If at any time during the interview session, you do not feel comfortable commenting on an issue or question, you are not obligated to do so, or if you would like to stop the interview at any time, you are welcome to do so without prejudice or consequence. The recorded data will be kept in a safe and secure location, and destroyed once the interview has been transcribed.

#### ***Photography or Video-Taping***

No photographs will be taken of participants during observations. Photographs and/or video recordings will not be required for an interview.

### **Confidentiality**

Personal information will be kept confidential. This means that your name, school name, community and/or any other information that would give confidential information away will not be included in any presentation, or the final document.

### **Data Storage and Eventual Destruction**

All data, including digital data, research field notes, etc. will be stored in a private and secure place. This research material, including digital material, will be stored until the publication of the final document, at which point, the material will be destroyed, or deleted.

### **Feedback**

An exhibition of the projects and information will be held at the completion of the process, which you will be invited to attend. The final document will be published and available for viewing at the University of Manitoba Architecture/Fine Arts Library and on the University of Manitoba's MSpace (<https://mspace.lib.umanitoba.ca/>) no later than March 2020.

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**Your signature on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and /or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation.**

### **CONTACT INFORMATION:**

Breanne Jack- Masters of City Planning Practicum Student, University of Manitoba

Telephone: [REDACTED] Email: [REDACTED]

Dr. Rae Bridgman- Practicum Advisor, Department of City Planning, Faculty of Architecture,  
University of Manitoba, 201 Russell Bldg., Winnipeg, MB, R3T 2N2

Telephone: [REDACTED] Email: [REDACTED]

**This research has been approved by the Joint-Faculty Research Ethics Board (JFREB) of the University of Manitoba. If you have any concerns or complaints about this project you may contact any of the above-named persons or the Human Ethics Coordinator, Crop Technology Centre, 208-194 Dafoe Road, Winnipeg, MB R3T 2N2, Ph: (204) 474-7122, Fax: (204) 269-7173, [humanethics@umanitoba.ca](mailto:humanethics@umanitoba.ca). A copy of this consent form has been given to you to keep for your records and reference. The University of Manitoba may look at your research records to see that the research is being done in a safe and proper way.**

Thank you participating in this project. Your cooperation is greatly appreciated.

Please check one or both of the following points if you AGREE with them:

- I agree to participate in the observations during the Walking School Bus
- I agree to participate in the observation during the brainstorm session
- I agree to participate in an interview

I, \_\_\_\_\_, wish to participate in the research being conducted by Breanne Jack. My signature indicates that I have read the information above and give Breanne permission to use the information gathered during the observation and/or interview session under the conditions stated above.

Participant's Signature \_\_\_\_\_ Date \_\_\_\_\_

**Appendix H: Interview Questions**

### Parent/Guardian Interview Questions

1. How many children do you have that participate in the Walking School Bus program?
2. Do you have any children that do not participate? If so why not?
3. Do they walk with the bus to and from school every day?
4. Had you heard of Walking School Bus programs before the school started a program?
5. Why did you decide to enroll your child in the walking school bus program?
6. Did you have any concerns when enrolling your child in the program?
7. Is this your child's first year with the walking school bus?
8. How did your child get to school last year?
9. How would your child get to school if there was not a Walking School Bus this year?
10. Which method of getting to school is most convenient for you?
11. Which method does the child like more?
12. Did/Will winter impact the Walking School Bus for you and your child at all? How so?
13. What do you think your child's feelings towards the walking school bus are?
14. Does your child talk about the Walking School Bus at home?
15. What do you think of the walking school bus?
16. How do your child's perceptions affect your decision about how they get to school?

### Leader Interview Questions

1. Why did you decide to be a supervisor on the Walking School Bus?
2. Why do you think it is important for children to use an active mode of transportation to get to school?
3. Has the Walking School Bus been affected by winter at all? How so?
4. What about bad weather like rain, hail etc.?
5. What are your perceptions of the Walking School Bus program?
6. What do you think the children's perceptions are towards the Walking School Bus?
7. Do children talk to you about the Walking School Bus during the school day (during class, in the hallway etc.)?
8. Do children ever express that they do not want to be on the Walking School Bus? Did they tell you or did they express it in some other way? What did you do about it?
9. How do you discipline children when they misbehave on the Walking School Bus?
10. If one of the leaders is sick, is it hard to find a replacement at the last minute? Could you do it alone if needed?
11. Was there any resistance to the Walking School Bus when it was starting? By the school division, parents, other teachers etc.
12. Were there any barriers (physical or regulatory) when planning the Walking School Bus? Did these influence the program in any way?
13. Has the program changed at all from when it first began last year?
14. What is the age/grade range of the children that walk with the walking school bus? How many in each grade?
15. How many children walk in the morning?
16. How many in the afternoon?
17. What would you change about the Walking School Bus?



### Principal Interview Questions

1. Why do you think it is important for [REDACTED] to have a Walking School Bus?
2. Had you heard about the program before last year?
3. What are your perceptions of the Walking School Bus program?
4. What do you think the children think of the Walking School Bus?
5. Was the Walking School Bus affected by winter at all? How so?
6. What about bad weather like rain, hail etc.?
7. Was there any resistance to the Walking School Bus when it first started? By the school division, parents, teachers etc.
8. Were there any barriers (physical or regulatory) when planning the Walking School Bus?
9. Did these influence the program in any way?
10. What, if anything, would you change about the Walking School Bus?
11. Have other schools in the school division heard about the new program at your school? What was their reaction?
12. Have there been any other Walking School Buses started as a result of this program?
13. Has the program changed at all from when it first began last year?

**Appendix I: Ethics**



Research Ethics  
and Compliance

Human Ethics  
208-194 Dafoe Road  
Winnipeg, MB  
Canada R3T 2N2  
Phone +204-474-7122  
Email: humanethics@umanitoba.ca

**PROTOCOL APPROVAL**

**TO:** Breanne Jack (Advisor: Rae Bridgman)  
Principal Investigator

**FROM:** Kevin Russell, Chair  
Joint-Faculty Research Ethics Board (JFREB)

**Re:** Protocol J2017:052 (HS20862)  
"Active Transportation: Children's Perceptions of the Walking School Bus Program in a Rural Manitoba Community"

**Effective:** August 4, 2017

**Expiry:** August 4, 2018

**Joint-Faculty Research Ethics Board (JFREB)** has reviewed and approved the above research. JFREB is constituted and operates in accordance with the current *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans*.

This approval is subject to the following conditions:

1. Approval is granted only for the research and purposes described in the application.
2. Any modification to the research must be submitted to JFREB for approval before implementation.
3. Any deviations to the research or adverse events must be submitted to JFREB as soon as possible.
4. This approval is valid for one year only and a Renewal Request must be submitted and approved by the above expiry date.
5. A Study Closure form must be submitted to JFREB when the research is complete or terminated.
6. The University of Manitoba may request to review research documentation from this project to demonstrate compliance with this approved protocol and the University of Manitoba *Ethics of Research Involving Humans*.

**Funded Protocols:**

- Please mail/e-mail a copy of this Approval, identifying the related UM Project Number, to the Research Grants Officer in ORS.

Research Ethics and Compliance is a part of the Office of the Vice-President (Research and International)  
[umanitoba.ca/research](http://umanitoba.ca/research)



UNIVERSITY  
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Research Ethics  
and Compliance

Human Ethics  
208-194 Dafoe Road  
Winnipeg, MB  
Canada R3T 2N2  
Phone +204-474-7122  
Email: humanethics@umanitoba.ca

## RENEWAL APPROVAL

**Date:** August 7, 2018

**New Expiry:** August 4, 2019

**TO:** Breanne Jack  
Principal Investigator

(Advisor Rae Bridgman)

**FROM:** Julia Witt, Chair  
Joint-Faculty Research Ethics Board (JFREB)

**Re:** Protocol #J2017:052 (HS20862)  
"Active Transportation: Children's Perceptions of the Walking School  
Bus Program in a Rural Manitoba Community"

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**Joint-Faculty Research Ethics Board (JFREB)** has reviewed and renewed the above research. JFREB is constituted and operates in accordance with the current *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans*.

This approval is subject to the following conditions:

1. Any modification to the research must be submitted to JFREB for approval before implementation.
2. Any deviations to the research or adverse events must be submitted to JFREB as soon as possible.
3. This renewal is valid for one year only and a Renewal Request must be submitted and approved by the above expiry date.
4. A Study Closure form must be submitted to JFREB when the research is complete or terminated.

**Funded Protocols:**

- Please mail/e-mail a copy of this Renewal Approval, identifying the related UM Project Number, to the Research Grants Officer in ORS.

Research Ethics and Compliance is a part of the Office of the Vice-President (Research and International)  
[umanitoba.ca/research](http://umanitoba.ca/research)



## ***Certificate of Completion***

*This document certifies that*

**Breanne Jack**

*has completed the Tri-Council Policy Statement:  
Ethical Conduct for Research Involving Humans  
Course on Research Ethics (TCPS 2: CORE)*

Date of Issue:      16 March, 2016