Forest Schools in Canada:
An Exploration of Elementary School Teacher Perspectives in Ontario

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Abstract

This qualitative research study focused on Forest Schools and related nature based learning programs in Ontario. Specifically, this study was concerned with exploring what elementary school educators are doing to integrate the aims of Forest Schools into their teaching, how they are incorporating curriculum expectations into their planning, and what supports they would find most helpful to start or continue doing this type of work. Data was collected through semi-structured interviews with two Ontario educators; a Forest School Kindergarten teacher and an outdoor education centre teacher. Findings suggest that both educators have had success incorporating the overall expectations of most subject areas of the Ontario curriculum into their programs while supporting child-directed learning whenever possible, highly valued holistic and project based assessments, and emphasized lack of access and funding as barriers to their work.

Key Words: Forest Schools, Nature Based Learning, Outdoor Education.
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1.0 Introduction

There is a growing concern amongst parents, teachers, and the general public that children today seem to be spending fewer hours outdoors in nature than in any other time in history. As stated by Richard Louv (2005), in his book on the topic, *Last Child in the Woods*, many of our indoor activities, and lack of access to green spaces (Lindemann-Matthies & Knecht, 2011; O'Brien & Murray, 2007; O'Brien, 2009). Whether these concerns are real or based in fear, research has shown that with less exposure to nature comes many negative consequences for children which can include lower physical activity levels, less social and emotional competence, and negative cognitive, affective, and behavioural impacts (Maynard, 2007; O'Brien, 2009). Additionally, there is a concern that children who do not use and enjoy green spaces when they are young will miss out on the emotional benefits and be less likely to use or care about these spaces when they grow into adults (Louv, 2005).

During school hours, time spent outdoors is often limited for many reasons, such as lack of access, health and safety concerns, limited time, financial constraints, administrative burden, large class sizes, transportation logistics, and the comfort level and experience of the teacher. Due to increased pressure on schools to maintain high achievement and decrease any activities that may detract from instruction time, many elementary school children are only spending 15-30 minutes outside per day. However, there are many developmental benefits of learning outdoors that these children might be missing out on. Natural landscapes seem to have particular qualities that meet children's needs for diverse, stimulating, and challenging play environments and encourage more
creativity and improvement in coordination than an indoor environment can provide (Maynard, 2007).

Given these concerns about limited time spent in nature, some schools are incorporating direct instruction in natural settings as a way to implement the desired academic and social outcomes expected in a traditional classroom. This innovative approach is known as the Forest School movement. The Forest School movement can be defined in many ways, and each school takes a slightly different approach, but for the purposes of this study I will use the most commonly accepted definition put forth by researcher Liz O'Brien. She states "Forest School is an inspirational process that offers all ages regular opportunities to achieve and develop confidence through hands-on learning in a woodland environment" (Murray & O'Brien, 2007, p.1). Not surprisingly, the contemporary Forest School model is most often attributed to originating in Denmark where there is a certain cultural pride surrounding outdoor living. As the popular saying goes, "There is no such thing as bad weather, just bad clothing." In Denmark, children's initial introduction to school is often almost entirely spent in nature (Lindemann-Matthies & Knecht, 2011; MacEachren, 2013).

The Forest School movement spread to the United Kingdom in 1995 after a group of students at Bridgwater College visited a Danish Forest School and brought the idea back home (Maynard, 2007; Slade & Bland, 2013). Since then, Forest Schools have spread throughout the U.K. and as of 2009; there are over one hundred Forest Schools in England alone. The numbers are continuing to grow as more specialized training and research becomes available (O'Brien, 2009). In Canada in recent years there has been a growing interest in the Forest School movement and nature-based programming for young children. The first Forest School in Canada, the Carp Ridge preschool near Ottawa, Ontario, opened in 2007 (MacEachren, 2013). There are now
approximately fifteen Forest School programs operating in Canada, with four programs specifically run in Ontario (Andrachuk et al., 2014). These numbers are likely to continue to grow as educators, administrators, and parents continue to look for innovative ways of reaching, inspiring, and preparing our young learners.

1.1 Purpose of the Study

In reviewing the literature on this topic, I discovered a great deal of high quality qualitative work. Many case studies were conducted over an entire school year and included interviews with educators, parents, and children, as well as photo documentation, checklists, and observations in the field completed by facilitators and researchers alike (e.g., Bailie, 2012; Davis & Waite, 2006; Elliott, 2014; Murray & O'Brien, 2007; O'Brien, 2009; Ridgers, Knowles, & Sayers, 2012; Slade & Bland, 2013). Although there is a growing body of research relating to Forest Schools, there is little published work on the movement in Canada (Coe, 2013; MacEachren, 2013; Welz, 2014). Further, while there is a lot of research establishing the definition, principles, positive benefits, and the key aims of Forest Schools (e.g., Davis & Waite, 2006; Elliott, 2014; Lindemann-Matthies & Knecht, 2011; Maynard, 2007; Murray & O'Brien, 2007; O'Brien, 2009; Roe & Aspinall, 2011; Slade & Bland, 2013), there is a gap in the literature specifically concerning how teachers are taking these aims and principles and translating them into their own classrooms. What can be done to support more teachers to start or continue this work, and how are curriculum outcomes being incorporated? The purpose of my study is to begin to address some of these questions and to explore the work of Forest School educators in Ontario and the larger movement across Canada.
1.2 Research Questions

The main research question guiding this study is how can teachers integrate the aims of the Forest School’s movement into Ontario elementary school classrooms? Following this, the sub-questions include: From teachers’ perspectives, are the aims of the Forest School's movement appropriate and achievable in the context of the Ontario Curriculum? How are elementary teachers implementing the aims of the Forest School's movement in their classrooms? And finally, what supports do elementary teachers need to fully implement the aims of the Forest School's movement in their classrooms?

1.3 Introduction of Methods

Following the outline set forth by Creswell (2013) for conducting a multiple case study, and inspired by the work of other major researchers in this area (Murray & O'Brien, 2007), I conducted 2 individual semi-structured interviews with Ontario elementary school educators who are using the guiding principles and defining characteristics of the Forest School movement in their work with their own students.

I intentionally sought out interviews with teachers who were able to provide a diverse and representative sample of Ontario outdoor educators in terms of the location and setting of the program, age and background of the children, and background and training of the teacher. During the interviews, I worked to develop a deeper understanding of how the educators are integrating the aims of the Forest School movement into their classrooms, both in relationship to the Ontario curriculum and in relationship to their individual understandings of the aims of Forest Schools. Finally, I sought information on what supports they felt they need most to continue conducting this work. As detailed by Trisha Maynard who conducted a similar exploration of the Forest School movement in Great Britain, I audio recorded each interview, transcribed, and analyzed the
data (Maynard, 2007, p.3). In terms of analysis, I attempted to identify, reflect on, and interpret the commonalities, differences, and emergent themes from the data while also respecting the individual teacher's voices and their unique perspectives by providing a platform for dispersion and dialogue. As described in Maynard’s study, "Ultimately, it was concluded that while a comparison of key ideas relating to the aims and approach was possible, the meanings given to these, and the understandings about the Forest School ethos, were essentially owned by Lucy, Polly, and Mel; or rather, were my interpretations of their reality" (Maynard, 2007, p.322). It is with this spirit and understanding that I entered into these discussions and conducted my research. That is, I hoped to establish a balanced and equitable dynamic with the teachers who agreed to be interviewed, and kept in mind the privilege of being granted permission to do this work throughout the process.

1.4 Background of the Researcher

I was initially drawn to the subject of Forest Schools in my graduate research methods course when my professor told me about them after I expressed an interest in outdoor education. I had never even heard the phrase "Forest School", but after doing some preliminary investigation I was hooked. The idea of teaching outside, in all weather, and being able to connect with students in this setting appealed to me greatly. As a child growing up outside of Chicago, in a not particularly "outdoorsy" family, my experiences in nature were quite limited. It was not until I spent a summer working at a wilderness-oriented summer camp in Colorado during university that I truly fell in love with the outdoors. It was there that I first experienced camping and backpacking in the mountains, rock climbing on real rock faces, rafting, and even seeing the sky full of stars. I observed first-hand how the combination of natural beauty, vigorous activity and movement, challenges experienced as a team and alone, and a lack of external digital distractions allowed for
such growth in the individuals I worked with. I believe that the ways in which children build confidence in themselves are different and more enduring when given the opportunity to take risks and rely on themselves and be relied on by others. I also feel very strongly that getting through a sustained period of time spent in the wild cannot be directly recreated through experiences inside of a traditional classroom. The natural world intrinsically provides a landscape for children to explore, build, move, learn, and get truly excited. With a highly trained staff, mutual respect of boundaries, and trust between staff and children, I think safety and weather concerns are quite manageable.

When I think back to myself as a student, and the few times per week I was allowed to spend any amount of time outside, I cannot help but remember the gravitational pull I felt towards those moments. As a child with a general inability to sit still and difficulty paying attention for long stretches of time stuck in a desk, even if what we were learning interested me, time spent in class sometimes felt like agony. I think this experience is felt in some ways by all types of people and all types of learners. It surprises me that more educators are not heading outside with their classes. I firmly believe there is something to be said for allowing children to be outdoors during the academic day where they are not constantly being told to keep quiet, slow down, and stop making a mess.

As an educator, I believe it is my duty to explore innovative options, such as Forest Schools, with the potential to reach certain children who might be overlooked in traditional classrooms and empower educators alike. I do not believe this type of school or program is right for every student, teacher, or parent, nor do I think it is possible in every school, town, or district. However, I do think it is an interesting and powerful concept that deserves further exploration, and has a huge potential for growth and expansion. As an academic researcher, this topic is important
because not only are Forest Schools a relatively new and growing field of study in Canada, but it is the people involved and excited about this movement who will shape how many people get the opportunity to experience the benefits that Forest Schools can offer.

1.5 Overview

Chapter 1 includes the introduction and purpose of the study, the research questions, as well as how I came to be involved in this topic and study. Chapter 2 contains a review of the literature on this topic. Chapter 3 provides the methodology and procedures used in this study including information about the participants, data collection instruments, and limitations of the study. Chapter 4 identifies the research participants and describes the data as it addresses the research questions, including the themes that emerged. Chapter 5 includes what was learned, insights, recommendations for practice, further study, and the limitations of the study. References and a list of appendices follow at the end.

Chapter 2: LITERATURE REVIEW

For the purposes of this research study, the topics examined in this literature review will address the definition of Forest School, the ethos and guiding principles, the positive effects of Forest School, critiques of Forest School, Forest School and its relationship to school curriculums, the contemporary Canadian Forest School movement, and lastly, the problems with Forest School research and need for targeted future studies. These sections will highlight both academic research studies as well as more recent media coverage to hopefully provide a broad scope of perspectives.

2.0 Defining Forest School

Before we can effectively discuss and critique the literature on Forest Schools, it is important to first define and establish terms. What exactly is a "Forest School"? Forest Schools can and do exist in many forms (full-day vs. half-day, once a week vs. once a month),
geographical areas (United Kingdom, Scandinavia, United States of America, Australia, and Canada), and settings (farms, forests, beaches, parks, and conservation sites). The defining features of the Forest School approach can be adapted from in many ways, but most researchers seem to agree that a Forest School must include students having regular, repeated, and extended access to nature in all types of weather, rich, hands-on learning experiences, and high adult to child ratios (Davis, Rea, & Waite, 2006; Elliott, 2014; MacEachren, 2013; Murray & O'Brien, 2005; O'Brien, 2009; Slade, Lowery, & Bland, 2013). In a Forest School, children learn both in and from nature (MacEachren, 2013). For the purposes of this research study, I will be adopting the following definition: “Forest School is an inspirational process that offers all ages regular opportunities to achieve and develop confidence through hands-on learning in a woodland environment” (Murray & O'Brien, 2005, p. 11).

2.1 Ethos and Guiding Principles of Forest School

After establishing a common definition, many researchers in this area have also discovered and written about emerging principles and recurrent themes that underlie the Forest School ethos. In Davis, Rea, and Waite's qualitative case study, with 59 participants between the ages of three and five, of both a Forest School program and a residential outdoor education centre in England, researchers described the emergent principles as "The Forest School aims to build on an individual's innate motivation and positive attitude to learning, to offer children opportunities to take risks and make choices and to initiate learning for themselves" (2006, p.5). However, the researchers also found that amongst practitioners in their study there was sometimes a lack of agreement on the prevailing pedagogy to follow and some disagreement over the best way to implement Forest School principles in daily practice (Davis, Rea, & Waite, 2006). Another study found that the primary aims of Forest School related to children's personal,
social, and emotional development. Practitioners stated that attending a Forest School should help develop self-esteem, confidence, and independence in children first and foremost (Maynard, 2007). These aims differentiate Forest Schools from other forms of outdoor education in that it is an explicit goal to help nurture and support children's self-esteem through building confidence and independence and in doing so encourage them to feel and recognize their own self-worth (Maynard, 2007). The limitations in this study, openly acknowledged by the author, are in the nature of the research design wherein only three practitioner's opinions and insights are considered.

Another important principle of Forest School is child-led learning and learning by doing. Practitioners aim to tailor their curriculum to the child's interest and learning style rather than the other way around (Maynard, 2007). Child-led learning also means that adults attempt to limit their interference when a child is attempting to solve a problem and give them time and space to do so. The thinking goes that by viewing children as naturally capable, and emphasizing these innate strengths, Forest School practitioners are empowering children and helping them gain confidence in themselves (Maynard, 2007). This type of approach also promotes child reasoning and encourages children to actively make meaning when they solve their own problems (O'Brien, 2009).

2.2 Positive Effects of Forest School

There is an abundance of research regarding the positive effects and benefits Forest School has on children. In my review of the literature on this topic, I identified multiple themes that were revealed in many studies. For the purposes of this review, the following categories are the purported benefits of Forest School that I will focus on in this discussion: increased activity, improved attention, promotion of positive emotional feelings (competence, confidence, self-
esteem, and sense of purpose) through risk taking, improved opportunities for children with varying learning styles and children with exceptionalities, improved child-nature and teacher-child relationships, improved social and communication skills, and unique opportunities not available in the indoor classroom setting.

In O'Brien's (2009) study examining the Forest School approach in the United Kingdom, the author found eight themes of positive effects emerging from the data, including: increased self esteem and self confidence, improved social skills, increased knowledge and understanding, increased motivation and concentration, improved language and communication skills, improved physical skills, new perspectives of practitioners, and children taking their experiences home and discussing it with their families and friends (O'Brien, 2009). However, it is important to note that the changes observed in the children took place slowly and over an extended period of time and this must be considered when evaluating the benefits as well as when setting up programs in the future. The results of this participatory research case study, which evaluated the impacts of Forest Schools through interviews with multiple practitioners and an examination of twenty-four children from seven schools in the UK, are particularly relevant because it examined a group of children over an entire school year at Forest Schools rather than a group of children with sporadic and limited contact with nature (O'Brien 2009). In terms of limitations, there is potential for bias due to using the practitioners as data collectors as they may have had a more difficult time being objective in their observations. However, they also were more likely to notice more subtle changes in the children. An additional limitation was that no observations were carried out in the indoor classroom so no comparisons were able to be made. As a reader, it is hard to know if the changes that were observed were solely from the children's experiences in Forest School or whether they were the result of general improvement that comes with age and maturation. O'Brien herself is a
major player in the Forest School research world and the Forest School evaluation toolkit and methodology she has developed, as well as data she has gathered in the field, is well respected and often cited (O'Brien, 2009; Murray & O'Brien, 2005; Murray & O'Brien, 2006; Murray & O'Brien, 2007).

2.2.1 Increased Activity

In terms of increased activity level, Lindemann-Matthies and Knecht (2011), in their study of the benefits and challenges in forest education as perceived by 257 elementary teachers in Switzerland, they found that the teachers believed that the children's need for movement is particularly well met in the Forest School setting. The results of this study also noted that children developed increased motor skill ability and stamina (Lindemann-Matthies & Knecht, 2011). This finding was also observed in Murray & O'Brien's 2005 and 2007 study where children in the Forest School programs developed improved gross and fine motor skills through making objects and structures and increased their physical stamina by navigating rough terrain and having opportunities for free and easy movement (Murray & O'Brien, 2005; Murray & O'Brien, 2007). The point related to the importance of physical movement in a natural setting is mirrored in MacEachren's (2013) article whereby she highlights that movement on uneven terrain helps children develop subtle and sophisticated movements, better coordination, and better balance (MacEachren, 2013). Given the increased childhood obesity rates and limited outdoor contact many children now face, both in school and at home, opportunities to get outside and moving and develop some of these skills are more crucial than ever. Maynard (2007) also points out that not only is free movement important in relation to a child's physical development, but that the opportunity for a child to develop control over their bodies can translate into developing control
which will eventually allow them to sit and pay attention during indoor lessons and the fine motor skills to hold a pencil (Maynard, 2007).

2.2.2 Improved Attention

Another benefit of Forest School explored by a few researchers was the increased ability for children to remain focused in this type of setting. In the study conducted by Lindemann-Matthies & Knecht (2011) researchers noted that practitioners observed their students had increased concentration, longer attention spans, and a greater ability to deeply immerse themselves in games and play. This study did have some limitations in the self-selecting groups (the initial questionnaire was sent to 950 teachers) that were overwhelmingly women (gender bias) and that these teachers took their classes to the forest only five times per year on average. However, a significant finding in this study was that children were reported to be "more focused, social, and open when in the forest, and thus more able to gain knowledge (mentioned by more than 85% of the interviewees)" (Lindemann-Matthies & Knecht, 2011, p.159).

2.2.3 Promotion of Positive Emotional Feelings through Risk Taking

A qualitative case study by Elliott (2014) examined a group of staff from an inner city primary school in Yorkshire as they visited a Danish Forest school and then developed their own Forest school program in an urban environment. Researchers found that giving children the opportunity to take and negotiate appropriate risk in a Forest School setting can help them in developing resiliency and self confidence. These sentiments are mirrored in Maynard's 2007 study where researchers also noted that when children were able to take risks in the Forest School environment, they believed it would have an impact on the child's willingness to take risks in their learning in the classroom and in life (Maynard, 2007). To counter the idea that allowing children to take risks, even with the benefits, is too dangerous, staff in this study found that "The freedom,
competence, and capability of the Danish children only came about through careful, supervised instruction surrounding routines and boundaries, introduced through extensive adult support (Elliott, 2014, p. 4).

In a fascinating documentary about one Forest School in Switzerland, School's Out Lessons from a Forest Kindergarten, and the idea of giving children freedom to take risks and make choices came up multiple times (Richter & Molomot, 2013). Children in the program worked with Swiss knives, saws, hammers, and matches with some supervision and guidance from their teachers. The teachers implicitly trusted the children. They respected their capabilities, enforced the safety rules of the class, but otherwise tried to limit their intervention. Teachers and parents in the film discussed how these accomplishments gave the children a great deal of pride and confidence in themselves (Richter & Molomot, 2013).

2.2.4 Improved Opportunities for Children with Varying Learning Styles and Children with Exceptionalities

In conducting this review, I found several studies noting that outdoor learning, such as in a Forest School, has the potential to help a diverse group of children including those on the autism spectrum, children with emotional and behavioural difficulties, and children with learning disabilities (Murray & O'Brien, 2005; Murray & O'Brien, 2006; O'Brien, 2009; Roe & Aspinall, 2011). Children with exceptionalities may fare better in a Forest School setting because sound does not bounce off of the walls, students can more easily walk away and cool off, children can expend energy more easily, are less likely to get over-stimulated, and the natural sounds and natural colours that children are immersed in during Forest School may have a calming effect (MacEachren, 2013).
In terms of addressing multiple learning styles, both Maynard (2007) and Davis, Rea and Waite (2006) have found that in a Forest School setting practitioners have the potential to address multiple intelligences, such as kinaesthetic and naturalistic learners, who may not do as well in a mainstream classroom. Roe and Aspinall's (2011) study compared the psychological restorative outcomes for adolescents with varying behavioural states in an outdoor school setting versus a traditional indoor setting. The results indicated significant positive effects in mood in the Forest School setting, restorative effects on all emotional variables in both groups, and that the poor behaviour group benefitted most from time in Forest School (Roe & Aspinall, 2011).

2.2.5 Improved Child-Nature and Teacher-Child Relationships

Another important benefit of Forest School researchers have found is in terms of fostering an attachment with and respect for nature in children. This relationship and development of care and respect for nature was found in several studies (Lindemann-Matthies & Knecht, 2011; MacEachren, 2013; Murray & O'Brien, 2005). This finding is significant because as we enter into a time in our history where we are increasingly facing growing environmental problems, the more children we can teach to care for the environment from a young age, the more people we will have in the future invested in helping to solve these issues. The other relationship that seems to grow and develop particularly well in the Forest School setting is between practitioner and child. As O'Brien (2009) points out, teachers gain a new perspective on their students and often see them behave and interact in the forest differently than in the classroom. A practitioner in MacEachren's (2013) study stated "The social context created in an FS setting, which does not have the confinements of walls, offers a unique opportunity for interactions between nature and child, teacher and child, and classmates and child" (MacEachren, 2013, p. 227). Additionally, due to the
lower adult to child ratio, practitioners can provide students with more attention (Davis, Rea & Waite, 2006).

2.2.6 Improved Social and Communication Skills

"Much of the work and activity that takes place at Forest School involves working with others" (O'Brien, 2009, p.50). In Forest School, social skills are heavily emphasized and necessary in order to be successful. Children are encouraged to work together to complete tasks, share materials, play without adult intervention, play by the rules constructed by the group, and relate positively to one another in their peer group (O'Brien, 2009). It is through these social experiences that students also gain an understanding of other people's personal space, learn to form new friendships, identify the strengths of others, negotiate with one another to achieve a larger task, practice communicating effectively in a group, and increase their awareness that their actions could have consequences on others (O'Brien, 2009).

Davis, Rea and Waite's (2006) case study of four Forest School programs in England with 59 participants between the ages of three and five, found that the most discourse and language development occurred during unstructured free play. Interestingly, and also unique to the forest setting, Murray and O'Brien (2005) posit that children in these programs may develop "more sophisticated uses of both written and spoken language prompted by their visual and sensory experiences at Forest School" (p.6). This is important as it implies that extended time spent in the Forest School setting specifically may allow for unique language and communication benefits not otherwise possible indoors.

2.2.7 Unique Opportunities Not Available in the Indoor Classroom Setting

In my review of the literature, it seems as though it is not a single factor that makes the Forest School approach a good fit for some children, but rather a combination of factors and
effects. One factor, as pointed out in Murray and O’Brien’s (2007) study is a more relaxed atmosphere. With more space outdoors, children can also experiment on a larger scale, have access to materials not available inside, and play freely without fear of admonishment for noise or messes (Maynard, 2007). To put these unique strengths succinctly, "Children in Forest School are encouraged to look at the world on three levels, the ground, at eye level, and the tree tops; a three dimensional outlook lacking in many classrooms. Forest school leaders also emphasize a fourth dimension, extended time, unavailable in timetabled lessons" (Davis, Rea & Waite, 2006, p.6). However, it is important to note that this setting is not a good fit for all children and not all children will benefit most from this type of approach.

It is within the context of these unique strengths and benefits demonstrated by several research studies that I enter into my own study. It is in the spirit of building off of the hard work and findings of the researchers before me that I feel confident in the positive benefits of Forest School that have been clearly proven and established. Given this, I feel the Forest School approach deserves to be explored further.

2.3 Critiques of Forest School

Teaching in a Forest School environment can present challenges in the areas of behavioural management, distraction, weather, and safety that not every teacher may have to address as directly if teaching in a typical indoor classroom environment. In terms of weather concerns, 84 percent of parents in one study indicated they were happy for their children to learn outdoors on a regular basis, whatever the weather (Elliott, 2014). Basically, with properly informed parents and properly prepared children weather is not typically seen as a huge issue in these schools. In fact, many children love to play freely in the rain and snow when given the chance and permission to do so. Safety is a concern in any type of classroom. Of course, in a
Forest School children have much more space, freedom to explore, and varying natural elements to contend with which brings along additional safety concerns. In one study conducted with primary school children on a forest site, there were some conflicting opinions amongst staff as to the relative safety of the site for the children with some teachers responding with more rules and restrictions and some feeling it was more important to allow the children to freely explore (Slade, Lowery, & Bland, 2013). In another study, some practitioners felt that it could also be more difficult to keep track of children in an uncontained area (Lindemann-Matthies & Knecht, 2011). However, the Swiss Forest School practitioners that viewed this as a challenge also felt that with clear rules and time this challenge could be dealt with effectively (Lindemann-Matthies & Knecht, 2011). Most interviewees also perceived it as a challenge that some students could become distracted from all of the stimuli in the forest setting around them (Lindemann-Matthies & Knecht, 2011). Additionally, the concern of the safety of children can be largely controlled for due to the higher than typical adult to child ratios in most programs. MacEachren (2013) also points out that with proper training, practitioners will learn how to operate these types of programs safely and distinguish risk from actual hazard, and thus have a better chance of effectively delivering the potential benefits.

Aside from safety concerns, some critics are not convinced that a child-led learning philosophy is beneficial to all children's' learning or that all young children will learn a great deal through unstructured play and limited adult intervention (Maynard, 2007). Even amongst staff members at Forest School programs, researchers have noted contentions in terms of how to balance child-led learning versus incorporating more direct academic instruction (Slade, Lowery & Bland, 2013). Some educators in the study felt that students need more guidance towards making progress in skill development and felt the time in the forest should relate more directly to
the work in the classroom while others felt this would go against the child-led learning ethos and freedom of the children (Slade, Lowery & Bland, 2013).

In one critique of Forest Schools in the U.K., one author believes the approach needs to be looked at with a critical eye due to the increasing popularity, commercialization of training programs, and what he feels is a lack of a philosophical base for the approach (Leather, 2013). The author also believes that some impacts of Forest School, such as increased self-esteem, have been overstated. While I would agree that in certain individual studies, the impacts can at times feel over-generalized, I would counter this argument by pointing out that every research study in this area I have read has found some evidence that children's self-esteem has improved with time spent in these programs. The author raises another fair critique when he states that play-based learning, learning in all weather, and allowing children to use tools is not an entirely new concept (Leather, 2013). This is again a fair point, but it should not discount the unique work Forest School practitioners are currently doing in our contemporary society where risk-aversion, over-scheduled children, and limited contact with nature is at an all time high.

2.4 Forest School and its Relationship to Curriculum

In evaluating how Forest Schools can effectively be adapted and implemented into the Canadian education landscape, the relationship between the Ministry of Education's curriculum and the work in these types of programs must be considered. As noted by MacEachren, "The defining feature is the emergent and play-based curriculum; I think it is fundamental to a FS and is what differentiates a FS from any other environmental program" (MacEachren, 2013, p.223). If the founder of Forest School Canada has identified a play-based curriculum in a natural setting as the differentiating factor of Forest Schools, the recent widespread implementation of the Full Day Kindergarten (FDK) program and play-based curriculum in Ontario could not have come at a
better time. Of course, in order to successfully implement this curriculum as an educator in a Forest School, you must have a very clear understanding of the way play-based learning in nature can and will unfold and how to use the emergent curriculum based on what occurs in class each day (MacEachren, 2013).

In Bentsen and Jensen's (2012) study, researchers point out that "inclusion of outdoor teaching in the written curriculum will give teachers explicit permission to practice it, and even place them under the obligation to do so" (p.214). This study surveyed 107 Danish udeskole or "outdoor school" teachers and explored curriculum integration and outdoor learning theories as well as examined the differences between best practices and actual practices (Bentsen & Jensen, 2012). Much like in Canada, it is largely up to the discretion of the individual teacher or school to take the students outdoors. Researchers found that udeskole activities were relatively sporadic, unplanned, and not practiced across all subjects and grade levels and suggests that more in-service training and teacher education could help to combat this problem (Bentsen & Jensen, 2012).

The aim of the study by Maynard and Waters (2007) was to see how educators at four traditional schools in Wales view using the outdoors as a part of their teaching. The study found that use of the outdoors was very limited and when the class did go outdoors the teachers generally allowed the children a limited amount of freedom and maintained their teacher directed learning approaches. This study is important because the findings indicate that even if use of the outdoors is approved or even promoted within a given curriculum, we need to critically evaluate how this time is being used. Additionally, teachers reported feeling a tension between pressures to meet curriculum expectations while incorporating play-based learning (Maynard & Waters, 2007). Support and encouragement of teaching in the natural world and the flexibility to do so by an updated curriculum document is certainly a positive step, but these documents do not
automatically change teaching philosophies and behaviours. We need to teach educators how to implement play based learning and explicitly teach the Forest School approach if we want to get the positive effects (Maynard & Waters, 2007). Evolving curriculums are opening the doors for more educators to teach outdoors, but are not necessarily providing enough direct guidance.

In another qualitative study evaluating the impact of a Forest School, an often-cited author provides a detailed chart of the activities children in Forest School engage in. Along with these activities there is a list of the benefits of each activity, and of particular interest to this study, a third column which lists "Mainstream Teacher Adaptations" for select activities (Davis & Waite, 2005). This study is of particular interest to my research as it provides concrete ideas and suggests to teachers interested in beginning to incorporate Forest School activities into their regular classrooms as well as provides additional evidence linking the potential of the Forest School approach to work within a national curriculum (Davis & Waite, 2005).

An interesting article in The Guardian discusses the Forest School movement in the U.K., and more specifically, provides a list of tips from John Cree, chair of the Forest School Association, on how teachers can incorporate curriculum into a Forest School approach. Cree suggests for Non-Forest Schools to start slowly by getting outdoors more and still keeping things mostly teacher led. After the teacher and children's comfort grows, he then suggests hiring teachers specifically trained as Forest School leaders to come and train at the school or remain as an in-house trainer (Ward, 2014).

Maynard argues "Further, as Forest School activities appear to span different areas of learning including language, literacy and communication skills (e.g. stories and rhymes about the forest), mathematical development (e.g. finding sticks as long as your arm and thicker than your thumb) and creative development (e.g. mixing colour palettes), it may be that one of the main
benefit of this approach for young children working within a statutory curriculum framework is that learning is embedded in meaningful and often real life activity" (p.326). This point is supported by Murray & O'Brien's claim that the focus of Forest School is to embrace a broad concept of learning, one where learning is happening during all school activities (2007).

It is also important to consider and evaluate how educators can and do assess children's progress, academically and socially, in a Forest School setting. In Murray and O'Brien (2007), researchers note that Forest School provides regular opportunities for critical observation "of the ways that children take advantage of given freedoms (within a controlled setting) to express themselves physically and verbally" (p.263) In addition, "Forest school provides teachers and practitioners with a formal yet non-classroom oriented arena for the assessment of a child's abilities and progress towards academic and other developmental objectives" (p.262). These observations can certainly be very telling and provide many rich opportunities for assessment, but must also come with highly specific training in the Forest School approach, a deep understanding of the relevant curriculum, support from administration, and a dedication to a reflective practice.

2.5 The Contemporary Canadian Forest School Movement

One very recent and highly relevant qualitative case study conducted in Ontario explored the experiences of two educators as they piloted a nature-based preschool program in Northern Ontario (Welz, 2014). The study focused on the impact of this experience on the educators as well as the benefits and challenges they encountered while launching this program. The researcher is upfront about the limitations (short time period, data collection issues, and researcher effect) but also provides an in-depth explanation of the steps she took to mitigate these factors such as triangulating the data and ongoing reflection and implementation of changes as needed. The study found that the practitioners were able to meet their curriculum requirements within the context of
this program. As one practitioner put it, "This study has reinforced my belief that educators can deliver nature-based programs that provide rich, developmentally appropriate, learning environments that effectively meet the needs of young children" (Welz, 2014, p. 106-107). This study is also important because it points to the fact that Canadian Forest School programs are beginning to find their own identities and adapt from programs in other countries to fit the unique needs of the Canadian culture and students (Welz, 2014).

One recent article in Parents Canada magazine, which interviewed Marlene Powers of Forest School Canada, estimated that there is approximately 20-25 forest and nature pre-schools, over 10 programs in the public school system, and 25 more in the process of starting across Canada (Robbins, 2014). This article is also highly relevant because it emphasizes that in a country with endless nature, children in Canada are somehow still deprived of time outdoors. The article cites one study which found that 70 percent of Canadian children spend under one hour per day outside (Robbins, 2014). This suggests that nature-based programs in Canada are coming at a very crucial time.

Although research being conducted on Canadian Forest Schools is just beginning, media coverage of the growing number of Forest School programs that are opening each year is gaining momentum. The first official Forest School program, Carp Ridge Forest Preschool, founded by Marlene Powers of the Forest School Canada organization, began in Ottawa, Ontario in 2008 ("Canada's First Forest Preschool to Launch in Ottawa Valley," 2008). CBC News did a segment on the Cloudberry Forest School in Newfoundland and Labrador which was founded by two teachers who felt kids were not getting enough opportunities outside and noticed kids losing touch with nature (Here and Now, 2013). TírnanÓg, Atlantic Canada's first certified Forest School, was
launched in Roachville, New Brunswick in 2013 and preschoolers at this school spend 85% of their days outdoors year round (Smith, 2013).

Another article from The Star explores whether Forest Schools in Canada have real staying power. The reporter, Andrea Gordon, discusses Sangster Elementary in Colwood, B.C. which launched its joyous Nature Kindergarten two years ago with 21 students in the nearby coastal forest and shoreline. Additionally, the Guelph Outdoor Preschool in Ontario has fully adopted the Forest School philosophy and Equinox Holistic Alternative School, a public TDSB program, has been modelling their outdoor kindergarten after Forest School principles in an urban area for the past four years (Gordon, 2013).

Grade 1 students at Hillcrest Public School in Barrie, Ontario, of the Simcoe County District School board, are also having a chance to participate in an outdoor classroom and the district is planning on building outdoor classrooms in all 85 of its schools (Alphonso, 2013). The Sooke School District in British Columbia has also launched an outdoor kindergarten program at Sangster Elementary School. If this program continues to be successful, the article reports that the Victoria School District may also have approval to build additional outdoor kindergarten classroom programs (Alphonso, 2013). At one Winnipeg, Manitoba daycare, Seven Oaks Child Daycare Centre, educators have begun offering a weekly Forest School program. This is not yet a routine offering at most daycares and preschools in Winnipeg, but the director has already seen the benefits in her students, stating, "At the beginning they'd run, fall, and look to an adult for help. Now they run, fall and stand up and brush themselves off, and keep going. So as adults, we've had to stand back a little bit" (Hendricks, 2014).
2.6 Weaknesses in Research and Identified Areas for Future Study

In general, I have noticed in my review of the literature that many studies conducted in this area have weaknesses in the area of small sample sizes, self-selecting participants, gender biases, limited geographic areas, short-term evaluations, and biased questioning. Many researchers continue to ask their participants "What are the positive impacts of Forest School?" rather than simply "What are the impacts of Forest School?" This distinction is important in terms of objectivity and in terms of needing to push the research forward. Continuing to establish and re-establish the benefits of Forest School (which I feel has been sufficiently accomplished) is stalling the progress of research in this area in my opinion. It is time for researchers to move on and begin identifying the challenges of working with children in this setting and begin to develop strategies to successfully implement curriculum, raise awareness, and mitigate the negative impacts that may exist. However, to be fair, Murray and O'Brien (2005) provide an excellent explanation for why they have decided to seek out positive impacts in their work. They stated, "Whilst acknowledging that learning for practitioners comes also from analysis of where things have gone wrong, this appreciative approach provides a way to challenge our usual emphasis on searching out problems, which can sometimes stifle our ability to see beyond them to the better world we are trying to create" (Murray & O'Brien, 2005, p.4). The more objective, long-term, and external research that is conducted in this area the more reliable the claims of the positive impacts will become.

Forest School in general is increasing in popularity in some areas, but it has still been the subject of limited research, mostly small scale evaluative studies and case studies. Forest School has the potential to be a rich research area as it is particularly well suited for qualitative research because "The principle of self-evaluation within Forest School practitioners is strong; reflective debriefs are held after each session by staff to review and plan future sessions" (Davis, Rea &
Waite, 2006, p. 5). Murray and O'Brien (2005) recommend practitioners take this a step further and engage in a regular and rigorous self-appraisal process to ensure that day to day lessons are improving and viewed critically as well as providing a built-in method for future researchers to study and track the students' progress. If critical self-evaluation and observation become standard practice for all Forest School practitioners, research can build and continue at an even faster and more accurate pace (Murray & O'Brien, 2005).

Another problem in the area of Forest School research is a lack of longitudinal studies and a need for more research that carries on after children complete their Forest School experiences (Murray & O'Brien, 2005). Additionally, there needs to be more studies that observe children in other settings to try to tease apart where specific benefits are coming from (O'Brien, 2009). More research also needs to be conducted on the benefits of Forest School in relation to children's academic success, such as the relationship to literacy and numeracy competence, after children attend Forest school. This could help combat some of the skepticism certain parents feel in sending their child to a Forest School program and help to assure them their children would not be losing out academically or be ill-prepared to fare in an increasingly technology-obsessed world (Barkham, 2014).

More evidence in general would allow for better training of practitioners, more awareness, and potentially more support for these types of programs in public school districts. This type of training could perhaps be more widely incorporated into teacher education programs, in-service trainings of current teachers, or in the form of additional support and training for current Forest School practitioners by more experienced leaders. In terms of training, in the U.K. educators can obtain Forest School training from entry level to level 3. The highest trained individuals are then accredited and qualified to operate their own Forest School (Murray & O'Brien, 2006). In terms of
increased training opportunities in Canada, the Forest School Canada organization is helping to solidify and spread the Forest School movement throughout Canada by offering practitioner courses for the second year, beginning in the summer of 2015. This will allow Canadian educators who choose to participate an opportunity to become certified Forest School practitioners and both teach in or start their own programs in Canada (MacEachren, 2013).

As I have discussed in this literature review, there is still a lack of research addressing Forest School specifically in the Canadian context and evaluating how the vision and intentions of Forest School practitioners match up with actual practice. Curriculum-based outdoor learning has begun to receive more attention from researchers, the media, policy makers, educators, and parents. This current study will explore one particular type of outdoor learning, Forest Schools, in one specific country, Canada. This present paper aims to describe and explore the Forest School movement as it exists in Canada, which has been a largely grassroots initiative, through conversations with actual Forest School practitioners in Ontario. It is from these conversations that I hope to fill some of the gaps in the literature and begin to address the following research questions: How can teachers integrate the aims of the Forest School's movement into Ontario elementary school classrooms? Are the aims of the Forest School's movement appropriate and achievable in the context of the Ontario Curriculum? How are teachers implementing the aims of the Forest School's movement into their classrooms? And finally, what supports do teachers need to fully implement the aims of the Forest School's movement into their classrooms?

Chapter 3: METHODOLOGY

3.0 Procedure

In this qualitative research study, I conducted a case study with two Ontario educators whose work with students reflects the guiding principles and defining characteristics of the Forest School movement. This chapter outlines the research methodology that was used in the study. The
first method I implemented was conducting a literature review on the topic of Forest Schools and learning about the history of the movement, defining characteristics, relative benefits and challenges for children attending these programs, and curriculum connections. After reviewing the literature and developing my own research questions, I decided to focus on the unique characteristics of the newly developing Forest School movement in Canada. In addition to my review of academic studies, I also read multiple news stories and magazine articles on the topic, watched a documentary, and informally visited a Forest School in Ontario prior to conducting any interviews.

In order to assess how Canadian Forest School educators are enacting the principles of Forest School in their own classrooms and begin to answer my questions, I conducted two semi-structured interviews. My first interview was conducted with an educator currently running her own Forest School kindergarten program with children ages 2-5 about an hour north of Toronto. My second interview was conducted with an Ontario educator working with students ages 4-18 in an urban outdoor education centre where students from all over the Greater Toronto Area visit daily for nature-based field trips. In this research, I chose to use a qualitative case study model because I felt using this model and conducting interviews with experienced educators would be the most effective method to answer my research questions and get a good sense of the attitudes and practices of educators participating in my study.

Additionally, in my review of the literature, the case study method was the most commonly and effectively used model for exploring the work being done in Forest Schools and similar settings and connecting with educators in the field. As exemplified by the research of Coe, Maynard, Murray & O'Brien, and Welz, who also case conducted studies in this research area in both Canada and the United Kingdom, I was provided with excellent examples of multiple case
studies with similar structures and research questions after which I was able to model my own study (Coe, 2013; Maynard, 2007; Murray & O'Brien, 2006; Welz, 2014). In particular, a qualitative case study conducted in Ontario which explored the experiences of two educators and their perspectives on the relative challenges of curriculum integration and programming is particularly relevant to my study in terms of geography, sample size, research questions, and study structure (Welz, 2014). Similarly, in a study by Heather Coe (2013), the researcher conducted a small case study of four children in a nature-based Forest School program in Ontario and investigated the effects on the children. Interviews and informal discussion were conducted with the teacher and children (Coe, 2013). In following in the footsteps of these researchers and others, I was able to model parts of my study and also look to these important and relevant works for guidance in how to implement best practices in my interviews and data collection as well as validate my data and findings.

As previously mentioned, this exploratory case study aims to begin to provide insights into both some ways in which Ontario educators are implementing the principles of Forest Schools into their programs, but also how they can be further supported to continue this type of programming in the future. These interviews were conducted both in-person and over email, were approximately 30-45 minutes long, and scheduled at a time that was convenient for both participants. The interviews were audio recorded, transcribed, and analyzed. I asked each participant a list of approximately fifteen questions, with a few follow-up questions as needed. After the interview, I thanked participants for their time and insights as well as sent a follow-up thank you note to show my appreciation.
3.1 Instruments of Data Collection

In order to answer my main research question, *How can teachers integrate the aims of the Forest School's movement into Ontario elementary school classrooms?*, I set out to ask questions that would elicit responses as to how my three participants were already working to integrate these aims in their programs and where they felt they could be better supported. After asking a few questions to establish the background information of each educator, I then moved into three subsequent sections of questions related to: curriculum integration, a typical day in their program, and ideas for further support and improvement of practice. I organized the interview question sections by topic and by which sub-question I was seeking to answer. This division of questions into sections, each with its own focus, also assisted in my post-interview analyses.

In terms of developing specific questions, I looked to studies in my literature review with similar research questions to identify possible ways to phrase and order my questions as well generate ideas for specific questions I could ask. Murray & O’Brien (2007, p.257) provided a checklist of suggested data to collect about each Forest School site which I looked to in developing section one of my questions. Bentsen & Jensen (2012) asked their teacher participants to indicate how much time they spent on different activities both related and unrelated to curriculum as well as specific questions about which subjects and themes from the curriculum they incorporated into their daily plans. This study was particularly helpful in the development of my section 2 interview questions. While reviewing Lindemann-Matthies & Knecht's 2011 study, I noted the importance of asking the educators themselves, those who are in the field each day working with children in an outdoor setting, for their input on how these educators could be better supported. These questions helped me shape my section four questions. For a full list of my questions, see Appendix B.
3.2 Participants

For this study, I interviewed two educators working in Forest Schools in Ontario and/or nature based programs with an emphasis on following the principles of Forest School. Participants were recruited through reaching out to several outdoor-education focused organizations I have volunteered with or learned about through my research, as well as through suggestions and introductions made by professors I have worked with. I also contacted the founder of the Forest School Canada organization and posted in the group's associated Facebook group, which many Ontario based Forest School educators use to connect with one another. Participants were selected based on their current engagement and direct experiences working in Forest School or related programs, related background and training, willingness to participate, and overall knowledge and expertise on the subject. As it was my aim to develop a deeper understanding of how these educators are integrating the aims of the Forest School movement into their programs, both in relationship to the Ontario curriculum and in relationship to their individual understandings of the aims of Forest Schools, I attempted to select participants who would provide a diverse sample of Ontario Forest School educators. In order to answer my research questions, I also sought to interview individuals interested in discussing the emerging Forest School movement in Ontario and their individual roles, as well as an interest in reflecting on their personal beliefs and practices.

3.3 Data Collection and Analysis

My primary means of data collection was through semi-structured interviews (see Appendix B for Interview Questions). In conducting these interviews I sought to investigate specific aspects of how the participating educators understood and implemented the principles of Forest School into their programming, made connections to the Ontario curriculum, and could be better
supported in their endeavours. The data gathered through these interviews allowed me to explore and answer my research questions by giving me the opportunity to gain multiple perspectives to specific questions I developed after reviewing the literature. The semi-structured format in particular allowed me to ask both targeted and more open-ended questions which left room for interesting topics to naturally unfold over the course of the interviews. Shortly after completion of the interviews, I transcribed the data and began the analysis process.

After transcribing the interviews, I read each interview completely through for the first time without making any notations. During the second reading, I began to make preliminary notes in the column and began to highlight and underline recurrent themes and patterns. In my third and later readings, I began to make connections between my findings and the literature, connections and comparisons between the various interviews, pull interesting statements, and formulate answers to some of my research questions. I also then organized and classified my notes into a chart, highlighted segments by theme, and used this document to assist in making connections. In trying to find meaning from the data and identify larger emergent themes, I took regular breaks from my work and reflected after each reading. After fully analyzing the data for recurring patterns and creating an organized document classified by theme, I began to prepare my findings from the data into writing and developed the conclusions and implications my data suggested into ideas for future studies and further questions that need exploring. I also analyzed the changes I would implement in future work and the limitations this study presents. In this process of analysing the data, three major themes emerged. I discussed these themes further in chapter 4 and used a combination of paraphrasing and direct quotation from my interviews to illustrate these points further. In choosing these quotations and phrasing my findings, I was mindful of
respecting each individual educator's unique voice and honouring what they shared with me in our conversations.

3.4 Ethical Review Procedures

In conducting my research, I followed the approved ethics protocol set forth by the Master of Teaching program. As per the approved procedure, all participants I recruited were adults who voluntarily agreed to participate in my study. All participants were recruited directly by me via email or phone and given an overview of my study and aims to assess whether they were comfortable participating and met the basic criterion I was looking for. All participants were given my contact information, my advisor's contact information, and a letter of informed consents (see Appendix A) and required to sign and review it prior to the interview. Participants were also given all of the necessary information about content, confidentiality, dissemination, and optional anonymity. I explained I would securely control access to their data at all times, and would only share it with my advisor as needed through the drafting process. I explained I worked to ensure all participants were completely comfortable and willing to participate before and during each interview. I reminded each participant that their involvement in this study was completely voluntary and that they could refrain from answering any question, stop at any time, have an opportunity to review and revise their answers, and always retained the option to drop out of the study at any point. Procedures laid out in the informed consent were not modified at any point during the study. Each interview was set up to accommodate the interviewee's schedule, preferences, and comfort level and was conducted either in-person or over email with follow-up questions and clarification as needed.

3.5 Limitations
The primary limitation of this research project was in the small sample size. The participants in my study were also a non-representative sample of all Forest School educators as my sample was made up of only two educators in one region of Ontario. The number and type of participants in my study does limit my ability to make broad generalizations based on my findings, however, the information I have gathered here still has the potential to contribute to further awareness of the Forest School Movement in Ontario as well as provide suggestions and questions for the future research of others on this topic. Additionally, given the goals of this research project, to explore Ontario Forest School teachers’ perspectives and practices, this sample size seems like a suitable jumping off point. Another limitation of this study was the amount of time and questions I was able to ask each participant. Due to time constraints and the parameters of this research project, I recognize many areas were left unexplored or only discussed briefly. However, in formulating my questions and conducting each interview, I tried my best to ask questions that would provide the most insight and satisfy my main research questions. In order to derive the highest level of clarity from my interview data, I also checked with all participants to ensure that upon reviewing the transcripts their words and intentions were not misconstrued and followed up whenever I was unclear about something they had said.

In terms of the limitations of my literature review, I chose resources selectively that I felt were most relevant and appropriate to the scope of this project. I was mindful of trying to include a diverse array of current resources including journal articles, books, videos, and magazine articles but of course could not include all perspectives and coverage of this topic. As research on this topic grows, specifically in Canada, there will be more opportunities for myself and others to conduct future research and more inclusive literature reviews.
Finally, in considering the limitations of any qualitative study it is important to note that there is always potential for bias on the part of the researcher and participant in both the questions and collected responses. As a researcher, I worked to mitigate these potential biases by remaining as objective as possible in drawing my conclusions, openly acknowledging the limitations of this study, and recognizing and honouring that no study or person's perspective can ever be completely free from bias. However, it is equally important to note that there is always something we can learn if we listen carefully and think critically. In this way, this project has helped me to acquire additional research and critical thinking skills, such as the ability to formulate good questions and critically analyse data, which will surely serve me in my future as a teacher and researcher.

Chapter 4: RESEARCH FINDINGS

4.0 Introduction

In this chapter, I report my research findings after conducting two interviews. The first interview was with an Ontario teacher and curriculum planner who works for an outdoor education centre. The centre is not a traditional classroom, and not strictly a Forest School, but the nature-based programming focuses on and overlaps with many of the Forest School approaches and uses the Ontario curriculum as a framework. The second interview was with an Ontario teacher who currently independently runs her own Forest Kindergarten program. Both interviews were conducted in the first few months of the school year (i.e., September and October).

In the analysis of data from both interviews, I have identified and organized my findings according to three overarching themes: (1) participants emphasized the value and benefits of unstructured, child-directed outdoor time and exploration; (2) participants discussed the utility of holistic assessment; and (3) participants stressed the importance of further funding opportunities to
integrate more training and quality programming. Through the interviews and discussions with both educators, several important underlying themes and ideas emerged as well, which will be discussed in greater detail in the sections below.

4.1 Theme 1: Participants emphasized the value and benefits of unstructured, child-directed outdoor time and exploration.

In discussing the daily routine of their students and in identifying the practical ways all Ontario educators could incorporate elements of Forest School into their days, both of my participants spoke about the importance of giving children quality time outdoors. Both participants also emphasized that building this outdoor time into each day is a practical thing all teachers can do, but that it is the most valuable when the time is unstructured and child-directed. Child-directed learning is the process of teachers tailoring their curriculum to the child's interests and learning styles and limiting adult interference (Maynard, 2007). This type of child-directed learning is supported by several studies discussed in chapter two, including Maynard's study (2007) whereby researchers found this type of learning creates space for children to explore, develop confidence, and learn to love learning. Additionally, the importance of this type of learning is also discussed and supported by the study conducted by Davis, Rea, & Waite (2006) where the process was described as follows, "There is no syllabus, but through observation and awareness of different learning styles leaders adopt an intuitive approach, encouraging children to use all their senses to appreciate nature. Play, in particular, offers a means to engage holistically" (Davis, Rea, & Waite, 2006).

In terms of practical advice, put succinctly, participant B stated "Go outside. Take your kids outside." Participant A spoke about teachers understanding the deep benefits of this time being more likely and willing to incorporate it and said "Just getting kids out and able to do child-
directed learning in any environment would be fantastic. If educators are more understanding of what the students are gaining they are more willing to advocate for it in their school." The finding about the importance of unstructured time freedom to explore and experiment is consistent with the findings of Maynard's (2007) study in which researchers found that the outdoors present a unique opportunity not available inside because with more space outdoors, children can experiment on a larger scale, have access to materials not available inside, and play freely without fear of admonishment for noise or messes (Maynard, 2007). Maynard also found the following overall enriching benefits of unstructured time outdoors:

That said, allowing children the freedom to explore, move around and play in a rich, stimulating and flexible natural environment; emphasizing a practical, hands-on approach to learning; providing children with progressively more challenging tasks at which they are likely to succeed; encouraging them to take appropriate risks; and demonstrating that they are viewed as strong and capable, are all likely to have a positive impact on children's self-confidence and sense of independence and, to a lesser extent, on their self-esteem. Involvement in Forest School may also be beneficial for children's health and physical development, strengthen positive dispositions towards learning and aid the development of democratic life skills (2007).

I found that what this unstructured and/or child-directed outdoor time can look like was flexible and slightly different among my participants, but can suit the needs of many programs. For example, both of my participants cited the importance of immediate immersion in nature upon their students' arrival each day. This time allows the children a given time to explore and take in the sites around them. Beyond this initial immersion, both participants incorporate unstructured outdoor time in different ways and at different times. Participant A largely
incorporates unstructured outdoor time throughout the day and for all subjects. After her students arrive and become immersed in nature, she leaves this time open and child-directed and does not structure whether or not the children will move on or when they will move on to another area of the forest. She explained this part of the day as their opportunity to "either check in and continue with projects started previously or begin new ones. If they are engrossed they stay at that for the day, if they are not as engrossed we will decide on another camp to visit."

In terms of covering the curriculum, participant A cites an intrinsic trust that children will naturally move through many or most of the overall curriculum expectations over the course of a year without too much prompting and with limited adult inference. The importance of placing this trust in students and limiting adult interference during outdoor time was also cited and found to be effective in the Forest School documentary I watched as a part of my literature review where the narrator noted, "The teachers implicitly trusted the children. They enforced the safety rules of the class, but otherwise tried to limit their intervention and trusted the children's capabilities and natural curiosities" (Richter & Molomot, 2013). When I asked participant A if she found certain subjects more or less challenging to conduct or cover in an outdoor setting she stated,"No - the children naturally follow all areas of the curriculum. Most often they meet social development, emotional development, language, motor skills, and science and health goals (every day). Other areas are met when interest happens (at least once a month)."

In terms of structuring long-range plans in a more traditional classroom, this type of approach could present some challenges for many teachers. However, if this unstructured child-led time is incorporated in addition to more structured lessons, it could be feasible for a teacher to create a balanced classroom that incorporates the Forest School approach. As such, there was some disagreement over this topic among my participants in terms of the appropriate balance
between unstructured and child-led learning versus structured lessons in terms of covering the curriculum expectations. This difference in opinion and philosophy in terms of how to balance child-led learning versus incorporating more direct academic instruction was also found amongst Forest School educators in another study as well (Slade, Lowery & Bland, 2013). Similarly to the findings in this study, some educators in the Slade, Lowery and Bland study felt that students need more guidance towards making progress in skill development and felt the time in the forest should relate more directly to the work in the classroom while others felt this would go against the child-led learning ethos and freedom of the (2013).

Participant B spoke to this when discussing her programming approach in terms of incorporating the curriculum. For some subjects, she felt a more unstructured approach is more easily accomplishable, such as physical education "With physical education we are doing a lot of things with the kids, especially when they are climbing or carrying large sticks, it is sort of that physical component that they don't get in a gymnasium or in a school yard." As well as Science, in which many curriculum connections can be made through hands-on learning tasks, such as engaging in structure or shelter building. Participant B described one example of by stating "We find ways to connect shelter building to the curriculum all the way through grade 6 [...] We base a lot of our learning on loose parts, this is logs and sticks and hay and all different sorts of plants you can build or weave or construct with." According to researchers Murray and O'Brien, working with loose parts to build structures is not only fun and engaging for students, but it also can help children develop improved gross and fine motor skills (Murray & O'Brien, 2005; Murray & O'Brien, 2007).

Additionally, participant B spoke about having access to a large compost system and green space where children can observe decomposing leaves and decomposers in action as a part
of the Science curriculum. In terms of overarching themes and connections to nature in teaching Science, Participant B stated that "we find that that model of starting small and then working our way back to your impact really works for all of those curriculum connections."

Beyond Science and Physical Education, participant B cited that Math presented the biggest challenge of explicitly teaching in an outdoor setting in an unstructured way because a student may never directly inquire about concept and/or it may be difficult to achieve more generally in this setting. Participant B also noted "It becomes more difficult as kids are doing more complicated math [...] that is something we are working on now and that is to develop a stronger math program."

Identifying this first theme from the data is particularly relevant in terms of my main research question because incorporating unstructured outdoor time is the easiest way all Ontario teachers can incorporate some of the aims of Forest School into their daily routine as well as partially or fully cover many of the curriculum expectations. The significance of these findings, given the state of the existing research, is exciting as the idea that unstructured outdoor play is important for all students is supported by the research. Additionally, the finding that both educators I interviewed are having success in incorporating several curriculum expectations into this outdoor time is encouraging because it can potentially give some teachers the push to experiment with this type of learning. However, caution should be exercised in generalizing the results of this study as the data is based on discussions with only two educators and their opinions are not representative of all Ontario Educators or Forest School teachers in the province.
4.2 Theme 2: Participants discussed the utility of holistic assessment.

The second theme that emerged over the course of both interviews was the importance and usefulness of holistic assessment. Both participants discussed the importance of assessing students learning through informal and formal observation, reflection, and project-based learning. For the purposes of this discussion, it is important to note that assessment was discussed by both educators in terms of student growth in not only specific curriculum areas but also in terms of personal development and general skill areas (i.e. self-esteem, connection to nature, interest in learning, working as a team, self-control, and observation skills). This ties in closely with what prior research has identified as the overall aims and ideals of Forest School, which tend to focus more largely on a child's holistic growth both academically, socially, physically, and emotionally. Researchers in one study found that the primary aims of Forest School related to children's personal, social, and emotional development and that attending a Forest School should help develop self-esteem, confidence, and independence in children first and foremost (Maynard, 2007).

When discussing how she integrated assessment for and of learning into her Forest School, participant A spoke of her system of assessing the children once per week using various measures, "We usually reach 95-110 goals a week[...] We use the Ontario kindergarten curriculum, play theories (one from Parten, one from Smilansky and one from Smith and Pellegrini). We will also be adding play schemes this fall." This finding is of particular importance because participant A's Forest Kindergarten program is run entirely outdoors and is highly child-directed and unstructured, and yet she is still able to assess her students consistently using the Ontario Curriculum as a guide. This may suggest that it could in fact be feasible for more Ontario teachers to incorporate elements of Forest Schools into their daily classrooms and still meet their
assessment and reporting requirements. This finding is also supported by some emerging research on the topic. In Murray and O'Brien (2007), researchers note that Forest School provides regular opportunities for critical observation "of the ways that children take advantage of given freedoms (within a controlled setting) to express themselves physically and verbally" (p.263) In addition, "Forest school provides teachers and practitioners with a formal yet non-classroom oriented arena for the assessment of a child's abilities and progress towards academic and other developmental objectives" (p.262). These observations can certainly be very telling and provide many rich opportunities for assessment, but must also come with highly specific training in the Forest School approach, a deep understanding of the relevant curriculum, support from administration, and a dedication to a reflective practice. This finding is also important to note because participant A is both incorporating the elements of the Ontario curriculum and assessing the child holistically. These elements do not need to be mutually exclusive.

Participant A also touched another important element of assessing children from a more holistic standpoint when she spoke about the importance of reflecting with her students at the beginning and end of the day. This gives participant A information about what her students are curious about, interested in, and an opportunity to correct any misunderstandings about a particular concept while also building community. Participant A then turns to child-directed project-based learning as a way of allowing her students to explore new concepts: "Then they either check in and continue with projects started previously or begin new ones. If they are engrossed they stay at that for the day if they are not as engrossed we will decide on another camp to visit." The importance of project-based learning and assessment was brought up as a natural way of integrating a child's natural interest with a useful method of assessment for the teacher. As the day proceeds, participant A is also watching each child closely and observing what they are
engrossed in, how they are progressing, and allowing for plenty of trial and error on the child's part. At the end of the day, the group comes back for a gathering, or assembles if still on site, and debriefs about their day and the children share what projects they have been working on.

Participant B also integrates this type of reflection and sharing in the closing of each her program's days as well and stated, "Then at the end we usually have a discussion about what did you learn today, what are you going to do back at your school now that you see what we have done here." This sharing with the teacher and with one another is an important time to strengthen understanding of concepts, make further connections, and is another example of a time for teachers to be informally observing or taking notes in order to build a holistic profile of each child's understanding when assessing them at a later time.

In speaking with Participant B about some of her program's approaches to assessment, she noted a similar affinity and encouragement of project-based learning and assessment as a way of clearly and fairly allowing children to demonstrate their knowledge. Participant B noted the utility of project-based assessment in charting incremental progress over the course of unit in a concrete way, "You can see changes from day one to day five and things they have learned and able to do. For example, build a shelter that is able to stand up whereas the first day I don't how to use these materials and I am uncomfortable with them, but by day five they're able to really build a strong and stable structure." Participant B also stated "Project-based learning in nature-based education is the way to go because it is really hard to just have a rubric where it's like "oh, they're demonstrating this skill..." but if it is an actual project that you can sort of dissect what they had to go through in the process to get there I think that that's probably the easiest way to assess it." In this way, both participants agreed that a focus on process and progress was more important than comparing children's final "products" to a standardized rubric. Participant B also emphasized a
further assessment piece comes when students share their projects with the group during a gallery walk and explain what they have constructed, and perhaps most importantly, explicitly share their thinking. This allows the teacher another opportunity to understand the student's understanding of a given concept and any misconceptions they may still hold.

In terms of the implications of my findings surrounding the theme of holistic and project-based assessment, they are consistent with the findings of other researchers who have studied the Forest School approach and also found holistic assessment and authentic tasks are more effective and meaningful in a child's learning. For example, Maynard argues:

Further, as Forest School activities appear to span different areas of learning including language, literacy and communication skills (e.g. stories and rhymes about the forest), mathematical development (e.g. finding sticks as long as your arm and thicker than your thumb) and creative development (e.g. mixing colour palettes), it may be that one of the main benefit of this approach for young children working within a statutory curriculum framework is that learning is embedded in meaningful and often real life activity (Maynard, 2007, p.326).

By providing children plenty of opportunities and time for project-based learning inspired by nature and their natural curiosity, authentic learning and assessment are occurring all the time in Forest School programs.

4.3 Theme 3: Participants stressed the importance of further funding opportunities to integrate more training and quality programming.

The final theme identified through analysis of the interviews, and one that came up multiple times, was the importance of further funding and training opportunities for educators so that they may continue to do this type of work and expand in the future. In speaking with
participant B, I learned that one of the major challenges she confronts in her work is that often
times funding is inconsistent, limited, and highly specific. Therefore, the people who run the
program cannot always use the money the way they would like. Participant B explained that often
times their organization will receive a donation, but the donor will specify which age group and
project it is to be used for, or require certain deliverables. She explains, "So that is a big challenge
with fundraising. A lot of the times the deliverables are so specific that it doesn't allow us to offer
what is most meaningful [...] It would be great to have open-ended funding, but that is what any
non for profit would say." This finding is important because it indicates the importance of open-
ended funding for these types of programs; where the educators can have more control over how
to allocate the funds to improve the nature-based programming. When I inquired further,
participant B explained that with more open-ended funding, her program could have the
opportunity to expand the curriculum, hire more educators, and offer the program to more
children. Participant B stated "So it is really important for us to have that money to develop new
curriculum, to have that sort of time and energy to develop more meaningful connections. We
have a good suite of programs but we always want to grow and are always hearing from teachers
about new things they want to do and we want to be able to provide that since we are one of the
only nature centres in the city." She also pointed out that transportation is often a barrier for
getting children to their centre, and therefore with additional funding, more children could be
brought to the site and exposed to nature. Participant B explained, "transportation would be huge
because students that live in the downtown core are able to access the TTC but if they live
somewhere like Markham or Richmond Hill or somewhere further afield where taking TTC
doesn't make that much sense then there is a financial barrier to getting here to afford a bus."
In contrast to Participant B who works for a non-profit organization that relies on philanthropy and corporate donations, participant A is independently running her own Forest Kindergarten and does not receive any donations or funding beyond tuition. After university, participant A sought out and paid for her own Forest School training in the United States before beginning her own program. When asked what supports she would find most helpful to continue to do the work she is doing, she responded, "Financial support would be awesome so I could get further training, possibly offer scholarships and make a decent wage (a lot of my work is unpaid)."

This statement reveals a lot of information, as participant A explained that with financial support she could not only receive more training and improve on and expand her skill set, but also provide more children the opportunity to take part in Forest School by offering scholarships. Much like her initial Forest School training, much of the work she does in her program today is unpaid and completed by participant A on a volunteer basis. This finding could possibly imply that if participant A and other educators were able to receive more consistent financial support from running these types of programs, more and more educators may consider beginning their own Forest School programs, and thus more children would have access. As participant A affirmed when discussing how to get more educators in Ontario involved in Forest School programming, she responded "Look at the teachers, EA's, etcetera as first stop - going from top down won't be as effective as inspiring the educators to start at the ground level and work up for changes."

4.4 Conclusion

Through my discussions with my two participants, I found that in respect to my main research question, how can teachers integrate the aims of the Forest School movement into their Ontario elementary school classrooms, the answer is far more complex and multi-layered than I initially envisioned. While both participants come from strong nature-based education
backgrounds and have a wealth of experience and knowledge on the topic, they varied slightly in some of their responses and reflections. There was however high levels of overlap in their joint beliefs that children need meaningful, plentiful, child-directed and unstructured time outdoors each day. This might look different in all classrooms, but the major takeaway for educators should be, as evidenced by both the sentiments shared by the participants as well as researchers on the topic, that adult intervention during these periods should be limited and thus give children plenty of opportunity to explore (Richter & Molomot, 2013). Both participants emphasized this as a key way to incorporate elements of Forest School into even the most traditional classroom. Further, it is important to emphasize that in terms of curriculum integration tying into this dedicated outdoor time, both participants stated that Physical Education, Science, and Language were the easiest subjects to integrate in an outdoor environment, with careful long-term planning all subjects have the potential to be incorporated.

In terms of my second major theme relating to holistic assessment in an outdoor education setting, this finding holds the most promise and potential for further exploration. As both participants emphasized: children deserve authentic, holistic assessment opportunities and time to explore subjects through project-based learning. Both educators also had a common dedication to teaching children in and about nature in meaningful and enriching environments were evident in their honest, thoughtful, and insightful responses. This holistic approach to assessment ties in to the primary aims of Forest School and related programs which aim to help children develop self-esteem, confidence, and independence in children first and foremost (Maynard, 2007). These ideals can and should hold true in both an outdoor and indoor classroom setting. Children should be given plentiful opportunities to express and demonstrate what they have learned and share their understandings in meaningful ways. The unique opportunity for holistic assessment presented in
the outdoor setting can potentially serve as a model for all assessment and push educators to think more creatively in how we evaluate our students. Meaningful inquiry-based lessons, opportunities for observation, and project-based and interest-driven assessments can be incorporated into all subjects and all environments.

The final major theme addressed in this chapter, and highlighted by both participants, is the need for ongoing and open-ended funding and financial support to support efforts to offer more outdoor education programming to more children, expand curriculums, and allow educators to pursue further training opportunities. In general, the research that has so far been conducted in this arena has found that Forest Schools and similar programs can have significant positive effects for children, but more work still needs to be done and more attention drawn to this area of education in order for more funding to become available. With more research-based evidence of the positive effects, and particularly, into the feasibility of incorporating Forest School elements into traditional public school classroom settings and connecting it directly to provincial curriculums, it is my hope that more support for these types of programs in public school districts will continue to occur.

The findings presented here will be further discussed and their significance highlighted in the following chapter as they are put into conversation with the existing literature. Additionally, chapter 5 will include further implications of this study in relation to myself as a teacher and researcher, recommendations for stakeholders, lingering research questions, and potential directions for future research.
Chapter 5: DISCUSSION

5.0 Introduction

The present study was designed to explore Forest Schools, and similarly inclined nature-based programs, in Ontario. Specifically, the study was conducted as an exploration to learn more about how educators working in these settings are integrating the aims of Forest Schools into their programs, integrating the Ontario curriculum, and how these programs could be better supported. The findings serve to support the current literature pertaining to Forest Schools and to specifically tell us more about specific ways all educators in Canada can integrate the aims of these programs into their own planning, assessment, and daily classrooms while still covering the curriculum. This chapter summarizes the research findings and highlights the present study’s implications for various stakeholders, such as, pre-service teacher programs, school districts, teachers, and researchers. Additionally, this chapter provides several recommendations and suggests directions for future research.

5.1 Overview of Key Findings

Following interviews with two outdoor educators working in programs that are integrating the aims of Forest Schools; a rigorous analysis revealed three important themes: (1) participants emphasized the value and benefits of unstructured, child-directed outdoor time and exploration; (2) participants discussed the utility of holistic assessment; and (3) participants stressed the importance of further funding opportunities to integrate more training and quality programming.

The first theme, participants emphasized the value and benefits of unstructured, child-directed outdoor time and exploration, served to remind us that all classroom teachers should work to incorporate quality outdoor time for their students into their daily schedules as the positive benefits of this time are significant and not directly replicable inside the classroom. This theme is
key in terms of practical application for teachers, because as emphasized by the findings of this and other studies, this suggestion can be flexible and suit the needs of many programs and classrooms in terms of how the individual educator determines the appropriate balance between child-led versus structured lesson plans should be conducted.

The second theme, participants discussed the utility of holistic assessment, touched on an important finding that not only were the participants in this study able to assess their students effectively using holistic and project-based assessment measures, but additionally, they were able to integrate many curriculum expectations and subject areas holistically into each student's learning with careful planning and/or trusting the students to naturally move through them over a longer course of time. This finding reminds educators that we need to work to give children plentiful opportunities to express and demonstrate what they know with a variety of authentic assessment opportunities.

Finally, the third theme, participants stressed the importance of further funding opportunities to integrate more training and quality programming, highlighted the need for more funding into these programs to provide greater access to a wider array of students, allow educators to seek out more training, and assist with creating more initiatives to develop different areas of their programming and continue to integrate more of the Ontario curriculum. This finding serves as a reminder that even with promising research continuing to develop in the area of Forest Schools, and established positive benefits for children, access and limited funding remains an issue. If only a limited amount of students can access these types of programs, and an even smaller fraction of educators have the training to run these types of programs or have a willingness to engage in this type of work in traditional classrooms, the benefits to students will be a missed opportunity.
5.2.1 Broad Implications

The present study has important implications for educational reform. In broad terms this study should serve as a reminder to administrators and curriculum planners that nature-based learning can have significant positive effects on student learning and growth when educators are well-trained and supported in this type of work. Consistent with the conclusions of multiple studies (Maynard 2007; O'Brien, 2009), the present study finds that child-directed or student-driven learning outdoors has an important role to play in our schools and has the potential to enrich student learning by increasing their independence, confidence, and overall interest in school. The study also provides insight into the issue of addressing students with varying learning styles, intelligences, and exceptionalities by finding that nature-based teaching can often more easily accommodate these students by providing more opportunities for interest-driven learning and holistic assessment opportunities. Both Maynard (2007) and Davis, Rea and Waite (2006) also found that in a Forest School setting educators have the potential to address multiple intelligences, such as kinaesthetic and naturalistic learners, who may not do as well in a mainstream classroom with more ease. Policymakers, administrators, and curriculum planners should take heed to these findings and consider expanding and supporting this type of programming because of their potential as another inclusive classroom environment suitable for many students. By supporting and funding these types of programs in publically-funded schools or outdoor education centres, or providing more funding for teachers to seek out training, more children will be able to gain access to the benefits of nature-based learning. In terms of pre-service teacher education programs, the findings of this study indicate that with more direct instruction and pre-service training opportunities in outdoor education and associated programming during school, educators may be more apt to take their students outdoors to engage in this type of learning throughout their careers.
5.2.2 Narrow Implications

The present study also has specific implications for me as a teacher and a researcher. In immersing myself in this topic, I have learned about the rich and diverse positive impacts taking students outside can have on their learning and overall development, including: increased activity, improved attention, promotion of positive emotional feelings (competence, confidence, self-esteem, and sense of purpose) through risk taking, improved opportunities for children with varying learning styles and children with exceptionalities, improved child-nature and teacher-child relationships, improved social and communication skills, and unique opportunities not available in the indoor classroom setting (O'Brien, 2009; Murray & O'Brien, 2005; Murray & O'Brien, 2006; Murray & O'Brien, 2007). These findings, as well as learning from the results of this present study, show that educators can and are finding ways of integrating many curriculum expectations and subject areas into outdoor classroom time. In practical terms, these findings will influence my future teaching practice because I feel confident that it is crucial to integrate quality, consistent, outdoor time into my teaching each day. If teachers prioritize this and plan carefully, all classroom teachers can provide their students with meaningful nature based learning opportunities. Prior to this study, I would have likely felt more hesitant to incorporate outdoor learning into my daily routine and teaching and felt as though it would be taking time away from more important learning. Engaging in this research has shown me that outdoor time can be just as full of learning as indoor classroom time.

Another implication of this present study on my teaching practice is that it serves as a reminder to focus on all aspects of my students' development both during lessons and during assessment. It can be all too simple to become overwhelmed by the hundreds of curriculum expectations, academic standards, and marking that teachers are responsible for covering. It is
important to remember that we as teachers must also focus on our students' holistic development. These aims are explicitly highlighted and taught to Forest School educators, in that it is an explicit goal to help nurture and support children's self-esteem through building confidence and independence, and can be applied to all classroom teachers' personal practices and philosophies. (Maynard, 2007).

My future practice as a teacher will be different as a result of what I have learned because I also now feel emboldened to engage in nature-based teaching because it is supported by more and more policies by the Ministry of Education. In Bentsen and Jensen's (2012) study, researchers point out that "inclusion of outdoor teaching in the written curriculum will give teachers explicit permission to practice it, and even place them under the obligation to do so" (p.214). Additionally, by finding that both educators in this present study are having success integrating the Ontario curriculum into their teaching while conducting lessons in Forest School and related outdoor settings, I feel confident that with careful planning and additional training I too could have success in doing this in my own classroom. This sentiment is also supported by the findings of another study (Welz, 2014). The study found that the practitioners were able to meet their curriculum requirements within the context of this program. As one practitioner put it, "This study has reinforced my belief that educators can deliver nature-based programs that provide rich, developmentally appropriate, learning environments that effectively meet the needs of young children" (Welz, 2014, p. 106-107).

Finally, this present study has implications for my future teaching practice in terms of assessment. Child-led, interest-driven, inquiry-based, and project-based projects can provide many rich opportunities for assessment. Additionally, as discussed in my interviews with both participants, assessing students in a more holistic way over a longer period of time is a more fair
and equitable process to the diverse array of learners teachers will encounter in their classrooms. This sentiment is also reflected in the findings of Murray and O'Brien, where researchers noted that nature-based learning can provide regular opportunities for educators to critically observe students and both informally and formally assess (2007).

### 5.3 Recommendations

The implications of the present study point specifically to several recommendations for classroom teachers, administrators in school boards, and teacher education programs. Based on the findings in this study and the direction of the current research outlined in the literature, there are several things stakeholders can begin doing immediately which can have a positive impact on students in Ontario. Three recommendations will be outlined below.

#### 5.3.1 Classroom Teachers

Given the results of this study and other literature touched on in Chapter 2, classroom teachers should feel emboldened to begin incorporating outdoor lessons into their short and long term plans. Take your students on a silent nature walk around the neighbourhood and ask them to reflect on what they observed with all of their senses. Watch a tree in your school yard and have students complete a sketch of it every few months as a way of discussing the changing seasons. Go outdoors for your science block for a week, see what your students are curious about, and shape an inquiry-based unit around their natural interests. Enlist help from parent volunteers or students in teacher education programs if you are not feeling comfortable being outside alone with a larger group. The results of this study in particular indicate that with careful planning, creativity, and establishing boundaries you can entrust your students to explore their environment and with that gain a sense of independence and confidence in themselves. This sense will hopefully then translate back into their work inside the classroom and with the world around them. For teachers
feeling overwhelmed, stressed, and weighed down by the vast amount of curriculum expectations they are already in charge of covering, remember you can find an approach that works for you and mix in structured and unstructured outdoor time and increase it as you gain confidence. As discussed at length in this paper, many studies have linked consistent, quality time outdoors during the school day where children are engaging in and with nature to positive effects in student behaviour, self-esteem, attention span, social skills, and overall communication skills (Lindemann-Matthes & Knecht, 2011; Maynard, 2007; O'Brien, 2009;) This should be encouragement enough to get your students outside and exploring as much as possible.

5.3.2 Administrators

Administrators in specific schools and school boards have a major opportunity to support this type of work by simply encouraging and supporting classroom teachers in their schools who want to begin conducting their classrooms with the aims of Forest Schools in mind. By providing encouragement and support, more teachers will likely feel the confidence to begin taking their children outdoors more and inspire other teachers in their school to do the same. Administrators can also support this type of work by approving funding, even in small amounts, to allow teachers to complete training in Forest School teaching on their own time or bringing in Forest School educators for a professional development training workshop in their own schools. Although the participants interviewed in this study cited funding as the most important way they could feel more supported to continue doing the work they are immersed in, the goal of the funding was so that they may complete more training and get more children involved in their programs. Administrative support in any school for this type of work, even without funding, could lead the way towards more teachers integrating nature-based learning into their practice and thus achieve the goal of increased opportunities for students.
5.3.3 Teacher Education Programs

Finally, teacher education programs have a unique opportunity to encourage more nature-based learning by mandating or offering more specific training to pre-service teachers in this area. Teachers who receive no such training during the course of their pre-service training and end up working in a school that does not already have a focus on outdoor education are going to be far less likely to initiate these types of programs on their own. This might be due to lack of confidence in their ability to do so, fear of what this type of programming actually means and looks like in a practical way, or quite simply they may have never heard of Forest Schools and their corresponding educational philosophies. Additionally, teacher education programs can continue to offer more field placements in outdoor education centres and similarly minded programs. By making this type of option available to more students during their practicum experiences, future teachers again will have more exposure to nature-based programming and be more likely to incorporate it into their own classrooms. Teacher education programs can also continue to cover this topic more broadly in a variety of courses and place a greater emphasis on inquiry-based teaching and holistic assessment which will in turn better prepare future teachers to conduct this type of work.

5.4 Areas for Further Research

In as much as the present study has served to expand upon the current literature, it has also highlighted the need for further study. In future research endeavours, it is recommended that a greater emphasis be placed upon several areas: pre-service teacher education programs, publically funded and operated Forest School programs, and curriculum integration. Educational researchers and scholars should also direct their attention on how to run Forest School programs with older students, not just primary students, because the benefits would hopefully translate to all age
groups. Additionally, more attention should be directed towards studying the utility of working with students with exceptionalities in an outdoor setting. Future studies that observe children in other settings, and try to tease apart where specific benefits are coming from, could also be beneficial to our overall understanding of how to improve Forest School programs for all students.

The present study also raised several questions around how we can better compile specific strategies, lessons, and unit plans that incorporate the aims of Forest Schools for all classroom teachers to use as a practical tool in their teaching practice. Future research studies stemming from this present study may also want to focus on classroom management strategies to use in an outdoor setting, evaluating how the vision and intentions of Forest School practitioners match up with actual practice, and standardized assessment protocols.

Furthermore, longitudinal and larger scale research studies should be conducted to test the long term effects nature-based programs have on student learning and development and provide more objective results. Conducting a study with a control group and follow-up among the participants could also provide interesting data. Based on my review of the literature, the overall benefits of nature-based learning have been strongly established. Future research studies should focus on how these programs may benefit diverse groups of students, how to train more educators to conduct these programs, how to expand these programs into more public schools so more students can have access, and practical strategies for all educators to engage in this work.

5.5 Conclusion

Given that this present research paper is a small-scale, qualitative study with participants drawn from a very particular context, the findings cannot be broadly generalized. However, there are several key implications this study may have on administrators, teachers, teacher education programs, researchers, and students. Broadly, this study serves as a reminder that child-directed
learning outdoors does have a place in our education system, higher availability of funds for teachers to seek out training and/or start their own programs is increasingly necessary, and given the unique opportunities present in an outdoor setting and evidence that curriculum integration is possible, as many educators as possible should be taking their students outdoors.

Based on the findings of this present study, as well as the literature review, it is recommended that teachers feel empowered to begin this type of work in their own classrooms and schools and feel confident in the decision. It is also recommended that administrators in local schools and school districts recognize the benefits of these programs and the key opportunity they have to provide support to teachers eager to engage in this work by supporting them emotionally, logistically, and if possible, financially. Finally, it is recommend that pre-service teacher education programs incorporate more outdoor education focused lessons and classes as well as related practicum opportunities into their program offerings. This will help to ensure that more teachers will become involved in this work.

The present study is important because in a time where children are increasingly alienated from nature (Louv, 2005), nature based learning and Forest School programs are one potential outlet for students to immerse themselves in the outdoors while also developing academic, social, and emotional skills. This present study is significant because the findings indicate that even if use of the outdoors is approved or even promoted within a given curriculum or program, the number of children with access to this type of learning is still limited. Future research stemming from this present study must focus on creating and applying specific strategies all teachers can use to implement the aims of Forest Schools into their classrooms while also balancing between the pressures to meet curriculum expectations and benefits of child-directed learning. We need to teach educators how to explicitly teach the Forest School approach if we want to get the positive
effects (Maynard & Waters, 2007). Evolving curriculums, more research studies on the topic, and additional availability of training are opening the doors for more educators to teach outdoors, but are not necessarily providing enough direct guidance to all educators in typical classrooms.
APPENDICES

Appendix A: Letter of Signed Consent for Interview

Date: ___________________

Dear ___________________,

I am a graduate student at OISE, University of Toronto, and am currently enrolled as a Master of Teaching candidate. I am studying how teachers in Ontario can incorporate the Ontario curriculum requirements in a Forest School or nature-based program for the purposes of investigating an educational topic as a major assignment for our program. I think that your knowledge and experience will provide insights into this topic.

I am writing a report on this study as a requirement of the Master of Teaching Program. My course instructor who is providing support for the process this year is Dr.___________________. My research supervisor is ____________________. The purpose of this requirement is to allow us to become familiar with a variety of ways to do research as well as study a topic in teaching that will better inform my future practice as a teacher. My data collection consists of a 40-60 minute interview that will be audio recorded. I would be grateful if you would allow me to interview you at a place and time convenient to you. I can conduct the interview at your office or workplace, in a public place, or anywhere else that you might prefer.

The contents of this interview will be used for my assignment, which will include a final paper, as well as informal presentations to my classmates and/or potentially at a conference or publication. I will not use your name or anything else that might identify you in my written work, oral presentations, or publications. This information remains confidential. The only people who will have access to my assignment work will be my research supervisor and my course instructor. You are free to change your mind at any time, and to withdraw even after you have consented to participate. You may decline to answer any specific questions. I will destroy the audio recording after the paper has been presented and/or published, which may take up to five years after the data has been collected. There are no known risks or benefits to you for assisting in the project, and I will share with you a copy of my notes to ensure accuracy. Please sign the attached form, if you agree to be interviewed. The second copy is for your records. Thank you very much for your help.

Yours sincerely,

Researcher name: Cara Perez
Phone number: 647-981-5161
Email: cara.perez@mail.utoronto.ca or caralgeorge@gmail.com
Instructor’s Name: Ken McNeilly
Email: kenneth.mcneilly@utoronto.ca
Consent Form

I acknowledge that the topic of this interview has been explained to me and that any questions that I have asked have been answered to my satisfaction. I understand that I can withdraw at any time without penalty. I have read the letter provided to me by Cara Perez and agree to participate in an interview for the purposes described.

Signature: ______________________________________

Name (printed): _________________________________

Date: __________________________
Appendix B: Interview Questions

Section 1: Background information
1. How many years have you been an educator and in what capacities? (Grade levels and subjects)
2. Number of students in class or group?
3. Adult to child ratio?
4. How many hours and days per week are your students in nature and engaged in nature-based activities?
5. Can you please describe any specific training in this type of work?
6. How would you describe your personal approach to Forest School/Nature-based education?

Section 2: Relationship to Ontario Curriculum
7. Can you please describe how you go about implementing the Ontario curriculum into your lessons and programming? (Or, what elements of the Ontario curriculum do you incorporate into your lessons?)
8. Could you please discuss a specific lesson plan or activity that shows how the Ontario curriculum can be incorporated into a Forest School/Nature-based learning activity?
9. Are there certain subjects you find are easier or more challenging to conduct in this type of setting and tie into the curriculum? If so, please describe.
10. How do you assess for learning in the Forest School/Nature-based learning setting?

Section 3: Typical day in Forest School
11. Can you describe your typical day in the Forest School classroom/Nature-based learning setting? Typical activities?
Section 4: Further opportunities for support and improvement

12. What types of support would you find helpful in your own classroom/setting in order to continue working within the Forest School/Nature-based learning model? (For example, training opportunities, resources, mentoring, administrative support, financial support, access to green space, parental support and involvement, and higher adult to child ratio).

13. What types of support, if any, are you currently receiving?

14. Which supports, if any, have helped you the most in providing your students with Forest School/Nature-based learning programming?

15. How do you think we can support more Ontario educators in incorporating elements Forest School/Nature-based practice in their own classrooms or getting involved in the Forest School movement?
References


