

Exploring the Implementation of Outdoor Play in Nova Scotia's Pre-primary Program

Master's Thesis

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July 19, 2019

A thesis submitted to the Department of Child and Youth Study in partial fulfillment of the requirements for the degree of Master of Arts in Child and Youth Study

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Abstract

Introduction: Research has indicated that outdoor play influences children's physical, cognitive and social-emotional well-being, but there exist barriers to outdoor play implementation in early learning settings. Given the novelty of Nova Scotia's Pre-primary Program, little is known about how outdoor play is being implemented. Methods: Focus groups and interviews were conducted with two Pre-primary Program Early Childhood Educators (ECEs), two facilitators, two school teachers, the school principal, and three staff from the Government of Nova Scotia. Data also included photographs of the outdoor play spaces used by the Pre-primary Program taken during a site visit and the collection of relevant documentation. Results: Thematic analysis of all data was completed and resulted in a description of the outdoor play space and practices of the Pre-primary Program and factors that may be influencing these identified practices. Six themes or 'outdoor play influencers' were identified: 1) Outdoor play, including loose parts and risky play, is valued; 2) outdoor play is promoted and engaged in by others; 3) space and resources are available; 4) communication and engagement happens; 5) leaders are integral; 6) partnerships and collaboration are essential. Significance: This research contributes an understanding of the various perceptions about outdoor play (including loose parts and risky play), and outdoor play implementation strategies that may provide guidance to stakeholders involved in the Pre-primary Program including ECEs and policy makers.

Acknowledgements

To my supervisors, Dr. Jessie-Lee McIsaac and Dr. Joan Turner, thank you for your dedicated support and guidance with this thesis and throughout my entire time at MSVU. You both went above and beyond to provide me with rewarding experiences and opportunities to further my research and gain valuable skills, of which I am particularly thankful for my time spent working as part of the amazing team at the Early Childhood Collaborative Research Centre. The skills I gained at the ECCRC were essential in completing this thesis. I would also like to thank my committee member, Dr. Michelle Stone, for sharing your outdoor play expertise and enthusiasm.

To my parents, thank you for being true models of what it means to dedicate your career to helping others. You have touched the lives of many within our community and I hope to make a similar impact in my own way. To my brother Eric, thank you for continuing to inspire me to be a kinder human. You are ultimately the reason why I chose this graduate degree.

To Zach, thank you for sharing my passion for outdoor play and for being my go-to for our own risky outdoor adventures. You encourage me to practice what I preach. To the friends I've made in Halifax, thank you for always being there and for making Halifax my second home.

Finally, thank you to Mount Saint Vincent University for the funding support (Nova Scotia Research and Innovation Scholarship, the Field Family Graduate Award in Child and Youth Study, and the Child and Youth Graduate Endowed Scholarship).

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Chapter 1

Introduction

Early childhood, often thought to encompass children up to eight years old, represents a time in human development that is highly sensitive as children's early experiences and opportunities are critical determinants of their future health, behaviour, and learning (Irwin, Siddiqi, & Hertzman, 2007; McCain, Mustard, & McCuaig, 2011). Children facing adversities during these early years, such as sustained poverty, are more likely to experience developmental struggles such as difficulty transitioning into school and poor mental health, which can follow them into adolescence (Boivin & Hertzman, 2012). In Nova Scotia, one in four children are entering school vulnerable in at least one developmental domain (Government of Nova Scotia, 2016). This statistic has been found to apply to children across Canada, and nation-wide children from lower socioeconomic status are experiencing these vulnerabilities more compared to those from low-moderate, moderate and affluent income families (McCain et al., 2011).

For children facing adversities early in life, the addition of diverse positive experiences throughout early childhood has been shown to be beneficial in improving developmental outcomes. Children's participation in early childhood education can benefit children's cognitive and social development, positively influencing school readiness (Moore, McDonald, Carlon, & O'Rourke, 2015; Patel, Corter, Pelletier, & Bertrand, 2016). Early childhood integrated service models, which provide early childhood education as well as a variety of other supports for parents and children, also demonstrate positive effects on child development (Patel et al., 2016). These effects are noticed not only in children's cognitive and social development, but also in their physical health and well-being (Patel et al., 2016).

Highlighting the importance of physical health and well-being in early childhood are the

life-course models of health which emphasize that health status early in life influences health and socioeconomic status during adulthood (Case, Fertig, & Paxson, 2005; Pakpahan, Hoffman, & Kröger, 2017). These models are supported by studies that demonstrate that children's physical health and well-being influences health trajectories and has been associated with successful aging (Brandt, Deindl, & Hank, 2012; Pakpahan et al., 2017). The existing literature demonstrates that ensuring children have opportunities to engage in outdoor play will positively influence children's health trajectory. Outdoor play contributes to children's overall well-being by positively influencing physical (Gray et al., 2015; Johnsen, Christie, & Wardle, 2005), cognitive (Castelli, Hillman, Hirsch, Hirsch, & Drollette, 2011; Zamani, 2017), and social-emotional development (Bundy et al., 2009).

Understanding the magnitude of childhood inequities that exist within the province and the importance of providing children with exposure to positive early learning environments and opportunities, the government of Nova Scotia began the process of creating an integrated early-years system in May of 2012 (Government of Nova Scotia, 2012). This led to the introduction of eight Early Years Centres (EYCs) into or near elementary schools in various communities across Nova Scotia starting in 2014 (Government of Nova Scotia, 2017). EYCs consist of three core components: 1) A play-based, no-fee early learning program for children in the year before school; 2) family supports and resources; and 3) onsite regulated childcare (Government of Nova Scotia, 2017). In September of 2017, the government introduced the Pre-primary Program, building on the learnings from the EYCs and replacing the existing Early Learning Program (ELP) and adding 38 Pre-primary Program locations across the province. An additional 130 Pre-primary Program classes were introduced in 2018, and the program is expected to be province-wide and available for every child by 2020 (Premier's office/Education and Early Childhood

Development, 2018, March 7).

The Pre-primary Program follows the Nova Scotia Early Learning Curriculum Framework, which emphasizes a play-based approach to early learning, believing that children are “competent learners” (p.49) and that play provides the context in which children learn (Nova Scotia Department of Education & Early Childhood Development, 2018). Throughout this framework the *outdoors* is highlighted as a valuable learning environment to be utilized. Given the novelty of the Pre-primary Program, little is known about how the outdoor play component of the curriculum framework is being implemented within these settings. The goal of the current research is to address this gap in knowledge by exploring how the outdoor play component of the curriculum framework is being applied in one of the Pre-primary Program sites in Nova Scotia. The objectives are to: 1) Identify the various perceptions of outdoor play within the school community; 2) explore what outdoor play practices are being implemented at the Pre-primary Program; and 3) determine what factors enabled the identified outdoor play practices to occur at the Pre-primary Program.

Chapter 2

Literature Review

Play can occur almost anywhere, from an indoor play room to deep within a forest. The outdoor context has become an area of particular interest within the topic of play as researchers continue to uncover the diversity of outdoor play environments and materials and their associated benefits. The following sections in the literature review will begin by exploring the existing research and current data of play and outdoor play before further explaining the potential barriers to its implementation, and perceptions surrounding outdoor play.

Play

In order to explore outdoor play, play itself must first be understood. The ambiguous nature of play presents a challenge to developing one standard definition; however, play can be identified as encompassing five characteristics: 1) Positive affect; 2) non-literality; 3) intrinsic motivation; 4) process orientation; and 5) free choice (Eberle, 2014; Johnson, Christie, & Wardle, 2005; Smith & Pellegrini, 2008). Based on this characteristic approach to identifying play, play involves activities that individuals enjoy engaging in and can allow the individual to focus on internal rather than external realities, often providing an escape from reality itself (Eberle, 2014; Johnson, Christie, & Wardle, 2005). For an activity to be considered true play it should not require extrinsic motivation as it should be a desired activity, and the enjoyment derives from the process of playing itself, not the end results (Eberle, 2014; Johnson, Christie, & Wardle, 2005; Smith & Pellegrini, 2008). Overall, play is an activity done by choice of the individual.

Although the purpose of play is commonly viewed as simply for the elicitation of enjoyment, play has also been understood to serve other, more developmentally-focused purposes. Over the course of many years a variety of theories have emerged on why children

play and the purpose of play. Similar to a lack of a single definition of play, there is no standard theory behind the function(s) of play. Classical theories of play emerged during the 1900s, including surplus-energy theory, recapitulation theory, and practice theory (Johnson, Christie, & Wardle, 2005). The classical theories generally took an evolutionary approach to children's play (i.e. play is practicing survival skills) and viewed human energy as fluid-like (i.e. when we play energy level goes down) (Johnson, Christie, & Wardle, 2005). Diverting away from energy expenditure, the modern era of play theories suggest play serves to guide children through development (Johnson, Christie, & Wardle, 2005). Some of these theories include psychodynamic theories, social learning theory, and cognitive theories. The final category of play theories is the post-modern theories, such as critical education theory and chaos theory. These theories incorporate diversity, social justice, and subjective knowledge into their theories, allowing the consideration of context and other critical factors in understanding the role of play (Johnson, Christie, & Wardle, 2015).

As with the definitions of play, many perspectives can be identified. Similarly, play is categorized differently by different authors. One method of categorizing play that has been identified in the literature is separating play into four possible categories: 1) Motor play, 2) object play 3) symbolic play, and 4) social play (Johnson, Christie, & Wardle, 2005). Each of these categories contains numerous sub-categories. Motor play can include locomotor play (i.e. running, climbing) and rough-and-tumble play (i.e. play fighting, tumbling), and object play can include exploratory play (i.e. exploring new environments, taking objects apart) and constructive play (i.e. blocks) (Johnson, Christie, & Wardle, 2005; Smith & Pellegrini, 2008). Symbolic play typically refers to children taking on new roles and using their imaginations to create pretend objects, and social play can have various levels from solitary (playing alone) to cooperative

(playing directly with someone else) (Johnson, Christie, & Wardle, 2005). The important concept to remember is that these four major categories of play are often found occurring simultaneously within any given instance of play (Johnson, Christie, & Wardle, 2005), creating extreme variations and seemingly infinite possibilities in play scenarios.

Benefits of Outdoor Play

Play, whether indoors or outdoors, has been shown to positively impact children's cognitive, language and literacy, social, and emotional development (Johnson, Christie, & Wardle, 2015). Outdoor play is responsible for some truly remarkable effects that are often unique from indoor play (Kemple, Oh, Kenney, & Smith-Bonahue, 2016). The current research explores the positive influences of outdoor play on children's physical, cognitive, and social-emotional development.

Affordance theory. American perceptual psychologist James Gibson first developed the term "affordance" in 1977. Well-defined in Osiurak, Rossetti, and Badets' (2017) article, "affordance" is "the action possibilities offered to an animal by the environment with reference to the animal's action capabilities" (p.403). In other words, when animals (including humans) perceive any given substance, object or layout, they simultaneously and directly perceive the potential actions that can be performed (Gibson, 1986).

Affordance theory provides a lens to consider why the outdoor environment may differ in types of play and benefits than the indoor environment. For example, although a chair may be perceived to afford sitting, a swing may be perceived to afford sitting as well as swinging. Affordance theory may also explain why natural outdoor environments may differ in types of play and benefits than manufactured environments. Although the swing may be perceived to afford sitting and swinging, a log may be perceived to afford sitting, standing, rolling, balancing

or even climbing.

Physical development. Arguably the largest benefit of outdoor play is its association with children's increased physical activity. Gray et al.'s (2015) systematic review of the literature identified 16 studies demonstrating a positive association between outdoor play and habitual physical activity and eight studies demonstrating higher acute physical activity levels when children played outdoors compared to indoors. The outdoors provides more space for movement and, more importantly, it is the context in which children are most likely to engage in risky play (Sandseter, 2007; Stephenson, 2003).

Risky play is "thrilling and exciting forms of play that involve a risk of physical injury" (p. 258), categorized into play involving great heights (i.e. climbing, jumping from surfaces), high speed (i.e. swinging or running fast), dangerous tools (i.e. knives, ropes), dangerous elements (i.e. cliffs, deep water), rough-and-tumble (i.e. wrestling, play fighting), and disappearing/getting lost (i.e. exploring alone, unsupervised play) (Sandseter & Kennair, 2011). Loose parts are often considered conduits for risky play and are manipulable objects with no specific function (Bundy et al., 2009) as functions are left "open to the child's own interpretation" (Houser, Roach, Stone, Turner, & Kirk, 2016, p.795). These items can be either manufactured (i.e. pots, rope) or natural (i.e. pinecones, sticks). The opportunity to engage in risky play and play with loose parts is related to higher intensity physical activity behaviour in children (Berg, 2015; Brussoni et al., 2015; Bundy et al., 2009; Farmer et al., 2017; Zamani, 2017), which, in accordance with affordance theory, is believed to be due to the fact that children perceive more opportunities with these types of play (Berg, 2015; Bundy et al., 2009; Farmer et al., 2017).

Similar to loose parts, green space does not come with a set of pre-determined actions or

behaviours, making this type of play space appealing to children of different interests and conducive to different forms of play. Accordingly, green space has also been positively associated with active play in early childhood (Berg, 2015; Black, Menzel, & Bungum, 2015; Dymont, Bell, & Lucas, 2009; Nedovic & Morrissey, 2013; Zamani, 2017). The mere presence of green space such as trees, plants and grassy hills have been shown to evoke children's functional play and physical activity (Berg, 2015; Zamani, 2017). Another study by Nedovic and Morrissey (2013) noticed that a simple switch from pavement to mulch pathways increased children's physical activity, allowing for more confident running and risky play.

This connection between natural play space elements and risky play was also noted in a study by Sandseter (2009). Sandseter's (2009) study found that a natural play space allowed for more risky play compared to a manufactured playground. The researcher explained this finding using affordance theory, suggesting that the natural environment had more diversity in surfaces (i.e. hills, rocks) and no fence, affording the opportunity to engage in play that had a higher degree of risk compared to the even-surfaced, fenced in playground (Sandseter, 2009). For example, children were able to roam away from others and engage in climbing and jumping from surfaces that were higher than those found in the manufactured playground (Sandseter, 2009).

The physical benefits associated with outdoor play come primarily through the promotion of physical activity through the natural elements of the outdoors. Active play outdoors has been associated with improved quality of sleep, as increased active play has been shown to reduce the frequency in which children wake up during sleep (Xu, Wen, Hardy, & Rissel, 2015). Other more commonly-known functions of physical activity include the development of fine and gross motor skills, cardiovascular endurance and the prevention of obesity (Johnson, Christie, & Wardle, 2005). One study suggests that active play is most likely to improve fitness levels if the

outdoor environment is characterized by diverse and uneven terrain, such as the forest. In an intervention applied by Fjørtoft (2001), Kindergarten children in the experimental group used the woods as their play area while the comparison group continued to use their manufactured playground. Unlike the comparison group whose fitness levels did not change, the children in the experimental group showed significant improvements in motor fitness, especially coordination and balance since having experienced the diverse surfaces of the unmodified natural environment (Fjørtoft, 2001).

Aside from increased physical activity, the outdoor environment can positively influence children's physical health through the presence of natural elements. A systematic review of the literature conducted by Sherwin et al. (2012) found an association between time spent outdoors and reduced prevalence of myopia, which is suggested to be due to increased release of retinal dopamine in response to sunlight, the greater light intensity which leads to pupil constriction and slower eye growth, and less demand for distance vision. A natural source of vitamin D, children spending time outside in sunlight are less susceptible to rickets, a disorder caused by extreme vitamin D deficiency and characterized by enlargement and curvature of various bone structures and muscle weakness (Wagner, Greer, & the Section on Breastfeeding and Committee on Nutrition, 2008). Vitamin D deficiency is also accountable for decreased calcium absorption in the gut, reduction in bone mass, increase in fracture risk, and abnormal immune function (Wagner et al., 2008), demonstrating the importance of healthy doses of sunlight.

Cognitive development. The benefits of time spent outside can also influence cognitive development. The natural elements of the outdoor environment have been demonstrated to influence children's ability to focus. According to Wells (2000), children living in areas surrounded by more greenery (i.e. trees) are better able to focus their attention. There is also

evidence that children diagnosed with attention deficit/hyperactivity disorder (ADHD) who spend more time playing in green settings experience milder symptoms than those playing in more manufactured or indoor settings (Taylor & Kuo, 2011).

The outdoors not only prepares children to focus better, it also provides the opportunity to engage in different types of play. Variety in play is important as each type of play provides its own cognitive benefits. For example, dramatic play allows children to develop self-efficacy as they practice taking on new roles (Pellegrini, 2009) and constructive play can help form the foundation for knowledge surrounding science, math and technology (Ness & Farenga, 2016). Playing with loose parts has been perceived to slow down children's play as they concentrate on the pieces (Nedovic & Morrissey, 2013), inspiring more creative and dramatic play (Bundy et al., 2009; Nedovic & Morrissey, 2013; Zamani, 2016; Zamani, 2017). Natural elements in particular such as living creatures, greenery, and seasonal/weather changes have been found to elicit curiosity and imagination, triggering more constructive, exploratory, and dramatic play (Zamani, 2016; Zamani, 2017). Even the simple sensory stimulation that comes from engaging in the outdoor environment has been associated with exploratory play (Nedovic & Morrissey, 2013). Although high amounts of constructive, exploratory and dramatic play are common to most outdoor areas, they are especially high in the more natural areas, whereas manufactured playgrounds tend to host more of the functional play and non-play behaviours (Zamani, 2016; Zamani, 2017). Referencing affordance theory, the natural elements may be affording more diverse play opportunities than the manufactured elements, reinforcing more variety in cognitive benefits through play.

This increased exploratory play outdoors was further examined by Beery and Jørgensen (2018) who observed Kindergarten children as they played outdoors and asked adults to discuss

their childhood experiences with nature. The adults recalled learning about environmental phenomena and concepts (i.e. life cycles, seasons) and being driven by sparked curiosity to learn more about these (Beery & Jørgensen, 2018). This greater knowledge of and interest in the environment was similarly noted while observing the children. Exposure to natural environments has therefore been related to greater knowledge about the environment and as a result, a greater sense of environmental responsibility (Beery & Jørgensen, 2018).

Focusing on physical activity, children's fitness levels and time spent engaging in moderate-to-vigorous physical activity has been repeatedly positively associated with children's executive functioning, including working memory (Chaddock et al., 2010; Scudder et al., 2016), attention (Castelli et al., 2011; Hillman, Buck, Themanson, Pontifex, & Castelli, 2009; Scudder et al., 2016; Syväoja, Tammelin, Ahonen, Kankaanpää, & Kantomaa, 2014; Wu et al., 2011), and self-regulation (Becker, McClelland, Loprinzi, & Trost, 2014; Castelli et al., 2011). This association has been visualized using magnetic resonance imaging (MRI) which shows that more fit children have larger hippocampal volumes, an area of the brain responsible for executive functioning (Chaddock et al., 2010; Syväoja et al., 2014). Electroencephalography (EEG) measures confirm that physical activity not only enlarges these structures but changes their pattern of activity seen through larger P3 amplitudes, which indicate increased allocation of attentional resources (Hillman et al., 2009). In addition, physical activity improves self-regulation, which has a positive influence on children's academic achievement in literacy and numeracy skills (Becker et al., 2014). Although the physical activity highlighted in these studies are not specifically occurring outside, outdoor play has been associated with increased physical activity (Gray et al., 2015) and may therefore be associated with these benefits.

Social-emotional development. Socio-emotional development is another aspect of child

development that is positively influenced by outdoor play. Increased time spent playing outdoors has been associated with not only a greater amount of social interaction with peers (Bundy et al., 2009), but interaction that is characterized by more cooperation (Bundy et al., 2009; Hinkley, Brown, Carson, & Teychenne, 2018). This resulting increase in social skills has been attributed to children's access to loose parts (Bundy et al., 2009; Farmer et al., 2017) which, as previously mentioned, promotes children to engage in dramatic and creative play (Bundy et al., 2009; Nedovic & Morrissey, 2013; Zamani, 2016; Zamani, 2017). The use of loose parts specifically has been found to elicit more opportunities for children to engage in and practice communicating, negotiating (Maxwell, Mitchell, & Evans, 2008) and sharing (Neill, 2013). Nedovic and Morrissey (2013) also documented that the introduction of flower tubs into a childcare centre garden influenced the children to be more caring and respectful with others, creating more positive social interactions.

In terms of emotional development, risky play has been shown to increase self-esteem and confidence through success in overcoming challenges, and allows children to become more resilient by improving their risk management skills (Bundy et al., 2009; Farmer et al., 2017; Rooijen & Newstead, 2016; Sandseter & Sando, 2016). Risky play has also been associated with reduced aggression (Bundy et al., 2009), which could be perhaps further reduced with natural sunlight, physical activity, and greenery. According to the results of a study by Wirz-Justice et al. (1996), just one hour of exposure to natural sunlight is able to improve an individual's mood. Similar to natural sunlight, physical activity may increase an individual's positive mood through the release of endorphins (Williamson, Dewey, & Steinberg, 2001). Besides sunlight and active play, general forms of greenery appear to keep children calmer and reduce the likelihood of them becoming agitated while playing (Nedovic & Morrissey, 2013).

Physical literacy. Although the definition of physical literacy is often debated (Edwards, Bryant, Keegan, Morgan & Jones, 2017), the following definition endorsed by Physical and Health Education (PHE) Canada is commonly referred to across schools in Canada (Temertzoglou, 2015):

Physical literacy is the motivation, confidence, physical competence, knowledge and understanding to value and take responsibility for engagement in physical activities for life (Whitehead, 2016).

Many of the explored benefits of outdoor play on children's physical, cognitive, and social-emotional development contribute also to children's physical literacy. For example, in Fjørtoft's (2001) study in which children were found to have enhanced motor fitness following time spent engaging in a more natural environment indicates an increase in the children's physical competence. Children's increased self-esteem, confidence, and resilience from engaging in risky play (Bundy et al., 2009; Farmer et al., 2017; Rooijen & Newstead, 2016; Sandseter & Sando, 2016) is also an example of increased competence in active play that translates to overall development.

Current Status of Outdoor Play

Children enrolled in the Pre-primary Program in Nova Scotia are four to five years-old and are within the critical early years age range in which developmental outcomes are highly influenced by their opportunities for engagement in diverse, positive experiences (Irwin, Siddiqi, & Hertzman, 2007; McCain et al., 2011). The existing literature provides evidence that outdoor play is one of such important opportunities as it provides significant contributions to children's overall healthy development through its ability to provide more active play, variety in play behaviours, and natural elements. Unfortunately, recent reports suggest that children are not

spending enough time outdoors and the consequences are already becoming visible.

ParticipACTION (2018) is a Canadian non-profit organization responsible for conducting and promoting research surrounding active living in an effort to increase Canadians' physical activity levels. Since 2005, ParticipACTION (2018) has been releasing yearly Report Cards which synthesize evidence from multiple sources to determine how well Canadian children are achieving healthy, active lifestyles. Data from the 2016 ParticipACTION Report Card showed that only 37% of children and youth played outside every day (ParticipACTION, 2016). Informed by data from Statistics Canada's 2014-15 Canadian Health Measures Survey (CHMS), the recent 2018 Report Card indicates that the children who do go outside, do so only for approximately two hours per day. The 2014-15 CMHS also looked at the Pre-primary Program age group specifically, and found that three- to four-year-old children are spending an average of between 1.6 hours (when cared for at home) to 2.1 hours (when cared for in a non-school setting) per day outdoors (ParticipACTION, 2018).

Other sources outside of ParticipACTION and Canada have been documenting this decrease in outdoor play, demonstrating a similar societal shift in other countries as well. The majority of mothers from one study in the United States shared feeling that their child(ren) were spending less time playing outside than children from even a few years earlier, and that they recalled engaging in more outdoor play as a child than their children do (Clements, 2004). In a nationally representative survey conducted in the United States, approximately half of the sample of preschool children were reported to have at least one outdoor play opportunity per day (Tandon, Zhou, & Christakis, 2012). Even in Australian childcare settings, children aged one- to five-years-old have been found to spend as much as 80% of their time sedentary (Ellis et al., 2016).

The potential consequences of these low levels of outdoor time are already beginning to appear. Increased attentional control issues and fidgeting in classrooms (Visser et al., 2013), decreases in children's overall strength when compared to children the same age ten years previous (Cohen et al., 2011), and poor posture due to lack of physical activity (Quka, Stratoberdha, & Selenica, 2015) are among some of the physical consequences that have been documented and related to reduced outdoor play time. Other studies have reported children to exhibit less inhibition ability and more anxiety (Charles, Louv, Bodner, & Guns, 2008). Some studies suggest that children are more disapproving and/or fearful towards the outdoors having had less experience with nature and its organisms (Fägerstam, 2012; Strife & Downey, 2009).

These low amounts of outdoor play have become a topic of concern, pushing professionals such as occupational therapists to avidly promote increases in outdoor play for children of all ages (Hanscom, 2016). Some researchers are also taking part in promoting outdoor play by providing literature-supported position statements. One such example is the following position statement on active outdoor play, stating:

Access to active play in nature and outdoors-with its risks-is essential for healthy child development. We recommend increasing children's opportunities for self-directed play outdoors in all settings- at home, at school, in child care, the community and nature (Tremblay et al., 2015, p. 6476).

This position statement has been endorsed by the Council of Chief Medical Officers of Health (CCMOH) (Pan-Canadian Public Health Network, 2018) and 19 other supporting organizations such as ParticipACTION and the Ontario Society of Physical Activity Promoters in Public Health.

Barriers & Perceptions of Outdoor Play

In order to address the low levels of outdoor play among children, the identification of the potential barriers to outdoor play is required. Barriers to outdoor play have been well documented in the existing literature and may be explored using Bronfenbrenner's ecological systems model. According to Bronfenbrenner's (1994) ecological systems model, there are five subsystems that interact to influence an individual's behaviour, in this case the child's outdoor play behaviour: 1) The microsystem, 2) the mesosystem, 3) the exosystem, 4) the macrosystem, and 5) the chronosystem. The existing literature has identified barriers to outdoor play in early childhood education and elementary school settings that could affect the Pre-primary Program within four of these systems: the microsystem, the mesosystem, and the macrosystem and chronosystem. In addition, some potential barriers to outdoor play within the Pre-primary Program involving the exosystem should be considered. With this model, it is understood that these various barriers to outdoor play from the various subsystems are not exclusive but are often interrelated and influence each other in order to ultimately influence children's outdoor play behaviour.

Microsystem. The microsystem comprises the child's relationships, roles and activities within their immediate environments (Bronfenbrenner, 1994). In this case, the child's home and the Pre-primary Program constitute the microsystem. Within the home are the child's guardian(s). Studies indicate that parents typically value outdoor play and acknowledge that it benefits children's development (Little, 2015; McFarland & Laird, 2018; Tandon, Saelens, & Copeland, 2017). However, parents' perceptions can also be influenced by perceived school readiness of their child. Parents have described play (whether indoors or outdoors) and learning as a dichotomy, with play being less important than academic teaching (Kane, 2016; Lin &

Yawkey, 2013; O’Gorman & Ailwood, 2012). This perception was especially true for parents with less education and/or lower socioeconomic status, where priorities for the needs of their children took a different focus (Lin & Yawkey, 2013).

Safety is another factor that may dictate parents’ perceptions of outdoor play. In one study, parents indicated that letting their child make decisions and engage in risky play outdoors can make them feel ‘nervous’ (McFarland & Laird, 2018). Parents describe environmental hazards (i.e. traffic, crime) (Bringolf-Isler et al., 2010; Brussoni et al., 2015; Little, 2015), the potential for injury, young age and weather (Jayasuriya, Williams, Edwards, & Tandon, 2016; Tandon et al., 2017) as barriers to outdoor play.

Children who identify as a racial minority and/or are of lower socioeconomic status are more likely to experience the additional barrier of inequities in accessing outdoor play areas. These children are less likely to have access to green space and nature (Strife & Downey, 2009). This has primarily been attributed to the fact that those of lower income are more likely to live in low-income areas and subsidized housing which are less likely than other areas to be located near green space (Strife & Downey, 2009). In addition, a study by Wijtzes et al. (2014) found that children identifying as a racial minority and/or are of lower socioeconomic status are more likely to engage in low levels of outdoor play (less than 1 hour per day). Multiple barriers have been identified to contribute to the limited outdoor play levels for this demographic, including environmental barriers (i.e. lack of safe playgrounds, facilities), scheduling demands, and family obligations (Wijtzes et al., 2014).

The microsystem also includes the early childhood educators (ECEs), such as those within the Pre-primary Program. Studies indicate that ECEs value outdoor play and believe it benefits children’s development (Ihmeideh & Al-Qaryouti, 2016; Leggett & Newman, 2017;

Sandseter, 2012; Tandon et al., 2017) even more so than parents (Tandon et al., 2017), but barriers still exist. According to ECEs, barriers to outdoor play may include a lack of dedicated space for play (McClintic & Petty, 2015), little access to natural spaces (Ernst, 2014), winter weather (Ernst, 2014) and/or little storage for loose parts (Farmer et al., 2017).

Another barrier to outdoor play implementation is safety concerns. Previous research has found that ECEs perceive their role to change from educator to supervisor when going from indoor to outdoor environments (Bundy et al., 2009; Ihmeideh & Al-Qaryouti, 2016; Leggett & Newman, 2017; McClintic & Petty, 2015), especially when loose parts or risky play is involved and risk of injury is perceived to be especially high (Bundy et al., 2009; Leggett & Newman, 2017). Unfortunately, this perceived role-switch results in fewer opportunities for teachable moments, small group activities and general engagement between teacher and children when compared to indoor activity (Ihmeideh & Al-Qaryouti, 2016; Leggett & Newman, 2017; McClintic & Petty, 2015). ECEs' preoccupation with preventing injuries may stem from simply feeling responsible for someone else's children (Sandseter, 2012), but also may be strengthened by fear of experiencing litigation issues and/or other negative consequences should a child become injured (Bundy et al., 2009; Kernan & Devine, 2010; Little, Sandseter, & Wyver, 2012; Little & Wyver, 2008). Increasing litigious culture has been highlighted in studies sampling ECEs in Australia (Bundy et al., 2009, Little, Sandseter, & Wyver, 2012; Little & Wyver, 2008) the United States (Little, Sandseter, & Wyver, 2012), Ireland (Kernan & Devine, 2010) and even Norway, despite being a country that has been recognized for less stringent outdoor play (Sandseter & Sando, 2016). Despite a low incidence of litigation pursuits following playground injuries in Canada, the fear of litigation appears to still exist similar to the other mentioned countries (Brussoni et al., 2015).

Mesosystem. The barrier of safety concerns in ECEs implementing outdoor play introduces the next system level, the mesosystem, which involves the interactions between the various individuals within the microsystem (Momirov & Duffy, 2011), in this case, the parents and ECEs. The results of one study suggest that ECEs' preoccupation with injury prevention may be strengthened when parents share with them concerns about safety, however some ECEs may respond by advocating more strongly for the importance of outdoor play and its risks (Sandseter, Little, Ball, Eager & Brussoni, 2017). Results of Jayasuriya, Williams, Edwards, & Tandon's (2016) study suggest that lack of communication between ECEs and parents may be a significant barrier to the implementation of outdoor play, and increased dialogue surrounding the importance of outdoor play and the implemented outdoor play practices may help to engage parents in promoting outdoor play along with the ECEs. Increased communication between ECEs and parents and increased parental involvement in early learning settings has been shown to increase support for the play-based learning approach, in which outdoor play is one component (Breathnach, O'Gorman, & Danby, 2016).

Exosystem. The exosystem level involves processes that indirectly affect the individual (Bronfenbrenner, 1994). For the children of the Pre-primary Program, this typically refers to policies or regulations. A unique feature of the Pre-primary Program compared to other early childhood education settings is that it is located in a school setting. This may or may not also serve as a barrier to the implementation of outdoor play according to the Nova Scotia Early Learning Curriculum Framework since the elementary school curriculum and structures differ from the framework, therefore the rest of the school may not necessarily implement outdoor play the same way as the Pre-primary Program.

In accordance with a play-based philosophy, the curriculum framework acknowledges

that the indoor environment is not the sole context in which learning occurs and that the outdoor environment offers unique features (i.e. mud, plants) and promotes different behaviours (i.e. risk-taking, exploration) that contribute to children's learning (Nova Scotia Department of Education & Early Childhood Development, 2018). The curriculum framework encourages educators to construct and adapt the outdoors for learning just as they would indoors, to ensure children have access to a variety of natural materials, and to engage children in learning opportunities surrounding the natural environment (i.e. sustainability) (Nova Scotia Department of Education & Early Childhood Development, 2018). Children should be encouraged to interact with their outdoor environment to “discover new concepts, problem solve, and create new ways of learning and playing” (Nova Scotia Department of Education & Early Childhood Development, 2018, p.49). Overall, this framework supports increased time spent outdoors, especially in natural environments.

Another potential exosystem influence on outdoor play in the Pre-primary Program is that all students attending Primary to Grade 12 educational institutions, now including the children of the Pre-primary Program, are covered for student accident insurance under the Nova Scotia School Insurance Program (SIP) (SSQ Financial Group, 2017). Although this program includes children younger than five years old, the Canadian Standards Association (CSA) has rated most of the playgrounds across the province as only being safe for children aged five to 12 years old (Halifax Regional Centre for Education, 2018, June 25). This has resulted in the Pre-primary Program being unable to use the school's playground equipment in most schools. Although this has been a topic of debate in the local media, it should be noted that the curriculum framework encourages the use of natural play spaces rather than equipment.

Macrosystem and chronosystem. The final system levels mentioned within the existing

literature that explore the barriers to outdoor play is the macrosystem, which consists of societal beliefs/ideologies, and the chronosystem, which refers to changes that occur over time (Bronfenbrenner, 1994). As previously mentioned, some parents fear for their child's safety when playing outdoors, which is sometimes also reflected in early childhood education settings as ECEs try to avoid litigation issues. This reflects the 'surplus safety' framework that has become apparent within today's society. The term surplus safety is used to refer to "the excessive measures adults take to prevent an injury from occurring, no matter how minor, regardless of whether the injury has any enduring negative (or positive) impacts and regardless of cost" (Wyver et al., 2010, p. 264). This surplus safety is represented through the previously mentioned rise in perceived litigious culture (Bundy et al., 2009; Kernan & Devine, 2010; Little, Sandseter, & Wyver, 2012; Little & Wyver, 2008; Sandseter & Sando, 2016), and is often perpetuated by the media which repeatedly exhibits frightening news stories such as child abductions and severe playground accidents (Little, 2015).

In addition to the rise of safety concerns throughout society has been a rise in the presence and use of technology. Children are growing up in a time where children are six times more likely to play video games than to ride a bike (Cauchon, 2005). One study that collected daily diaries from parents found that three- to five-year-old children were spending significantly more time engaging with technology at home on a daily basis than they were playing outside (Slutsky & DeShetler, 2017). The presence of technology has increased in homes (Clements, 2004) and become a part of daily life for most children (Slutsky & DeShetler, 2017). Technology has infiltrated not only most of today's homes, but also early childhood education settings as a means of bringing enjoyment to the children and also as an instructional tool (i.e. audio/visual aids) (NAEYC, 2012; Simon, Nemeth, & McManis, 2013). Overall, technology, especially

television and computer games, are increasingly consuming children's attention and time (Clements, 2004; Slutsky & DeShetler, 2017).

The Current Study

Based on the existing literature, various barriers to outdoor play exist across system levels, including parents' and ECEs' perceptions of outdoor play, which may influence how the outdoor play component of the curriculum framework is implemented within the Pre-primary Program. In addition, the Pre-primary Program is uniquely situated within a school environment, subjecting the program to other influences such as the Nova Scotia School Insurance Program (SIP), potential conflict between the curriculum approaches of the Pre-primary Program and school related to outdoor play, and additional perceptions of outdoor play held by stakeholders involved.

Exploring how outdoor play is facilitated within the Pre-primary Program in Nova Scotia is critical as outdoor play has been associated with significant benefits for children. By investigating the outdoor play perceptions held by various members of the school community, which outdoor play practices are being implemented within the Pre-primary Program and what factors were key to enabling their implementation, potential strategies to overcoming barriers will be identified. By identifying potential strategies, more Pre-primary Program sites may be able to actualize outdoor play as outlined by the Nova Scotia Early Learning Curriculum Framework. Accordingly, the objectives of this study are to: 1) Identify the various perceptions of outdoor play within the school community; 2) explore what outdoor play practices are being implemented at the Pre-primary Program; and 3) determine what factors enabled the identified outdoor play practices to occur at the Pre-primary Program.

Chapter 3

Methods

The aim of this qualitative research study was to explore how the outdoor play component of the curriculum framework is being applied in a Pre-primary Program site in Nova Scotia. This study collected information surrounding the perceptions of outdoor play and how outdoor play practices are being implemented within the Pre-primary Program through focus groups and interviews with relevant members of the school community, photographs of the outdoor play area, and relevant documentation. A thematic analysis of the discussions, photographs, and documentation was conducted to respond to the study objectives.

Methodology

This research study followed a qualitative, exploratory, embedded, single-case study design. Case study research is a research method that allows the researcher to acquire an in-depth understanding of a particular, contemporary “case” while retaining a “holistic and real-world perspective” (p. 9) (Yin, 2018). Case studies are typically employed when the researcher’s question(s) revolve around ‘how’ and/or ‘why’ and when the study does not require the researcher to manipulate any events (Yin, 2018). The objectives of this study sought to answer ‘how’ questions without any manipulations, and because there is currently little knowledge surrounding the implementation of outdoor play in the Pre-primary Program in the existing literature due to the novelty of the program, a qualitative, exploratory case study approach was deemed appropriate. This is supported by John Gerring's (2006) statement that:

Sometimes, in-depth knowledge of an individual example is more helpful than fleeting knowledge about a larger number of examples. We gain better understanding of the whole by focusing on a key part (p. 1).

The embedded component of the selected research design is related to the focus of the case study. The “case” is the entity of focus in this type of research (Yin, 2018), and for this study it was an elementary school within Nova Scotia that also serves as a Pre-primary Program site. An embedded case study can involve units of analysis from different levels (also referred to as subunits) (Yin, 2018), which applies to the current research study as data were collected from different system levels that correspond with Bronfenbrenner’s ecological systems theory.

This choice in case study research design reflects an interpretive research paradigm. Interpretivism (or constructivism) ontologically believes there to be multiple realities as reality is socially constructed, subjective and susceptible to change (Wahyuni, 2012). In accordance with this ontological belief, studies following an interpretive research paradigm such as the current study reject the idea of a single truth and seek to understand the reality of events within the context that they occur (Wahyuni, 2012). Data collection in this form of research focuses on uncovering the participants’ perspectives around certain events, with data being influenced by the researcher’s and the participants’ own experiences and values (Wahyuni, 2012).

Case Selection

A Pre-primary Program site in Nova Scotia was chosen using a purposive sampling method. In an effort to uncover how barriers to outdoor play can be overcome, the ideal case site was a Pre-primary Program site that had been identified as implementing outdoor play according to the Nova Scotia Early Learning Curriculum Framework especially well compared to other sites. Site recommendations were sought from the Department of Education and Early Childhood Development as well as other relevant professionals who have experience with the various Pre-primary Program sites and their outdoor play practices.

The case site was ultimately selected based on recommendations surrounding the quality

of outdoor play, however location within the province was also considered. Although more than one site was recommended, the site that was more feasible was chosen given time and funding constraints.

Data Collection

Case studies allow the researcher to obtain in-depth understandings through the use of multiple data sources. Case study researchers are encouraged to use as many data sources that make sense for their research question(s) as possible in order to fully explore and understand their case, with no forms of data sources being deemed better than others (Yin, 2018). With that in mind, the current study employed three methods of data collection: 1) Focus groups/interviews; 2) photographs; and 3) documentation.

Semi-structured focus groups and interviews were conducted with participants, allowing them the opportunity to provide their own explanations and personal views surrounding the identified topic (Krueger & Casey, 2014; Yin, 2018). The semi-structured approach was selected to ensure the key research questions were targeted while still allowing for flexibility within discussion much like an unstructured approach (Bryman, 2016). Probes were also used to provide general guidance for the discussion in the direction of the study's objectives and the questions and probes differed according to each participant type. See Appendix A for the focus group script and Appendix B for the interview script.

In addition to focus groups and interviews, photographs and documentation were collected from the case site. Photographs and documentation provided a better understanding of the outdoor play environment and materials and provided context for the information that arose in the focus groups and interviews (Ray & Smith, 2012).

Focus group/interview participants. Following a case study approach, this study

gathered information from identified key stakeholders in the school community that may have some role/stake in the Pre-primary Program. Gathering information from individuals of various roles established a more comprehensive understanding of the case. Originally, the identified stakeholders included the Pre-primary Program ECEs and facilitators, the school teachers and the school principal. Through discussions with those involved in the selected Pre-primary Program site, this list of stakeholders was expanded to include a development specialist from the Nova Scotia Department of Education and Early Childhood Development (DEECD) and a regional manager and physical activity consultant from the Nova Scotia Department of Communities, Culture and Heritage (CCH). These individuals had been identified as individuals with relevant information to contribute and were therefore invited to participate in individual interviews.

Participants were required to be a current member of a group from the school community, or a stakeholder identified by the school community, and be the age of majority in order to take part in this study. Their ability to participate in the study according to these criteria was determined upon first contact when demonstrating interest in participating.

Focus groups/interview recruitment. Because the research was conducted within a school, clearance and consent was required from the selected Regional Centre for Education and the selected school's principal. Contact was first made with the Regional Centre for Education in accordance with their research approval process. Following permission, the principal of the site of interest was asked for their willingness to support the study, as the principals are responsible for the school building and what events take place within. This initial email of request and attached information letter (Appendix C) to the principal provided them with information surrounding the purpose for the research, methods, and ethical considerations.

Following approval from the Regional Centre for Education, ECEs, the Pre-primary

Program facilitators, the principal, school teachers, and government staff (i.e. CCH and DEECD staff) were recruited for participation. Two focus groups were conducted, one for the ECEs and one for the school teachers. Two ECEs and two school teachers chose to participate in their designated focus groups. Individual interviews were conducted for the Pre-primary Program facilitators, school principal and government staff as these are mostly individual positions within the Pre-primary Program and school community. Both of the Pre-primary Program facilitators, the school principal, the DEECD development specialist, and CCH regional manager and physical activity consultant chose to participate in an interview.

The ECEs, Pre-primary Program facilitators, school teachers, principal, and government staff were recruited for participation through information letters (Appendix D) describing the research and inviting them to participate. For the ECEs, Pre-primary Program facilitators, principal and government staff, initial contact and sharing of the information letter was conducted through email. For recruiting school teachers, information letters and a verbal explanation of the research and invitation were presented to the teachers at the beginning of a staff meeting as this was deemed the preferred recruitment method by the principal. In-person recruitment was ideal as any questions were directly answered and comfort may have been established for participants by having met the researcher prior to focus group participation.

Individuals recruited were made aware on their information letter that their participation would result in a chance to win one of three \$25 gift cards in a draw at the end of the data collection process. This draw included all participants from all of the focus groups and interviews.

Focus group/interview data collection process. The focus groups and interviews ranged between 20 and 60 minutes in length. All discussions were recorded using an audio-recorder,

after having received permission by the participants, as well as through field notes. Focus groups and interviews were conducted on school property, at Mount Saint Vincent University, or over the telephone and scheduled for a time that was convenient to participants.

Photographs. Photographs of the designated outdoor play spaces, even if they are only used occasionally, were taken without children visible. This process was guided by both of the Pre-primary Program ECEs immediately following their focus group, and they both provided contextual information such as what different outdoor spaces are used for and how often they are used.

Document review. The ECEs and principal were asked for documentation that could include learning stories, meeting notes, and any other relevant pieces of information that have to do with the Pre-primary Program and outdoor play. The ECEs provided copies of learning stories and the principal provided links to external resources covering the topic of outdoor play that had been used by the school.

Analysis

As this is an exploratory case study, analysis followed an inductive analytic strategy by working with the data “from the ground up” (Yin, 2018, p. 169). Audio-recordings were transcribed verbatim using Express Scribe Transcription NCH software. All transcripts, photographs, documents, and field notes were managed and analyzed with assistance from the NVivo software program.

Thematic analysis was completed for all transcripts, photographs, documents, and field notes, using open coding to inductively identify emerging codes (Yin, 2018). Thematic analysis was conducted following the six phases of thematic analysis described by Braun and Clarke (2006). Once data collection was complete, the data was read to identify and make memos of any

emerging themes. Once a general idea of the data contents had been obtained, systematic coding of the data began. These codes were then sorted and grouped into themes, and the themes were then revised and adjusted as necessary. Upon accepting the data groupings, the themes were analysed, providing a name, definition, and narrative for each theme. Analysis and presentation of the results include embedded extracts of the data throughout the analytic narrative.

Ethical Considerations

This study received ethics approval from the Mount Saint Vincent University Research Ethics Board (UREB). Before initiating any focus groups or interviews, participants were provided an information letter (Appendix D) outlining the research study, the details of their participation, and the risks and benefits of their participation. The information letter also emphasized that their participation is voluntary and there would be no consequences should they refuse to answer any questions or leave the discussion at any time. Participants were required to provide a signed consent form (Appendix D) prior to the start of any interview or focus group (or oral consent, for interviews completed over the phone).

In order to protect the privacy and confidentiality of participants and the school community, no identifying information was collected throughout this case study. This included ensuring no individuals were captured within the photographs taken of the outdoor environment. Any identifying information shared during focus groups and interviews was de-identified during the transcription process so as to not be included in the report. Due to the nature of focus groups, confidentiality could not be guaranteed, however, participants were required to sign a confidentiality agreement (Appendix E) which indicated that information shared during the focus group should remain confidential. Paper data was stored in one of the co-supervisor's locked filing cabinets and all other data (i.e. audio recordings, photographs) were stored on a password-

protected computer.

Chapter 4

Results

The Site

For this single case study, the researcher selected an elementary school with a Pre-primary Program in Nova Scotia that has been identified as implementing outdoor play according to the Nova Scotia Early Learning Curriculum Framework especially well compared to other sites. The site selected is an elementary school that serves approximately 150 students from Pre-primary to Grade Six in a small, rural community in Nova Scotia. The site's Pre-primary Program includes two ECEs and 19 children.

Participants

The Pre-primary Program's two Early Childhood Educators (ECEs), two Pre-primary Program facilitators, two school teachers, the school principal, a development specialist from the Nova Scotia Department of Education and Early Childhood Development (EECD) and a regional manager and physical activity consultant from the Nova Scotia Department of Communities, Culture and Heritage (CCH) were recruited and participated in focus groups or interviews.

Both ECEs working at the Pre-primary Program graduated from early childhood education college programs and worked in various education settings and positions. One of the ECEs has been working at this Pre-primary Program site since its beginning in September 2017, and the other ECE joined the site Fall 2018, just over three months prior to the focus group.

Similar to the ECEs, the development specialist and both Pre-primary Program facilitators have completed either a diploma, degree or both in early childhood education/child and youth study and have years of experience working in the field. Both facilitators also have a degree in elementary education. The development specialist indicated having various roles

around the Pre-primary Program including the delivery of materials and equipment for sites and communicating with Pre-primary Program leads/facilitators. The Pre-primary Program facilitators explained that their role largely includes supporting the Pre-primary Program ECEs (i.e. programming support, providing materials).

Regarding the school staff participants, the principal completed a teaching degree and worked as a teacher and principal at the junior high/high school level before beginning at the current elementary school five years ago. The two teachers involved in the focus group also have a teaching degree and have a mixture of experience teaching elementary to high school levels. Both teachers currently teach early elementary.

The CCH regional manager and physical activity consultant both explained that their positions include providing on-going support to a community organization that focuses on supporting physical activity and outdoor play, ultimately working to build capacity around outdoor play implementation in the site's region.

Throughout the presentation of results, participants will be referred to using participant category names in an effort to preserve their anonymity. See Table 1 for a description of the participant categories that will be used and a list of which participants are included in each category.

Table 1

Participant Categories' Included Participants and Descriptions

Participant Category	Included Participants	Description
Pre-primary Program Participants	The Pre-primary Program ECEs and facilitators	Participants who work directly with the Pre-primary Program, either on- or off-site.
School Participants	The school principal and teachers	Participants who work on-site for the selected school.
External Participants	The development specialist working for the Department of Education and Early Childhood Development and the regional manager and physical activity consultant working for the Department of Communities, Culture, and Heritage.	Participants who do not work directly with the selected school or the Pre-primary Program on a regular basis.

Through conversations with these participants, photographs of the outdoor spaces, and review of relevant documents provided by Pre-primary Program and school participants, information surrounding the implementation of outdoor play at this Pre-primary Program site was documented. Information was provided about the outdoor play spaces, activities engaged in by the Pre-primary Program, and factors that could have contributed to the ability to engage in the identified activities.

Outdoor Play Spaces

The following information regarding outdoor play spaces was compiled based on a tour (guided by the ECEs) of the outdoor play spaces to take photographs and discussions had with the Pre-primary Program and school participants,

The outdoor play spaces at this site includes a volleyball court, basketball court, soccer field, manufactured playground equipment areas, multiple raised garden boxes that grow a variety of produce, and a large wooded area. The Pre-primary Program children and ECEs use all of the on-site outdoor play spaces with the exception of the manufactured equipment zones.

The most actively used outdoor play space at the site for both the Pre-primary Program children and the school students is the wooded area. This wooded area was first introduced as a play space for students almost five years ago, an initiative that was led by the current school principal. To make the densely wooded area more conducive to play and movement between the trees, students from a local community college thinned out the area. Since then, the school students have been permitted to play in the wooded area and, since the introduction of the program in September of 2017, the area has been shared with the Pre-primary Program children.

Throughout the wooded area is a gravel trail that was introduced by the Parent Teacher Association that is used for cross-country running (see Figure 1), a slackline, tree logs of varying lengths (left behind by the community college students' thinning work), tires, tree stumps, and old Christmas trees donated by members of the community. See Figure 2 for a photograph showing some of these items. Along the property line at the back of the wooded area runs a brook with a small bridge (see Figure 3) leading to a neighboring house. The brook is considered off-limits to the Pre-primary Program children as the ECEs have assessed it to be more of a hazard than a fun play opportunity. The water is described as "stagnant" and overly grassy which could get tangled with the children's feet. See Figure 4 for a general map of the site's property, not to scale.



Figure 1. Beginning of the gravel trail. December 13, 2018. Photo by Brenna Richard.



Figure 2. Tires, logs, stumps and sticks found within the wooded area. December 13, 2018. Photo by Brenna Richard.



Figure 3. The brook and small bridge along the back of the school's property. December 13, 2018. Photo by Brenna Richard.



Figure 4. Map of site's property.

Outdoor Play Activities

Discussions with the Pre-primary Program and school participants provided the following information regarding outdoor play activities engaged in by the Pre-primary Program ECEs and children.

The Pre-primary Program ECEs and children typically spend about an hour outdoors morning and afternoon unless the weather conditions are particularly cold and/or wet. During the warmer months, the ECEs and children will spend the majority of their day outdoors. The

outdoor play spaces they choose to access also vary according to the weather conditions. For example, during the warmer months the ECEs and children will load up their wagon with balls, chalk, art activities and other supplies to bring over to the volleyball court, basketball court, and field area which are all adjacent to each other. The volleyball court is used less during cold months as the sand is frozen and not as engaging. Other weather-related activities that the Pre-primary Program children and ECEs engage in includes sledding, playing in the puddles (especially a large mud puddle located by the field) and looking for worms and salamanders during wet conditions.

“...depending on the weather we do, look under the rocks. “Are there salamanders? Are they awake? Are they going to sleep? What can we find?” right? Those kinds of things on a rainy day “let’s find the puddles where’s the worms” right?” [Pre-primary Program Participant]

For the most part, the Pre-primary Program children play in the woods exploring, building, and creating with loose parts. One of the class’ favourite activities includes walking around with sticks and banging the sticks against trees. The children also collect natural loose parts such as acorns, push tires up the hill, play in and add to the large log structures made by the older students at the school, and play with the manufactured loose parts from their storage shed such as pots and pans. The Pre-primary Program participants often used the term “imaginative” when describing the children’s loose parts play; for example, participants shared stories of the children pretending that rocks were cellphones and that a stick was a rake.

“They had the old fash—I call them old fashion cellphones yesterday. They had rocks like this, like the size of a grapefruit and they were pretending it was their cellphones!” [Pre-primary Program Participant]

“...she literally found a stick and it had like three prongs kind of on the end... she used that as her rake. And she raked the path. She was at that like half an hour. Clearing the whole path back and forth.” [Pre-primary Program Participant]

Along with loose parts play the Pre-primary Program children engage in risky play. The children are provided with opportunities to experience freedom, whether running through the field, exploring the wooded area freely (guided by established boundaries), or hiding amongst the trees and shrubs. Despite the Pre-primary Program and school participants commenting that much of the trees on-site are not highly conducive for climbing, the Pre-primary Program children have managed to find a select number of trees which they enjoy climbing (see Figures 5 & 6). The Pre-primary Program staff also provide guidance and engage the children in playing with real tools, including hammers, saws, and screwdrivers which they use to build.



Figure 5. A tree used for climbing by the Pre-primary Program children. December 13, 2018. Photo by Brenna Richard.



Figure 6. A tree used for climbing by the Pre-primary Program children. Circled is one of the used footholds. December 13, 2018. Photo by Brenna Richard.

The Pre-primary Program participants also “guide” some activities with the children. These guided opportunities are provided based on the children’s interests. No child is required to participate should they not want to, although the Pre-primary Program participants commented

that the majority typically participate consistently. Some of these opportunities include bringing the children for guided walks and engaging them in examining bark, pine needles or fungi.

“...so I said “okay we’re gonna do a marching parade. Everybody go find something from the woods” so we marched all around the field. They had sticks they had—we basically—I had a pretend guitar and we were just singing in the rain you know? How often would they get to do that?” [Pre-primary Program Participant]

Many of these guided activities involve either bringing the outdoors into the classroom or vice versa. The Pre-primary Program participants bring the outdoors in the classroom by using natural elements for classroom decorations; for example, their birthday wall is made of cut up grape vines. The children are also engaged in bringing the outdoors inside by having them collect natural loose parts for art projects (i.e. making ornaments, twig art) and by bringing in creatures that they have found outdoors as a class to observe and discuss before returning the creature to its natural habitat (i.e. salamanders, tadpoles). Just as the outdoors is brought into the classroom, activities typically thought to be done in the classroom are often brought outside. This has included bringing art supplies and/or snacks outdoors, as well as activities such as the following example:

“...we made salt dough together, and then they took it outside and put it on the trees and found things in the environment to make the faces with the salt dough on the trees.” [Pre-primary Program Participant]

Outdoor Play Influencers

The collected data from participants, photographs and documents also provided implicit referencing to identify factors that would have influenced the identified activities: 1) Outdoor play, including loose parts and risky play, is valued; 2) outdoor play is promoted and engaged in by others; 3) space and resources are available; 4) communication and engagement happens; 5) leaders are integral; and 6) partnerships and collaboration are essential.

Outdoor play, including loose parts and risky play, is valued. Participants were asked

what outdoor play meant to them and how they think it may influence the Pre-primary Program children as they learn and grow. Participants were also asked more specifically about how loose parts and risky play may have a role in outdoor play and in influencing children's development. The following section explores how participants described outdoor play, loose parts, and risky play. Through discussions, participants also offered their own thoughts as to how they believe the Pre-primary Program children and the children's guardians feel about the outdoor play practices occurring at the site, which will be included in the following section.

Outdoor play. Participants described outdoor play as being the opportunity for children to engage in internally-motivated activities and explore in, or near, nature with exposure to fresh air and access to space to move. A few participants described the outdoor environment as being “a second classroom”.

“I guess it's the chance for the children to go outside to explore all sorts of, different things... for me, outdoor play is like having another classroom, in this program.” [Pre-primary Program Participant]

Participants explained that outdoor play is associated with numerous learning opportunities and benefits to children's overall development. Participants indicated that outdoor play encourages children to be more active and offers more unique opportunities for gross motor skill and physical literacy development than indoor play. A couple of participants even expressed that outdoor play helps children with future academic concepts such as math.

Overall, participants often referred to the opportunity they have to help “re-introduce” outdoor play into the lives of children. Many participants reflected on their own positive experiences growing up playing outdoors and indicated their on-going desire to provide similar experiences to today's children.

“I think of how I played like I literally got up every day and went to my friends' we knocked on the door... we went in the woods we built tree forts we cut up worms we dug

in the dirt we ran we rode our bikes... I think we have to just go back to the basics and teach children how to enjoy the environment around them” [Pre-primary Program participant]

When asked more specifically about loose parts and risky play, participants responded without hesitation that they are components of outdoor play that provide their own unique benefits.

Loose parts. When asked specifically about loose parts, participants commonly described loose parts as manipulable objects that hold multiple functions. Participants elaborated that loose parts may be manufactured or natural, however Pre-primary Program and school participants noted that natural loose parts are preferred over manufactured at their site. Some examples of loose parts that were identified by participants include tires, cable spools, sticks, rocks, blocks, wood stumps, gutters, and drainage pipes.

“...oh loose parts is anything from, blocks to woods stumps to any kind of material that can be used in multiple different ways that they can change that they can not necessarily use for their original purpose like tires” [External Participant]

Loose parts were further described by participants as the “tools for learning” that provide endless opportunities for children to use their creativity and imagination. Through play with loose parts participants explained that children interact with their peers more, resulting in practicing and improving their language skills and social skills such as how to share, negotiate and cooperate with others. Participants indicated that loose parts not only offer these opportunities for skill development more so than typical manufactured playground structures but provide children with more entertainment overall.

“We often think of having single-focused or minimal-focused materials outside such as large climbers... but what the research will actually support is that having more open-ended materials that they can interact with as they see appropriate is more—is better for them developmentally and allows them greater opportunities to develop all their skills in all areas of development” [External Participant]

Risky play. When asked specifically about risky play, participants often described risky play as activities that may cause children feelings of fear but provide them with opportunities to test their personal boundaries, physically and/or emotionally. A few of the participants pointed out that what is risky for one child may not be for another. Examples of risky play from participants include climbing trees and rocks, playing with real tools such as saws and hammers, and jumping off of boulders.

“...to me risky play... is when you’re choosing to do something that gives you a little bit of butterflies in your tummy. And you’re a little bit nervous to do it, but you really wanna do it anyways” [Pre-primary Program Participant]

“...for one child risky play could be climbing up on a stump that they’ve never climbed up on before and then jumping down because to them there’s some risk involved it’s something that they’ve never done they’re learning new skills...but for another child it could be climbing to the second branch of a tree.” [External Participant]

While voicing their thoughts on risky play, participants commonly compared the concepts of ‘risk’ and ‘hazard’ by explaining that it is not risky play that is dangerous, it is hazards that are dangerous and need to be avoided/removed from the play environment.

“...hazard is if we allow them to try and climb that big rock, where there’s a lot of sharp jagged edges and if they slide and fall off the rock there’s things protruding from the ground that they could hurt themselves on... risk is the butterflies in your belly that little bit of excitement that little bit of fear, but you still conquer it, and hazard is like actual dangerous things around right? Broken glass, concrete chunks...” [Pre-primary Program Participant]

A couple of the Pre-primary Program and external participants also noted that they prefer to call risky play ‘adventurous play’ as the term ‘risky play’ has been stigmatized and associated with negative or harmful outcomes.

“So like I use the word risky but generally in our team we try to use adventurous because, yes there’s a degree of risk to adventure I don’t love how parents feel like I’m putting their children at risk.” [Pre-primary Program Participant]

Similar to loose parts, risky play was described by the participants to be responsible for

some of the benefits accrued from playing outside. Participants indicated that risky play helps children to learn how to move their bodies, make decisions, take risks safely and develop confidence. Risky play was also described by participants as being associated with the development of problem-solving skills and self-regulation.

“...there's so much to learn outside! You know? Like climbing a tree isn't just climbing a tree it's "where do I put my foot? Am I touching in three places at all times? Am I looking at my environment to make sure that if I get high up and I fall, am I gonna fall and hit my head on this rock or is it kind of a safe space to—to do that climb?", right? "Are my friends being respectful of the space around me?" right? "Do I need help? If I can't do it myself do I get to do it?" right? Like there's all those pieces that come into play, and "when I get up the tree, look at how the world looks different! What do I see, what do I hear?" right? So it's not just that physical experience but it's all those other pieces that come with it that you don't get inside.” [Pre-primary Program Participant]

Children appear to value outdoor play. In addition to explaining their own thoughts and feelings, participants offered insight on their perspective of how the Pre-primary Program children and the children’s guardians feel about the ongoing outdoor play practices at the Pre-primary Program. Some of the Pre-primary Program and school participants noted that the children do not complain about being bored and rather appear to be enjoying the available loose parts, exploring the log forts built by the older students, and engaging in a variety of the play opportunities including puddle jumping and tree climbing.

“There wouldn't be one time where a child would come up and say “I'm bored”.” [Pre-primary Program Participant]

“...they were ecstatic to be in this big puddle and it was just fun to watch them you know it was only about four—four or five inches deep but, you'd think they were up to their necks in water and just playing and splashing” [School Participant]

“It makes me laugh cause that's what it's—they get up there and they're having the time of their life you know” [Pre-primary Program Participant, re: tree climbing]

Although the participants expressed that they believe the children are enjoying their play opportunities, Pre-primary Program participants have heard the children voice that they look

forward to having access to the manufactured playground equipment once they are in Primary. The Pre-primary Program participants also recognized that although some children were eager for time outdoors since the first day they began at the Pre-primary Program, not all children felt as comfortable playing outside, which they indicated is perhaps due to not being used to being outside in various weather conditions or not possessing the same level of play skills. Despite this, Pre-primary Program participants noticed that even the children who were initially challenged by outdoor play appear to have become more comfortable playing outside as the year has progressed.

“I think our kids thrive and there are kids that—that weren’t comfortable with it probably at the beginning of the year and they were getting more comfortable with it because it’s not often that we’re inside” [Pre-primary Program Participant]

“We are seeing children coming into programs who are—are not able to play don’t have that skill yet, playing indoors is one set of skills playing outdoors is a whole other set of skills” [Pre-primary Program Participant]

Guardians appear to value outdoor play. According to Pre-primary Program and school participants, the children’s guardians similarly appear to be enjoying the presented outdoor play opportunities, including the loose parts and risky play. Pre-primary Program and school participants indicated that they perceive the guardians as “happy”, “excited”, and “appreciative” of the implemented outdoor play practices, and that they have been supportive despite occasional accidents (i.e. scrapes, bruises) or children’s clothes becoming dirty from play.

“Parents seem to be, quite okay and understanding with the fact that kids get hurt” [School Participant]

“Super supportive no complaints when the bags of wet muddy clothes coming home, joy over seeing the pictures of the—we have a couple of really muddy pictures of kids from jumping in a—like a muddy puddle” [Pre-primary Program Participant]

The Pre-primary Program participants have even heard some guardians considering integrating loose parts into their own backyards so their child can continue to enjoy the same

type of play at home.

“If anything I’ll hear the parents saying “oh maybe I should look at having an old tire brought to my yard” so you know so-and-so can roll it down their hill.” [Pre-primary Program Participant]

Outdoor play is promoted and engaged in by others. Participants indicated through conversations that different aspects of the identified Pre-primary Program outdoor play practices are being practiced and promoted by the rest of the school as well as off-site in the community itself.

Based on conversations with Pre-primary Program and school participants, there are some differences in outdoor play between the Pre-primary Program and the rest of the school, including when they go outside and what their outdoor play entails. For example, these participants explained that the school students spend less time outside on a daily basis than the Pre-primary Program children, which was perceived by participants to be due to more rigid schedules of academic lessons typical of most schools. Although there are some indicated differences in the outdoor play practices of the school students and Pre-primary Program children, there were multiple described similarities. An external participant expressed that they believe sites generally have large differences in outdoor play practices between the Pre-primary Program and the rest of the school, and this could be a challenge as the Pre-primary Program’s outdoor play may not be as supported. However, a Pre-primary Program participant suggested that there are perhaps more similarities between the two groups at this site compared to others.

“...my sense is that the larger school community has their own idea of what education and curriculum outcomes are and it varies quite drastically from the Pre-primary Program curriculum and play-based learning... and so my sense is in some sites it’s a hinderance to the Pre-primary’s ability to do outdoor play when the larger school environment doesn’t necessarily support it.” [External Participant]

“...again not as much as some other sites. Yes there are a few other things” [Pre-primary Program Participant, Re: outdoor play practices of Pre-primary Program versus rest of school]

Pre-primary Program and school participants explained that the entire school tries to go outside in a variety of weather and that school staff encourage the students to dress appropriately. Both Pre-primary Program and school participants indicated that the students also engage in similar outdoor play practices as the Pre-primary Program children when they are out in the wooded area. These participants noted that the students tend to avoid the manufactured equipment structures and instead show a preference for the wooded area, spending most of their time building large forts with the available loose parts.

“When I look out [laughing] it’s only the Primaries on the playground equipment at lunch time. The rest of them are all in the woods because they don’t care about the playground equipment, they want to be in the woods” [Pre-primary Program Participant]

Outdoor play is further promoted during the school day through teachers bringing their physical education and academic lessons and activities outdoors. Pre-primary Program and school participants shared that some of the physical education classes have been held outdoors, even teaching the students how to build forts and engaging in seasonal activities (i.e. sledding). The school participants reflected on how they too try to create opportunities for their students outside, including the integration of loose parts and nature into lesson plans.

“In the fall for example when the weather was nice and it happened to be our pattern unit we made patterns out of natural things in the woods rather than the pattern blocks that day.” [School Participant]

Documents collected from the principal indicate that the school has also participated in the Canadian initiative “Take Me Outside Day”, a day aimed at increasing awareness about the importance of outdoor education by having participants commit to spending one hour outdoors on October 24 of every year.

One of the Pre-primary Program participants suggested that overall the Pre-primary Program's outdoor play practices have been accepted and easy to engage in, which they indicated to be because of how similar they are to the rest of the school and how the school had already been implementing their practices even before the introduction of the Pre-primary Program.

“So at [site name], we are really fortunate that that was something that was already sort of being implemented so when the educators brought it to the school community they were completely on board” [Pre-primary Program Participant]

Outside of the site, other organizations in the community are working to promote, sustain and/or engage in similar outdoor play practices as those that the Pre-primary Program children and ECEs engage in. External participants shared how part of their role has been to support a community organization through the municipality that has been dedicated to encouraging children's physical activity and outdoor play. Participants shared how this community organization has been responsible for various programs such as an after-school program focused on outdoor play, which many of this site's students have attended in the past, as well as community and professional learning opportunities.

“The Communities, Culture and Heritage staff are—are amazing at—they're really doing a lot of work on promoting risky loose parts play as well” [External Participant]

“A couple of years ago I was actually able to participate in a—there was an opportunity for early childhood educators across the region to come and listen to, various examples of loose parts play in their area” [External Participant]

According to one of the external participants, municipalities from all over the region within which the site is located are introducing more natural play spaces in their communities that include more loose parts and less manufactured playground structures. This participant also mentioned a child care centre in the site's community that has been a “model” in outdoor play, including providing a natural outdoor play space that offers a wide variety of loose parts to

attending children.

“Many of the municipal units in the [site’s region name] are developing natural play spaces and parks and green spaces and playgrounds which often have—or more so these days have loose parts incorporated, taking advantage of the natural play space and less building of structures, or purchasing plastic kind of structures. So we see that happening in communities all around the region” [External Participant]

A few participants indicated believing that structural characteristics of the community have influenced outdoor play at this site as well. These participants suggested that the rural aspect of the community has set the children up for outdoor play success in that they are more likely to have been provided opportunities to engage in risky play and/or have parents who grew up playing outdoors.

“These are rural kids too, their parents I think probably grew up in—playing in the woods and stuff so it’s not so far removed whereas maybe in an inner-city or a town school it may be a bit different but the kids that I’ve seen the outdoor play be really successful are rural—are smaller rural schools that allow the kids—I don’t know maybe to take more risks within a more regulated area.” [School Participant]

Space and resources are available. Both Pre-primary Program and school participants commented on how fortunate this Pre-primary Program site is in terms of the outdoor spaces they have access to, especially the wooded area. Some participants noted that a space similar to the one at this Pre-primary Program site does not necessarily exist at all other Pre-primary Program sites across the province and indicated that they believe this lack of access would be challenging.

“...we are so very lucky in this school to have an amazing outdoor space. And—and that doesn’t happen, in every school and to me that would be the biggest challenges especially for the city schools... how do you create that environment?... Even some of the schools around here I know—I know one of our schools—they had a hard time finding an outdoor space where they could play with the kids that wasn’t just an empty field. Right? Cause an empty field is—you can only—you can only do so much on an empty field, right?” [Pre-primary Program Participant]

Participants indicated that the natural space available provides not just room to move, but

natural loose parts for the children to engage with (i.e. sticks, pinecones). Pre-primary Program and school participants mentioned how their site has also collected loose parts from elsewhere, both natural and manufactured, including old Christmas trees and tires donated by the community, and pots and pans. Pre-primary Program participants indicated that they are not able to leave the manufactured loose parts (except for the tires) in the wooded area when the Pre-primary Program is done for the day, so they were provided with a storage shed.

In addition to space and loose parts, the Pre-primary Program and school participants identified that the Pre-primary Program has been provided with other resources such as rain suits. The rain suits are full one-piece suits that cover the child from head to toe, with the exception of hands and feet. A couple of the Pre-primary Program participants explained that rain suits were something they advocated for and were then provided with a class set. These participants expressed that the rain suits allow play in wet weather and, because the rain suits were provided free of charge to the Pre-primary Program children and avoid dirtying of clothes, they reduce financial and time commitments for the children's guardians.

"...we provide a class suit of muddy buddies [rain suits] the parents do not have to pay for that because that was one of the things we spoke up about last year, was if you want these kids to be doing this then we need to provide the families cause not all families can afford to buy that" [Pre-primary Program Participant]

"...so the children all have access to—to something that protects their clothing when they're outside because that's a huge factor especially in our rural community. I'm sure it would be urban as well honestly but, you know trying to mitigate how much wet and dirt is going home because that's not the parents' job if we put them through that play it's our job to make sure that they're not going home and—and adding too much to the plate of—of the family" [Pre-primary Program Participant]

Communication and engagement happens. Through conversations with the various participants it was indicated that the ECEs hold various roles and responsibilities in the children's outdoor play at this site. This has been indicated by almost all participants to include

communicating with parents, other Pre-primary Program staff, and children about outdoor play expectations and additional communication with children around learning new skills and guidelines for navigating risks versus hazards. Some participants indicated that the ECEs are engaged in the outdoor play through their on-going communication outside as well as through fluctuating their role in play during the time spent outdoors.

The Pre-primary Program participants indicated that they believe the outdoor play practices at this site have been well-received by guardians as a result of the ECEs' communication with guardians about expectations for outdoor play at the program from the very start. They indicated that the ECEs maintain communication with the children's guardians by having learning stories visible, sharing photographs of the children engaging in outdoor play, and sharing information about the children's day with the guardians at pick-up. Pre-primary Program participants explained that pick-up happens outside, which allows guardians to actually see their child engaging in various outdoor play practices, including tree climbing.

“We’ve set ourselves up for success though, cause in all of our communication in the beginning one of the things that we said was “we—we encourage outdoor messy play. Your child is going to get dirty. Their clothes are going to get dirty.” [Pre-primary Program Participant]

A Pre-primary Program participant indicated that one of the ECEs often answers questions from others, including guardians, around outdoor play, and promotes their understanding of the developmental processes and benefits involved in outdoor play. This sharing process was described as being done in a way that was not “too technical”, suggesting that the ECE uses simpler language to allow for better understanding.

“...and they’ll be like “okay but why can’t they go on the playground equipment?” and “what are you gonna do in the woods?” and I’m like “well, here’s the thing. When you’re in the woods these are the actual things that are happening. Well you might just see them running around doing this but this is all of the things that are happening inside their heads when they’re doing those” right?” [Pre-primary Program Participant]

The Pre-primary Program participants described how the ECEs communicating their knowledge around outdoor play extends from guardians to also include other ECEs. One of the ECEs explained that, prior to working at this site, they had never worked in an early learning setting that implemented loose parts and risky play in a similar way. This ECE explained how it was a bit of a challenge adjusting to how the children at the Pre-primary Program played outside and what other Pre-primary Program participants would allow the children to do.

“You know cause part of me was the shock of “what do you mean they’re gonna just run down the hill [laughing] in the woods [ECE name]?” [laughing]. That created some challenges in the beginning I’m like “what do you mean they’re gonna climb up the tree [ECE name]?”.” [Pre-primary Program Participant]

The ECE who joined the site recently explained that although these outdoor play practices were challenging at first and that it took a “mental shift” to get used to them, having the other ECE’s knowledge and experience in outdoor play and their mentorship helped them to overcome this challenge within the past three to four months. Having had time to work together and get to know each other in August before the children started in September was also indicated by the ECEs to be helpful in allowing this mentoring relationship to work.

“So she’s taught me a lot about basically how—really, how—how the program is. Cause it is very new this program. So I feel, coming into the program had it not been for someone with some experience would have way more challenges. I just feel that I just think, you know, you need somewhat of a guidance” [Pre-primary Program Participant]

The ECEs’ communication further extends beyond the guardians and other staff to the children at the Pre-primary Program. Through conversation, the Pre-primary Program participants shared multiple situations in which the ECEs communicated with the children about outdoor play, often about expectations and how expectations differ in Grade Primary. Pre-primary Program participants explained how communication is also used by the ECEs during outdoor play practices as they help children to learn new skills such as tree climbing and working

with real tools, talking them through the necessary steps.

“...yes we’re in the same setting but you just, talk to the kids. Give them the respect and— and of them having that knowledge that you say “you know what next year, you’re in a different room, you have a—you have a teacher. You know, things are different in—in Pre-primary we do this and Primary we do this”.” [Pre-primary Program Participant]

“If you want to climb on that pile of wood look at it. Are they all rickety and mis-matched is it gonna move a bunch when you step on it? Is it wet? Is it slippery?... but it’s talking them through because they have to learn to make those decisions!” [Pre-primary Program Participant]

This communication continues as Pre-primary Program participants indicated that the ECEs provide guidelines for the children, such as how far in the wooded area they can roam, which areas they should avoid, and how to interact with loose parts in ways that hopefully avoid unnecessary injuries.

“They’ve gotten to know the boundaries so we started out the year wearing hi-vis vests and said “if you can’t see us we can’t see you. You need to be able to see what [ECE names] at all times”... so we walked them through the boundaries” [Pre-primary Program Participant]

How the ECEs communicate with the children around learning new skills and guidelines is one of the active roles that the ECEs take in outdoor play. This corresponds with the other role the ECEs are described by participants as having which is promoting safety. Participants described how safety is promoted by the ECEs by communicating guidelines, and also by removing hazards in the environment while still allowing children to engage in risky play.

“we as a team the adults are in charge of ensuring that any risks children are taking are free of hazard” [Pre-primary Program Participant]

The Pre-primary Program participants mentioned that the ECEs are also actively engaged in outdoor play by sometimes stepping in to re-direct play or guide the play themselves. Play re-direction was talked about once in reference to children who stick close to the ECEs rather than engage in play. In terms of guided play, such as looking for salamanders or using salt dough to

make faces on trees, the Pre-primary Program participants specified that this play is “never forced” but that “a lot of them will enjoy it”.

Leaders are integral. Within this site and its surrounding community exists various leaders that have contributed to enabling the identified outdoor play practices to occur. Pre-primary Program and school participants indicated that the principal and physical education teacher at this site were responsible for opening the wooded area to outdoor play about five years ago, which they explained was also associated with a change in outdoor play practices for the school that included more natural elements and independence for the students. One of the school participants indicated that the principal and physical education teacher shared guidelines with school staff and students to ensure everyone was prepared for the new outdoor play practices.

“...our phys ed teacher—gym teacher was integral in taking them out he was one of the ones too who was really keen about opening up our woods for play... he was awesome in of went over, what kind of are the things we need to make sure the students know” [School Participant]

Some of the Pre-primary Program and school participants explained that the principal has taken initiative in the collection of outdoor play materials, demonstrated in examples of the principal reaching out to the community for old Christmas tree donations and dropping off logs from a tree cut down at their own home. According to the participants, the principal demonstrates overall support for the Pre-primary Program by visiting the Pre-primary Program class both indoors and outdoors.

Leadership is additionally provided by the participants who work with the Pre-primary Program from an off-site position. The Pre-primary Program participants indicated that the Pre-primary Program facilitator provides them with guidance around outdoor play, and the facilitator’s role was described by one of the Pre-primary Program participants to involve checking in with the ECEs to make sure they feel supported, are engaging the children outdoors,

and have the tools they need to continue this engagement. A Pre-primary Program participant also indicated that the facilitator takes on a role of helping to educate others in the community if there are concerns with the outdoor play practices occurring at the Pre-primary Program.

“So, talking about how to implement those things outdoors checking in with ECEs on what they need what they are you know uncomfortable with what they need support in, I’m basically there to facilitate all of those things for them and—and make sure that they’re implementing them as equally as indoor and outdoor.” [Pre-primary Program Participant]

Partnerships and collaboration are essential. As stated by one of the external participants, *“the partnership between Community, Sport and Recreation and Education and Early Childhood Development is essential”*. Participants indicated that the Pre-primary Program has had a partnership with a community organization that is supported by the Department of CCH. Participants indicated that the community organization and CCH have influenced outdoor play in the community in various ways, but participants emphasized the professional development (PD) training modules around outdoor play that the community organization developed. External participants discussed these modules and provided some description of what they involve:

“...we developed five modules that were designed to help early childhood educators integrate outdoor play within their practice so moving what they’re doing inside the classroom outside the classroom, as well as going over the benefits so how—facilitating a conversation with them to draw out the benefits that the kids are getting and then we move into sort of the adult role and how they can interact in the outdoor environment with the children that they’re working with as well as developing an outdoor play philosophy...” [External Participant]

Pre-primary Program and external participants indicated that this Pre-primary Program site was offered the opportunity to engage in the testing trial of these modules, which a couple of the Pre-primary Program participants attended. Participants who engaged in this training from either a participation or development position shared positive feedback, even calling the training

“fantastic”, and one of the Pre-primary Program participants indicated that they believe it was this training that helped provide them with the skills to educate others about outdoor play.

“...the Pre-primary locations in and of themselves depending on the leadership are doing more and more of that and because we engaged them in the learning opportunities so the staff are feeling prepared and less—less retisent to take play outside” [External Participant]

On top of providing the Pre-primary Program staff with PD training, participants indicated that the community organization has worked closely with the Pre-primary Program to support them and the community in other ways.

“...the municipality really supports us in those conversations so one of the sites we needed to hold a—like a parent night basically where they could talk, ask us all the questions they needed to and the—and two reps from the municipality came and they ran an evening and we really unpacked some interesting stuff with that community and it went really well so, we have a lot of support that ECEs can email all their reps too if they have questions even for just like where property lines are and things like that it’s been really useful” [Pre-primary Program Participant]

Collaboration has also been brought up by participants, specifically within the site between the Pre-primary Program and the rest of the school. Pre-primary Program and school participants indicated that the Pre-primary Program class has been encouraged to attend school activities and are given access to use a variety of school resources.

“...we’re all teachers in our building you get involved and they [the Pre-primary Program] wanted to be part of it—our school and I was like “well of course if you want to” ... they come to different assemblies or different activity days... they can use like the gym when it’s empty the music room whatever they need to do.” [School Participant]

One of the Pre-primary Program participants indicated that they have also tried to include other school students in the Pre-primary Program’s outdoor play activities, whether this is through allowing the school students to join an activity the children are engaging in or even rearranging the Pre-primary Program’s schedule to be outside at the same time so the children can have more opportunities to engage with the students. Pre-primary Program participants noted

that having the children spend time playing outdoors with the older students has introduced the children to what Primary will be like, better preparing them for the later transition.

“...there were a couple of times where, we were outside and the other classes came outside for just some play time I think and we ended up—they ended up engaging in play with us and there was one I remember vividly because we had our tools out... and we let the grade ones come in and—and try the saws” [Pre-primary Program Participant]

Aside from benefiting the children, some participants have indicated that having the Pre-primary Program in the school has allowed for school staff to learn more about outdoor play.

“We talk about risky play like, for sure I would say Pre-primary more than us I’ve learned a lot from them” [School Participant]

Chapter 5

Discussion

The goal of this research study was to explore how the outdoor play component of the curriculum framework is being applied in one of the Pre-primary Program sites in Nova Scotia. The specific objectives of this research were to identify the various perceptions of outdoor play within the school community, explore what outdoor play practices are being implemented at the Pre-primary Program, and determine what factors enabled the identified outdoor play practices to occur. Focus groups and interviews with Pre-primary Program, school and government staff who chose to participate provided insight into their perceptions of outdoor play, the Pre-primary Program children and their guardians' perceptions of outdoor play, the outdoor play practices occurring at the Pre-primary Program, and the factors that may have influenced those outdoor play practices. Although some participants did not work directly at the selected site, these external participants offered key insights to the surrounding community and those community factors that may be influencing the site's outdoor play. Photographs taken during a site visit of the Pre-primary Program's outdoor play spaces and the collection of relevant documents (i.e. learning stories) provided further context regarding the Pre-primary Program's outdoor play practices and spaces.

Outdoor play implementation at this Pre-primary Program site involves the use of many outdoor play spaces, including sporting courts, fields and most importantly, a wooded area. Participants indicated that the Pre-primary Program ECEs and children typically spend an hour outside morning and afternoon every day, in a variety of weather. Based on the information provided by the Pre-primary Program and school participants, the Pre-primary Program ECEs and children spend most of their time engaging in unstructured play in the wooded area that

involves the use of mostly natural loose parts and opportunities for risk-taking through climbing trees and roaming the woods freely. Pre-primary Program and school participants indicated that the ECEs provide opportunities for group activities often centred on the natural elements such as collecting natural loose parts for projects and examining creatures found in the woods.

The following discussion sections will take an-depth look into the factors identified from the narratives provided by participants that may be contributing to the implementation of outdoor play at this site, organized by Bronfenbrenner's ecological systems theory. As previously stated in Chapter 1, Bronfenbrenner's ecological systems theory acknowledges five subsystems that interact to influence an individual's behaviour, in this case the child's outdoor play behaviour. For example, exosystem factors may influence both the mesosystem and microsystem and vice versa. Given the complexity in which elements from various system levels appear to be influencing each other in the results of this case study, an adapted visual of Bronfenbrenner's ecological systems theory is provided to build on the findings of this study (see Figure 7).

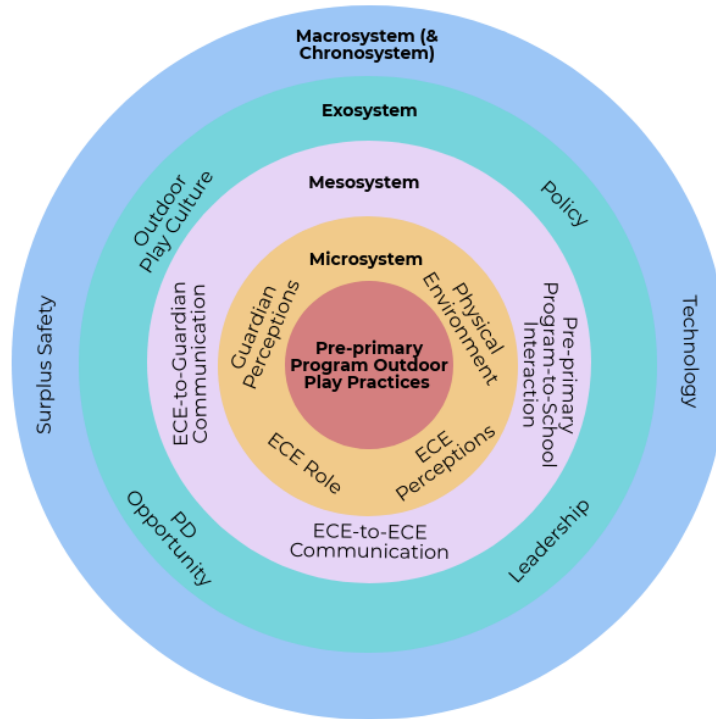


Figure 7. Adapted visual of Bronfenbrenner’s Ecological Systems Theory based on the findings of this study

Microsystem

For this research study, the identified microsystem involves the child’s home and school environments, which include their guardians, the ECEs at the Pre-primary Program, and their surrounding physical environment.

Guardians. Although this study did not include participants who were guardians of the Pre-primary Program children, participants indicated that the children’s guardians appear to value outdoor play, similar to the findings of previous research (Little, 2015; McFarland & Laird, 2018; Tandon, Saelens, & Copeland, 2017). Participants indicated that the guardians demonstrate both appreciation and support, with little voiced concern, for the outdoor play practices being implemented at the Pre-primary Program. This is not reflective of the current literature which finds guardians may demonstrate hesitation to outdoor play, despite seeing the value of these experiences, due to perceived school readiness pressures (Kane, 2016; Lin &

Yawkey, 2013; O’Gorman & Ailwood, 2012) and various safety concerns (i.e. weather, injuries) (Jayasuriya, Williams, Edwards, & Tandon, 2016; Tandon et al., 2017). Some participants attributed the guardians’ positive reactions to outdoor play to the idea that the guardians may have grown up in a similar rural setting engaging in similar outdoor play practices, however this was not able to be confirmed in this study as there were no guardian participants. The ECEs’ communication with guardians (mesosystem) also may influence guardians’ positive reactions.

ECEs. Participants identified that the Pre-primary Program ECEs clearly value outdoor play and believe outdoor play to have numerous benefits to overall child development, similar to the findings of previous research (Ilmeideh & Al-Qaryouti, 2016; Leggett & Newman, 2017; Sandseter, 2012; Tandon et al., 2017). The ECEs’ positive perceptions of outdoor play appear to be not only tied to their knowledge of the benefits of outdoor play, but to their own outdoor play experiences growing up, communication among ECEs (mesosystem), and the professional development opportunity (exosystem).

ECEs’ positive perceptions of outdoor play are put into practice as the ECEs engage with the children outdoors. Rather than feeling the need to resort to a supervisory-role once outdoors like many educators do in similar early learning settings (Bundy et al., 2009; Ilmeideh & Al-Qaryouti, 2016; Leggett & Newman, 2017; McClintic & Petty, 2015), the ECEs at this site maintain engagement with the children in learning opportunities and group activities similar to how they would indoors. Based on the information provided by the Pre-primary Program participants, it appears as though the ECEs engage the children in group activities, risky play, and new skill development without compromising the children’s safety by prioritizing communication with the children. This communication includes the ECEs explaining outdoor play expectations, guidelines and steps to learning new skills with the children. This role

continuity may also be influenced by ECEs' communication with guardians (mesosystem), leadership (exosystem) and the professional development opportunity (exosystem).

Physical environment. As recognized in Nova Scotia's Early Learning Curriculum Framework (Nova Scotia Department of Education & Early Childhood Development, 2018), learning environments are often referred to as the "third teacher" in early learning settings due to the degree to which they influence, and are influenced by, the ECEs and children. Results of this study clearly demonstrate that this site has access to an abundance of natural outdoor space and resources for the Pre-primary Program children and ECEs to engage with thanks to the rural location of the site as well as leadership (exosystem). Participants identified that this space and resource access was a positive aspect of this site as a lack of natural space for outdoor play and loose parts storage is often a challenge for outdoor play implementation, as stated in current literature (Ernst, 2014; Farmer et al., 2017 McClintic & Petty, 2015). Some participants also reported that they believe the rural aspect of the community within which these children live may be having a positive impact on their ability to engage in outdoor play at the Pre-primary Program as well as they believe that these children may have been provided more opportunities to engage in risky play compared to other children their age in more urban communities.

Mesosystem

The mesosystem for this study includes the interactions between the Pre-primary Program children's guardians, the ECEs, and school staff.

ECE-to-guardian communication. As mentioned in the microsystem, communication between the Pre-primary Program children's guardians and ECEs likely has a positive influence on guardians' perceptions and lack of concern regarding outdoor play in this case study. Participants reported that ECEs consistently communicate about the outdoor play practices

occurring at the Pre-primary Program with guardians, not only verbally but also in visual form through learning stories that include photographs, sending photographs home and allowing guardians to see their children engaging in outdoor play during pick-up time. Pre-primary Program participants indicated this communication has been key to having guardians support their outdoor play implementation. This assumption aligns with the results of current literature demonstrating the positive influence of ECE-guardian communication on guardians' support for outdoor play (Tandon, 2016) and play-based learning as a whole (Breathnach, O'Gorman, & Danby, 2016).

Existing research has demonstrated that guardians voicing concerns about outdoor play to ECEs may reinforce ECEs' preoccupation with injury-prevention, limiting outdoor play practices (Sandseter, Little, Ball, Eager, & Brussoni, 2017). According to the participants, guardians at this site have not shared many concerns about the on-going outdoor play practices. Given the lack of voiced concern, it is possible that the Pre-primary Program ECEs feel more at ease to implement outdoor play that includes risky play without switching to a supervisory-role. Participants indicated that on the few occasions where safety concerns have been voiced, these have been addressed through conversations about outdoor play and its risks and benefits, similar to what has been documented in previous research (Sandseter et al., 2017).

ECE-to-ECE communication. Communication among the ECEs was additionally considered by Pre-primary Program participants to be helpful. Some participants noted that having ECEs from various levels of experience might be a challenge for implementing outdoor play. This was a challenge specifically identified at this site, as one of the ECEs' work background involved less experience with risky play and loose parts. One unique contribution of this study is the influence of the relations among ECEs: results show that having an experienced

ECE with communicate their knowledge and experience with loose parts and risky play to the other ECE was integral to a smooth transition to outdoor play. This communication of knowledge between ECEs is further supported by the professional development opportunity (exosystem).

Pre-primary Program-to-school interaction. Interactions between the Pre-primary Program and the school are also perceived as positive. During discussions with Pre-primary Program and school participants it became clear that the Pre-primary Program has been well integrated into the rest of the school and supported by school staff. The Pre-primary Program is encouraged to engage with the rest of the school in activities, both indoors and outdoors, use any available outdoor play spaces (except for the manufactured playground equipment), and is offered support by the principal. An evaluation of the Pre-primary Program in 2018 demonstrated that Pre-primary Program sites that were not well-integrated with the rest of the school often resulted in Pre-primary Program staff feeling disconnected or unwelcomed in the school (Nova Scotia Department of Education & Early Childhood Development, 2019). For this site, integration was not an issue and therefore and the Pre-primary Program ECEs may feel more welcomed and at ease to utilize the available spaces and implement their desired outdoor play practices.

Exosystem

Outdoor play culture. Results of this study show that there are policies, regulations, and external supports influencing the Pre-primary Program children's outdoor play. Some participants mentioned that, from their experience, schools typically employ different and fewer outdoor play practices than the Pre-primary Program. These participants understood that it can be challenging to implement outdoor play practices in a non-supportive school; however, this was

not an issue at this particular site. The results instead point to a surrounding, supportive culture of outdoor play as not only are the Pre-primary Program children and ECEs engaging in and promoting the identified outdoor play practices, but so is the rest of the school members and even surrounding community organizations. Participants reported that the school students and teachers also utilize the wooded area and available loose parts and that one organization in particular has been promoting outdoor play within the community. The importance of culture on outdoor play was similarly reflected in discussions from an outdoor play-focused symposium that was held in Ontario in 2018. Participants considered outdoor play from an ‘ecosystem lens’ and recognized that the actions of stakeholders from various disciplines and sectors do ultimately influence outdoor play progress (Lawson Foundation, 2019). One of the unique contributions of this study is a demonstration of what this ‘ecosystem’, or outdoor play culture, actually looks like.

Professional development opportunity. With one community organization in particular, the Pre-primary Program has engaged in an on-going partnership which has resulted in a unique outdoor play professional development (PD) opportunity. This is important to note as participants indicated that many ECE training courses offered by Canadian educational institutions do not dedicate enough time to educating students on the importance of outdoor play and how to implement it. Participants also explained that, although they have noticed the topic of outdoor play has been gaining momentum across the province in recent years, outdoor play PD opportunities are still difficult to find. This has resulted in a wide range of comfort levels between ECEs when it comes to outdoor play, often depending on where they received their training, their previous work experiences, and if they had access to PD. At this site, one of the ECEs and the Pre-primary Program facilitators were able to engage in the PD offered by the

mentioned community organization and described the opportunity positively. This introduces another unique contribution of this study; results show PD has a positive influence on the microsystem and mesosystem. Participants indicated that the PD provided the ECE with further knowledge and language to help them communicate the benefits of outdoor play with others, including guardians and other ECEs. This influenced the perceptions of outdoor play held by the other ECE and could likely be influencing the perceptions of other school community members and the overall implementation of outdoor play by the Pre-primary Program staff.

Leadership. Within this outdoor play culture there also exists some specific leaders who have influenced the Pre-primary Program's outdoor play in terms of providing space and resources. Results demonstrate that the school's principal and physical education teacher were responsible for opening up the wooded area for play and providing knowledge to other school staff on how to promote independence and natural play with their students. Since then, the principal has continued to play a role in the collection of loose parts for the wooded area. Much of this occurred even before the Pre-primary Program was introduced, but these actions have had a significant influence on producing their most important outdoor play space and loose parts (microsystem). Supporting the idea that the principal and physical education teacher's leadership was important in developing the on-going outdoor play practices is research demonstrating that this type of school-level leadership tends to have a large influence on school improvement efforts, even more than system-level leadership (i.e. directors) (Gurr & Drysdale, 2018).

Further resources have been provided to the Pre-primary Program ECEs and children through the Pre-primary Program facilitators. Part of the facilitator's role involves providing guidance and tools to the ECEs to support their outdoor play implementation, significantly influencing the microsystem as well as the mesosystem. At a microsystem level, the facilitator

ensures the children and ECEs have the supplies they require and guidance to engage in outdoor play activities. This has included providing them with key tools such as rain suits and a loose parts storage shed, helping to overcome weather concerns and lack of loose parts storage which both participants and current research identify as outdoor play implementation challenges (Farmer et al., 2017; Jayasuriya, Williams, Edwards, & Tandon, 2016; Tandon et al., 2017). On a mesosystem level, the facilitator role includes sharing their knowledge on outdoor play to the surrounding community when necessary and helping ECEs to navigate communicating with families about outdoor play and its benefits.

Policy. The Pre-primary Program ECEs and children's outdoor play implementation is influenced by one policy in particular, the School Insurance Policy (SIP). The result of this policy came up during discussions with participants as they explained how the Pre-primary Program children are not allowed to use the manufactured playground equipment available at the school. Due to this policy, the Pre-primary Program ECEs and children must rely on the other available equipment, loose parts, and natural play spaces. However, because of the play-based nature of Nova Scotia's Early Learning Curriculum Framework, this policy seems to be less of an issue for the Pre-primary Program ECEs and children than one may initially believe. This curriculum places an emphasis on natural play spaces and loose parts, shifting away from manufactured playground equipment whether or not this policy exists.

Participants' responses suggest that the Pre-primary Program ECEs and children's outdoor play is not stifled by the School Insurance Policy. The general consensus from participants is that the children are receiving more benefits and enjoyment from the natural environment and loose parts provided at this site and therefore do not need the manufactured equipment, with participants actually preferring that the children do not use the manufactured

equipment for these reasons. Some of the specific developmental benefits that participants mentioned are greater with natural loose parts and risky play compared to manufactured playground equipment include children's use of creativity and development of social skills such as negotiation and cooperation, which is supported by current literature (Bundy et al., 2009; Hinkley, Brown, Carson, & Teychenne, 2018; Nedovic & Morrissey, 2013; Zamani, 2016; Zamani, 2017).

Macrosystem and Chronosystem

Surplus safety. During conversations, many participants discussed societal beliefs/ideologies and the changes over time that have been influencing children's outdoor play. Participants explained their personal perception that children are not provided the freedom to experience the same play opportunities they themselves had experienced growing up. This is similarly reflected in research by Little (2015) in which mothers of four- and five-year-old children expressed feeling that their children's outdoor play was more restricted with more supervision and less freedom to explore compared to the outdoor play they experienced growing up. Participants of this study indicated this was due to multiple factors, including adults' increasing pre-occupation with injury-prevention that has become apparent not just at home but in childcare and school settings. Some participants added that risky play in particular has been stigmatized with many adults believing risky play ultimately leads to injuries, which has resulted in these participants wanting to re-name risky play 'adventurous play'. These comments by participants support the surplus safety framework (Bundy et al., 2009; Kernan & Devine, 2010; Little, Sandseter, & Wyver, 2012; Little & Wyver, 2008; Sandseter & Sando, 2016) and the perceived litigious culture in Canada (Brussoni et al., 2015) that are both reflected in current research.

Technology. Another societal factor that the participants mentioned as negatively influencing outdoor play is increased technology use at home (i.e. iPads), a concern supported by current literature (Clements, 2004; Slutsky & DeShetler, 2017). The Pre-primary Program participants indicated that some of the children began the Pre-primary Program lacking basic play skills and being hesitant about the outdoors, which they attributed to having spent more time playing with technology and less time outdoors and less time playing with other children. Statistics from ParticipACTION (2016; 2018) demonstrating low levels of outdoor play support participants' perception that some of the children are spending less time outdoors.

Despite participants indicating these societal influences apply to the context of Nova Scotia, Pre-primary Program ECEs still manage to embrace outdoor play, including risky play. Based on the results of this study, the various microsystem, mesosystem and exosystem factors identified seem to have moderated these societal influences at this particular site, allowing for outdoor play that involves the natural elements and risk-taking.

Conclusion

The Pre-primary Program site explored in this research study engages in outdoor play characterized by natural elements, risky play, and loose parts. Although participants recognized and confirmed the existence of many outdoor play barriers that have been identified by existing literature, the narratives provided by the participants allude to a number of factors within the micro-, meso-, and exosystem that have likely contributed to enabling this site's outdoor play practices.

Strengths and Limitations

The goal of this research study was to explore how the outdoor play component of the curriculum framework is being applied in one of the Pre-primary Program sites in Nova Scotia.

This research study followed a qualitative, exploratory, embedded, single-case study design, which provided an in-depth understanding of the selected site. The purpose of qualitative research is not to generalize but rather, it allows for a more in-depth understanding of experiences unlike quantitative research, which can then be related to others. Utilizing a qualitative approach was therefore important to best understand the experiences of this case site. The embedded aspect of this research allowed for the collection of information from various members of the school community from the different levels outlined by Bronfenbrenner's ecological systems theory. Speaking with members from different system levels allowed the multiple realities that exist to come together to form a more complete understanding of this site.

Given the importance of understanding the multiple realities that exist within this case site, it would have been beneficial to include input from the Pre-primary Program children and their guardians, as well as teachers from other grades. Although an understanding of the children and their guardians' thoughts were shared by participants, this was from the perspective of those participants. Focus groups or interviews with these children and their families would have more accurately represented their true realities. In terms of teachers, there were only two teachers who chose to participate in the focus group and they were both teaching early elementary grades. Having more teachers and those that represented different grades would have been ideal as early elementary teachers may hold a different perspective on outdoor play compared to those teaching other grades. The teachers who chose to participate also viewed outdoor play positively and therefore may have been more apt to participate in the focus group than other teachers who may view outdoor play more negatively.

Additionally, this research study could have benefited from a multi-case research design, allowing the exploration of how outdoor play is being implemented at various Pre-primary

Program sites across Nova Scotia. Multi-case designs compared to single-case designs have the advantage of providing more robust information (Yin, 2018), however due to limitations in time and resources this was not deemed an appropriate method for a single student researcher.

Limited time and resources were also factors in the decision to not engage in direct observations of the children engaging in outdoor play at the site. Although direct observation provides valuable contextual information, it is also a highly time-consuming process (Yin, 2018).

Within the chosen methods of data collection, focus groups are associated with select limitations and in this case, the focus groups had limited participants. When responding in a group format such as this, participants may have been more prone to experiencing the social desirability bias, referring to the possibility that they may have provided responses that they feel are more culturally popular or acceptable even though this may not match their real thoughts or feelings (Bryman, 2016). In an effort to reduce these limitations, interaction guidelines highlighting the importance of respect and allowing everyone's opinions to be heard were established prior to the beginning of each focus group. The focus groups for this study were also small in size with only two participants in each. Although interaction between participants was observed and led to unique and valuable input, this would have been further enabled with more participants.

Rigor and Trustworthiness

Qualitative research that is of good quality is one in which readers can trust the findings. Trustworthiness was established by conducting this research with rigor, which often refers to the credibility, transferability, and dependability of the research (Bryman, 2016).

Triangulation was achieved in this research study through the use of multiple data collection strategies (i.e. photographs, interviews/focus groups, document review), contributing

to the credibility of this study. Also adding to the credibility, a chain of evidence was maintained by journaling details of the research process along the way to inform the presentation of the methods, and my co-supervisors acted as peer-reviewers throughout the entire process of this study. In terms of data collection, all focus groups and interviews were audio-recorded and transcribed with attention to detail in order to ensure data was collected as accurately as possible.

Addressing the dependability of this research, details of the data collection and analysis process (i.e. adding participants) have been provided, as have direct quotations from participants. This inclusion of details provides transparency to this research, allowing others to assess whether or not the suggested conclusions of the study are justified. Within these details includes a thick description of the case site, including why the specific case site was selected and the events experienced throughout the data collection process, which provides information to readers as to how these findings could be transferable to other Pre-primary Program sites.

Implications

This study provides an understanding of what outdoor play implementation looks like at one Pre-primary Program in Nova Scotia, including the surrounding school community members' perceptions of outdoor play and other factors that have influenced this Pre-primary Program's outdoor play practices. Although some of the factors found to be influential in this study may in some cases be difficult or even impossible to dictate, such as available outdoor space, others may be possible strategies to overcoming well-known barriers to outdoor play in early learning settings. For example, using consistent and visual communication strategies with guardians about outdoor play may be a successful strategy in other Pre-primary Program sites in increasing guardians' support for outdoor play practices and subsequently the ECEs' ability to engage with the children outdoors as well. It is ultimately hoped that Pre-primary Program

stakeholders are able to reflect on the findings of this study and either relate to them or identify possible areas for change and improvement in their own context.

Should Pre-primary Program stakeholders choose to review the findings of this study in an effort to find strategies for their own context, it is important to reflect on the extent to which factors or strategies from various system levels were found to influence each other. Based on the results of this study, the various microsystem, mesosystem and exosystem factors identified seem to have influenced each other to moderate any negative societal influences at this particular site, allowing for the identified outdoor play practices. Given the interactive nature of system levels (Bronfenbrenner, 1994), one should consider that focusing on only one system-level factor may not necessarily result in visible positive change. For example, even though communication efforts between ECEs and guardians are increased at a Pre-primary Program, it is possible that guardians may still feel hesitant or unsupportive towards the Pre-primary Program's outdoor play practices if the rest of the school does not engage in similar practices.

On a more provincial level, findings of this study suggest that outdoor play-specific education is valuable but not readily available to all ECEs in Nova Scotia. In order to ensure positive outdoor play experiences for all children in Nova Scotia, the topic of outdoor play needs to become a priority across ECE training institutions and in professional development opportunities across the province. Participants of this study voiced that this education needs to share knowledge about the benefits of outdoor play, how to implement outdoor play with children, and how to share this knowledge with families and the greater community. One of the most influential factors for the identified outdoor play practices at this site is the value that the Pre-primary Program stakeholders place on outdoor play. Sharing more knowledge on outdoor play will allow others to understand its value and ultimately increase the dedicated support and

resources.

Knowledge Mobilization

These findings will be made publicly available at the Mount Saint Vincent University library as well as through their online theses archive. An infographic summarizing the research will be provided to the participants of this study and to Nova Scotia's Department of Education and Early Childhood Development in an effort to inform future decision-making regarding the Pre-primary Program's outdoor play initiatives and programming, as well as any other relevant policies, programs and regulations. This study will be published in an academic journal and additional opportunities to share the results of this study, such as conference presentations, will be considered.

Conclusion

The three objectives of this study were to: 1) Identify the various perceptions of outdoor play within the school community; 2) explore what outdoor play practices are being implemented at the Pre-primary Program; and 3) determine what factors enabled the identified outdoor play practices to occur at the Pre-primary Program. All of the participants shared remarkably similar perceptions of outdoor play, believing that engaging in outdoor play is critical for overall child development and should include loose parts and risky play. Although the Pre-primary Program children and their guardians were not participants in this study, participants perceived that the children and guardians have been enjoying the Pre-primary Program's outdoor play practices and embrace the use of loose parts and risky play as well.

In terms of the second research objective, the results of this study indicate that the Pre-primary Program ECEs and children at this site have access to a variety of outdoor play spaces and resources (i.e. rain suits) and spend much of their time in the woods exploring the space and

creatures within. The children are supported to engage with mostly natural loose parts and even engage in risky play, which often involves climbing trees. Similar to their role in the indoor learning environment, the ECEs maintain an active role in the outdoor learning environment by engaging the children in learning opportunities, group activities, and helping them develop new skills.

Finally, in regard to the third research objective, there were a number of factors that were identified from the discussions with participants that may be contributing to the on-going outdoor play practices occurring at this site. These were organized using Bronfenbrenner's ecological systems theory. As was just described, the microsystem is characterized by positive perceptions regarding outdoor play by both guardians and ECEs, an active role of communication and engagement by ECEs during outdoor play, and an environment that provides access to nature and loose parts. The mesosystem is supportive of the outdoor play practices as communication is used to share knowledge about outdoor play implementation and benefits between the ECEs, and the ECEs and guardians. Previous research suggests this knowledge-sharing may be resulting in the ECEs feeling comfortable to implement the outdoor play practices and engage with the children outdoors without excessive preoccupation over minor injuries or litigation issues. There also exists a positive relationship between the Pre-primary Program and the rest of the school, further allowing the ECEs to feel supported in their outdoor play implementation.

At the exosystem level, the Pre-primary Program exists within a culture of outdoor play. The program at this site is surrounded by others implementing and promoting similar outdoor play practices, including the school and other community organizations. Through the efforts of this surrounding outdoor play community, Pre-primary Program staff have received outdoor

play-specific professional development and continuing support. With the leadership of a few key Pre-primary Program and school staff who hold similar values of outdoor play, the Pre-primary Program ECEs and children have access to an exemplar natural outdoor play space and loose parts and continue to receive additional resources and support.

Together, these enabling factors present in the micro-, meso-, and exosystem have contributed to allowing this Pre-primary Program to implement their outdoor play practices despite current society's trend toward pre-occupation with injury-prevention and technology. The children at this Pre-primary Program are provided outdoor play opportunities that enhance their physical, social-emotional, and cognitive development through experiences that encourage them to take risks and be creative, educate them about the natural world and foster the development of new skills.

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Appendix A

ECE/teacher focus group script

INTRODUCTORY COMMENTS

Hello, my name is _____, I'll be facilitating this focus group today. I'd like to thank everybody for taking the time to participate in this discussion that will focus on your perceptions and understandings of outdoor play at the Pre-primary Program here at (School name).

The purpose of this research study is to explore how the outdoor play part of the curriculum framework is being done at one Pre-primary Program site in Nova Scotia in an effort to identify and share with other Pre-primary Program sites in Nova Scotia strategies that may help them to overcome challenges in providing positive outdoor play experiences for their students.

Participation in this focus group is voluntary, all the information provided will be kept confidential. Answers will not be connected with any names in any reports or presentations. To help with the analysis of the information, I would like to audio-record this focus group. The recordings will be transcribed word for word and any identifying information will be removed (i.e., names, etc.). The responses provided will be reported all together, and although individual responses may be used as quotations, no one will be personally identified.

You should have all received more information about the study and the benefits/risks. Does anybody have any questions about this information?

[Focus group facilitator to collect all consent forms.]

Before we get started I'd like to review some 'guidelines' for this focus group. To ensure the privacy and confidentiality of all participants in this focus group we'd like to remind everybody that what is said in the focus group is confidential and should not be repeated or shared outside the group. Also, we welcome everybody's opinion and feedback. We don't all have to agree with the discussion but it is important that everyone's opinion is respected. Please participate and respond to questions as you feel comfortable. You can skip any questions or parts of the discussions. Finally, I'd like to ask that people speak one at a time and that once you've spoken you give the floor to somebody else so all have equal opportunity to participate. Is there anything else anyone would like to include as a guideline for our discussion today?

[Start audio-recording.]

DRAFT QUESTIONS (These may change slightly depending on the group and to build on emerging themes)**For ECE focus group:**

1. What does outdoor play mean to you?
 - a. Do you think risky play has a role in outdoor play? What about loose parts?
2. How do you think outdoor play might influence your students as they learn and grow?

3. What outdoor play practices do you engage your students in?
 - a. Does your class go in natural spaces (i.e. wooded areas, green space)?
 - b. Do they engage in risky play and/or play with loose parts (i.e. buckets, ropes, sticks)?
 - c. How do you feel about your outdoor play practices?
 - d. How do these outdoor play practices differ from the rest of the school? Is it different from how the children in the other grades engage in outdoor play?
4. Have your class's outdoor play practices been supported by the rest of the school and the students' parents? If so, how or how not?
5. Is there anything that might make it easier to support outdoor play for your class?

For teacher focus group:

1. What does outdoor play mean to you?
 - a. Do you think risky play has a role in outdoor play? What about loose parts?
2. How do you think outdoor play might influence how young children in the Pre-primary Program learn and grow?
3. What do you know about what the Pre-primary Program does around outdoor play?
 - a. Do they go in natural spaces?
 - b. What types of activities do they engage in, and with what types of equipment?
 - c. Are they engaging in risky play?
 - d. How do you feel about that?
 - e. How do you think that works for them?
 - f. How does this differ from the rest of the school? Is it different from how the children in the other grades engage in outdoor play?
4. Have you or your coworkers ever been involved in supporting the Pre-primary Program's outdoor play practices? Is there anything that might make it easier to support outdoor play in the Pre-primary Program?

Appendix B

Principal/Pre-primary Program facilitator/other relevant Regional Centre for Education or
government staff interview script

INTRODUCTORY COMMENTS

Hello, my name is _____, I'll be facilitating this interview today. I'd like to thank you for taking the time to participate in this discussion that will focus on your perceptions and understandings of outdoor play at the Pre-primary Program here at [School name].

The purpose of this research study is to explore how the outdoor play part of the curriculum framework is being implemented at one Pre-primary Program site in Nova Scotia in an effort to identify and share with other Pre-primary Program sites in Nova Scotia strategies that may help them to overcome challenges in providing positive outdoor play experiences for their students.

Participation in this interview is voluntary, all the information provided will be kept confidential. Answers will not be connected with any names in any reports or presentations. To help with the analysis of the information, I would like to audio-record this interview. The recording will be transcribed word for word and any identifying information will be removed (i.e., names, etc.). Although individual responses may be used as quotations, you will not be personally identified.

You should have received more information about the study and the benefits/risks. Do you have any questions about this information?

[Interview facilitator to collect consent form if interviewing in-person or ask for oral consent if interviewing over the phone.]

[Start audio-recording.]

DRAFT QUESTIONS (These may change slightly depending on the individual and to build on emerging themes)

1. What does outdoor play mean to you?
 - a. Do you think risky play has a role in outdoor play? What about loose parts?
2. How do you think outdoor play might influence how young children in the Pre-primary Program learn and grow?
3. What do you know about what the Pre-primary Program does around outdoor play?
 - a. Do they go in natural spaces?
 - b. What types of activities do they engage in, and with what types of equipment?
 - c. Are they engaging in risky play?
 - d. How do you feel about that?
 - e. How do you think that works for them?
 - f. How does this differ from the rest of the school? Is it different from how the children in the other grades engage in outdoor play?
4. How do you or your coworkers support the Pre-primary Program's outdoor play practices (if they do)? Is there anything that might make it easier to support outdoor play in the Pre-primary Program?

Appendix C

Initial email of request to conduct research with attached information letter

Greetings [name of principal]

My name is Brenna Richard and I am a graduate student in the Masters of Child and Youth Study program at Mount Saint Vincent University. I am inviting [School name] to participate in my research study: **“Exploring the implementation of outdoor play in Nova Scotia’s Pre-primary Program”**. This school has been identified as a Pre-primary Program site that has been demonstrating positive outdoor play experiences and a program of interest to explore. I hope to identify strategies that may help to overcome potential barriers in implementing outdoor play that can be shared with other Pre-primary Program sites in Nova Scotia.

This research will include focus groups at the school with the Pre-primary Program guardians, children, Early Childhood Educators and the school teachers. It will also involve Interviews with the school principal, Pre-primary Program consultant or coordinator, and other relevant school staff. Photographs will be taken of the Pre-primary Program’s outdoor play space(s) and documents (i.e. learning stories, meeting notes) that relate to the Pre-primary Program and outdoor play will be collected from the lead ECE and principal.

For additional information, please refer to the attached information letter. If you agree to support the recruitment of the identified stakeholder groups, please respond to this email or speak with myself, Brenna Richard, when I telephone this week.

Attached information letter

Greetings [name of principal]

[School name] is invited to participate in a research study approved by the Mount Saint Vincent University Research Ethics Board, “**Exploring the implementation of outdoor play in Nova Scotia’s Pre-primary Program**”. This school has been identified as a Pre-primary Program site that has been demonstrating positive outdoor play experiences and a program of interest to explore.

Background

The opportunity to engage in outdoor play during early childhood is important as it can positively influence children’s physical, cognitive, and social-emotional development. The Pre-primary Program follows the Nova Scotia Early Learning Curriculum Framework which recognizes the importance of the outdoor environment for learning and encourages positive outdoor experiences with nature; however, barriers to creating these optimal outdoor play experiences may be influencing Pre-primary Program sites in Nova Scotia. Given the novelty of this program, little is currently known about how outdoor play is being implemented at the Pre-primary Program as well as how staff can overcome potential challenges.

Research Team

Brenna Richard, a graduate student completing her Masters in Child and Youth Study, will be the lead researcher on this project, along with her co-supervisors Dr. Jessie-Lee McIsaac and Dr. Joan Turner. This project has been approved by the Mount Saint Vincent University Research Ethics Board.

Purpose

The purpose of this research study is to explore how the outdoor play component of the curriculum framework is being implemented at one Pre-primary Program site in Nova Scotia in an effort to identify and inform other Pre-primary Program sites of strategies that may help to overcome potential barriers in implementing outdoor play.

Research Method

Focus groups will be held at the school with the Pre-primary Program guardians, children, Early Childhood Educators and the school teachers. Interviews will also be conducted with the school principal, Pre-primary Program consultant or coordinator, and other relevant school staff. Photographs will be taken of the Pre-primary Program’s outdoor play space(s) and documents (i.e. learning stories, meeting notes) that relate to the Pre-primary Program and outdoor play will be collected from the lead ECE and principal.

Procedure

We are reaching out to you to ask for your support in conducting this research at [name of school] and recruiting the identified Pre-primary Program stakeholder groups for participation. If you agree to support the recruitment of the identified stakeholder groups, please respond to this email or speak with myself, Brenna Richard, when I telephone this week.

Appendix D

Information letter and informed consent form for the ECEs/facilitators/principal/school teachers/Other relevant Regional Centre for Education or government staff

Dear [ECE/facilitator/principal/school teacher/other relevant RCE or government staff],

You are invited to take part in a research study called “Exploring the implementation of outdoor play in Nova Scotia’s Pre-primary Program”. Other people in the school community are being invited to also take part. This school has been identified as a Pre-primary Program site that has been demonstrating positive outdoor play experiences and has therefore been chosen as a site to explore.

Study Purpose

The opportunity for outdoor play during early childhood is important as outdoor play has been shown to positively impact children’s learning and growing. The Pre-primary Program follows the Nova Scotia Early Learning Curriculum Framework which understands the importance of outdoor play for learning and encourages positive outdoor experiences with nature; however, creating optimal outdoor play experiences can be challenging and some Pre-primary Program sites in Nova Scotia may need some help. Because the program is fairly new, little is currently known about how outdoor play is being done at the Pre-primary Program as well as how staff can overcome challenges they may face. The purpose of this research study is to explore how the outdoor play part of the curriculum framework is being done at one Pre-primary Program site in Nova Scotia in an effort to identify and share strategies with other Pre-primary Program sites that may help them overcome challenges in providing positive outdoor play experiences.

Research Team

Brenna Richard will be the lead researcher on this project, along with her co-supervisors Dr. Jessie-Lee McIsaac and Dr. Joan Turner. This project has been approved by the Mount Saint Vincent University Research Ethics Board.

Research Method

Focus groups and interviews are being held in your community with various identified Pre-primary Program stakeholders at [School’s name]. [ECEs/School teachers/You] are invited to take part in a [60-minute focus group/30-minute interview] about [their/your] perceptions and understandings of outdoor play at the Pre-primary Program. All participants will be able to enter a draw to win one of three \$25 gift cards. [Refreshments will be provided and childcare will be available during the focus group.]

The [focus group/interview] will be audio recorded and notes may be taken by a peer graduate student. The [focus group/interview] will take place at a time that works for [the group of ECEs/school teachers/you] at [the school/convenient community location]. [We will discuss guidelines at the beginning of the focus group to help protect the privacy of the information

shared within the group and to encourage a positive sharing environment/The interview may be conducted over the telephone if this is more convenient for you.]

Benefits and Risks

Your participation is completely voluntary and there is minimal risk to you. Through discussion you may learn more about outdoor play in the Pre-primary Program and this information will help us to gain an in-depth understanding of how outdoor play is being done at the Pre-primary Program. This will allow us to share strategies with other Pre-primary Program sites across the province that may help them provide positive outdoor play experiences to their students as well.

Your Privacy

Every effort will be made to maintain privacy of your information. Please note that if there is a disclosure of harm or intent to harm a child or vulnerable person, or a participants' intent to harm themselves, I must report the information to the proper authorities.

Although the [focus groups/interviews] will be audio-recorded and these recordings will be transcribed word for word, any identifying information shared during the discussions will be removed (i.e. names, school name, places). Although some quotations will be selected for the final report, your name will not be identified. You may decline to respond to any questions that you feel uncomfortable answering throughout the discussion, and you may withdraw from the [focus group/interview] at any time without penalty before it starts or anytime during. [Any information you provide before the decision to withdraw from the focus group cannot be removed due to the challenges with separating your information from other participants/Any information you provide before the decision to withdraw from the interview will be removed.]

All data collected as part of this research will be stored on a password protected computer for five years and will only be accessible to myself and my two co-supervisors. Data may be used in sharing the research findings in infographics, presentations, or conferences. However, anonymity and confidentiality will be maintained as your identifying information will not be connected to the information provided during the [focus group/interview].

Interest in Participating

If you have any questions or are interested in taking part and would like to sign up for the [focus group/interview], please contact the lead researcher, Brenna Richard, at brenna.richard1@msvu.ca or (902)457-6553.

Study Results

At your request, you may be provided with a summary of the research following completion of this research study. In order to request a copy of this summary, please indicate so on your consent form or email brenna.richard1@msvu.ca to request a copy.

If you have any questions about this study, please contact Brenna Richard, brenna.richard1@msvu.ca. If you have any questions about how this study is being conducted and wish to speak to someone who is not directly involved in the study, you may contact the Coordinator of the University Research Ethics Board (UREB) c/o MSVU Research and International Office, at (902) 457-6350 or research@msvu.ca.

Consent Form

Research title: Exploring the implementation of outdoor play in Nova Scotia's Pre-primary Program

By signing this consent form, you are indicating that you:

- Have read the information presented in the informed consent form about the study being conducted by Brenna Richard of Mount Saint Vincent University.
- Have had the chance to ask questions about your part in this study and to receive information about your questions.
- Understand that if you agree to take part in this study you may still withdraw from the study at any time [however the information you provide before the decision to withdraw cannot be removed due to the challenges with separating your information from other participants.]
- Agree to be audio recorded.
- Have been given a copy of this form.
- Agree to take part in this study.

Name of participant (printed): _____

Signature: _____ Date: _____

If you would like to receive a copy of the summary of research findings, please provide an email address below.

Email address: _____

Appendix E

Confidentiality Agreement

I, the individual signing this form, am aware that all information that is confidential or private, shared in the focus group Guardians/Children, Early Childhood Educators or School Teachers and Outdoor Play in the Pre-primary Program will be kept private by me. I will not share information such as names of participants, details of experiences, how others interact, any personal data or business of the other participants, which I may learn about during this focus group.

I, the individual signing this form, understand and am aware that the researcher has a responsibility to report any disclosure of harm or intent to harm a child or vulnerable person, or a participants' intent to harm themselves.

By signing this consent form, you are indicating that you have fully read and understand the above information and agree to maintain confidentiality regarding information shared at this focus group. You will be given a copy of this consent form for your files.

Participant's signature **Date**

Researcher's signature **Date**

One signed copy to be kept by the researcher, and one signed copy to the participant.