# Outdoor Education is Essential: Increased Exposure to Nature Reduces Students' Anxiety and Increases Classroom Engagement

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**Abstract**

As an avid, outdoor enthusiast and elementary teacher, I purposefully seek to demonstrate how nature is essential for the healthy development and well-being of students. In recent years, there has been a steady decline in students' mental well-being and a rise in rates of anxiety, depression, and attention disorders. Watching my daughter grow and play during my maternity leave caused me to rethink best practices for teaching my students. This new desire to value outdoor play and foster natural curiosity within students grew throughout my masters courses at Thompson Rivers University (TRU). Upon my return to a classroom of challenging, anxious, and high-energy students, I promptly began conducting lessons outside. I will show that when lessons are taught in natural landscapes students' overall well-being improves. Outdoor instructional teaching time reinforces the importance of connection, caring, and provides strategies to help decrease feelings of anxiety and inattentiveness. I argue, students' mental well-being and engagement in the classroom improves as a result of instructional learning and play time in nature. Providing opportunities to engage in adventurous outdoor play teaches skills in collaboration and problem-solving. In this paper, I will demonstrate the necessity of providing students with a holistic, experiential approach to learning, through increased exposure to nature. Educators must be afforded opportunities in which to learn how to decolonize outdoor education, as well as given strategies to overcome barriers to teaching in nature. Students' learning environments have a significant impact on focus, engagement, and knowledge recall. The inclusion of outdoor educational practices within the elementary curriculum is essential for the healthy development of children.

*Keywords:* outdoor education, nature, learning environment, student well-being, experiential, outdoor play

# Chapter One: Introduction

## Moments of Enlightenment

Stepping off the groomed Regional Park path into a tangle of tree limbs and berry bushes, I hear my one-year old daughter squeal in delight before falling to the ground head first, in an attempt to gather a rock for her collection. I rush to see if she is alright and discover that she has tumbled into a muddy area of the forest. To my amazement, she has already picked herself up and resumed her quest for the perfect rock. Her confident swagger and joyful demeanor shines brightly whenever she interacts with nature. For me, this was an 'aha' moment. Following the birth of my firstborn, I began to look differently at the ways in which my students learned and interacted with the world. I saw value in encouraging play and developing natural curiosity.

My next light-bulb moment transpired while attending Thompson Rivers University (TRU) Masters of Education course EDUC 5990 Healing on the Land. Sitting beneath the cover of towering ponderosa pines, I stared blankly as cold water rushed over my feet, before plunging them farther into the icy creek bed — a calm stillness consumed me. Without thinking, my body released a deep-rooted sigh, which felt as though it had been held captive for a very long time. I felt myself sink into the Earth, as my fingers caressed the grassy mounds of the water's edge.

It was earlier that year that my husband and I had been trying to add another child to our family, but it was not working out as planned. I was feeling a lot of anxiety, sadness, and grief as to the ways things might have been. I found healing through the guidance of Tk'emlúps te Secwépemc Elder, Uncle Mike, during my TRU course, which inspired me to include the word 'healer' as part of my understanding of nature. Although the course was only one week in length, it presented one of the most profound and eye-opening experiences of my life. It awakened something deep inside of me. My reflection caused me to question how I could become more

intentional with the use of the surrounding land of my school and to discover ways to decolonize my outdoor education pedagogy.

**Interest in the Outdoors Grows**

I have always enjoyed the outdoors. Growing up, my family and I were 'lake' people. Every summer we visited my grandparents in their home at Scotch Creek. A week-long summer camp at Shuswap Lake each year was a highlight for me. As a child, my engagement in outdoor activities such as camping, hiking, and winter sports was minimal. My connection to, and appreciation for nature, truly began to develop when I met my husband in 2013. I was suddenly swept into his world of hiking, hammocking, and four-season camping. We purchased our first home adjacent to a Regional Park, and found ourselves exploring the natural world every chance we got. To this day, I regularly walk this nature path and marvel at its restorative beauty.

When I secured a full-time teaching position at a school with grounds that backed onto a forested area, I became excited at the prospect of incorporating nature into my teaching. Having little experience of conducting lessons outside, I often simply used the outdoor space for nature walks with students, if time permitted. Two of my work colleagues regularly took their students outside for lessons and soon became known as, *The Forest Class*. I had a strong desire to emulate their teaching philosophy. However, I ran short of time to implement this, as I took my maternity leave. Reflecting back, I see how this hiatus was perfectly timed in my journey to understand the myriad of benefits for time spent in nature.

In August 2019 my daughter was born. Shortly thereafter, the entire world came to a standstill in March 2020, seeing the COVID-19 pandemic shuttering businesses, schools, and placing a massive burden on health-care systems. As a result of not being able to participate in regular group activities, my family and I began spending much more time together outside. I

could see the benefits of adventurous outdoor play with my daughter, as well as the mental health benefits for my husband and I during that scary and unpredictable time.

I returned from maternity leave to a classroom of high-energy, boy dominated group of students. Holding their attention during lessons was a struggle. During this time, I was enrolled in the Research Methods master's course at TRU, researching how spending time in nature increases engagement and decreases feelings of anxiety in students. The timing of my coursework could not have been better for me to put into practice what I was learning. I purposely built time into my week to take students outside and either teach a lesson or allow unstructured play time. Without the four walls of the classroom, students' high-energy was more manageable, there was more space, their attention improved during lessons, and they collaborated with one another.

**Significance of Outdoor Education**

As educators, it is our responsibility to provide students with the proper resources and adequate amount of time to enable rich learning opportunities. My humanistic educational philosophy focuses on the belief that we must teach the "whole" child. In the eyes of Dewey, "education should begin with and remain closely tied to the actual experience and concerns of students" (Noddings, 2005, p. 62). What then, are the concerns and experiences of my students?

The COVID-19 pandemic accelerated the rate of mental health problems present in children. It negatively impacted children's health and well-being, as a result of the elimination of social gatherings during this period. Computer monitors and screens replaced in-person education in the classroom. Children experienced less unstructured time outdoors to play, create, and test their own limits as a result. Due to ever evolving safety protocols, school districts fluctuated between in-class and online learning, which limited normal social and academic

development for students. This confinement created a noticeable gap in students' ability to solve problems independently and to develop positive relationships with peers. In recent years, I have observed more students experiencing anxiety and attention issues, with little to no coping strategies. The landscape of teaching has changed. Students' and parents' priorities have shifted, as evidenced by the rise in use of technological devices and social media, which more often than not, take precedence over unstructured outdoor play. Our relationship with the land has been fractured.

A most recent goal I have set is to decolonize my teaching practices. In 2020, the breaking news of 215 unmarked graves discovered at the former Kamloops Residential School sent shockwaves far and wide. The knowledge gained from several of my master's courses taught me to recognize that my personal bias affects my teaching, and also, how I might recognize the ways in which I may have been treating students unfairly.

Using, The First Peoples Principles of Learning, as my guide, I now seek ways to honour and "recognize the role of Indigenous knowledge" (First Nations Education Steering Committee, n.d.). Outdoor education must recognize and honour ways of Indigenous teaching. I believe "learning is holistic, reflexive, reflective, experiential, and relational (focused on connectedness, on reciprocal relationships, and a sense of place) and requires exploration of one's identity".

**Presenting my Argument**

Through my observation of elementary students' mental well-being and engagement in the classroom, I experienced a connection between time spent outside and decreased feelings of anxiety and inattentiveness, which suggests that instructional learning and play time in nature must regularly occur in classrooms. I claim that instructional learning and play time in nature is essential for the healthy development of students. Although nature is well-known to be beneficial

to health, there continues to be debate on its place within schools. Outdoor education provides an opportunity to learn from the land and Indigenous Peoples. Land-based learning develops an intrinsic sense of responsibility for others in students (Thomas et al., 2018; Riley, 2020; Adams & Beauchamp, 2021). Learning and playing in nature improves the overall well-being of students. The evidence is clear that green environments contribute to stress resilience (Dettweiler et al., 2017; Kuo et al., 2018; Beyer et al., 2014; Barton & Pretty, 2010; Dettweiler et al., 2022). Being in nature develops a sense of belonging, self-awareness, and connection to the land. There is a direct link to students' increased confidence (Tiplady & Menter, 2021), positive interaction with peers (Flom et al., 2011), and ability to solve their own problems through engaging in adventurous outdoor play (Dodd & Lester, 2021). Some educators feel anxious about taking students outside, or do not think it is a good use of instructional time, or feel it is too unsafe. Parents' anxiety and safety concerns can also be a barrier to children playing outside (Sandseter et al., 2020). Higher academic achievement occurs when students' lessons are conducted outside. This is based upon the following evidence from Kuo et al. (2018) and Flom et al. (2011) where students demonstrated significantly better transfer of knowledge and engagement in their studies after learning outside.

My desire as an educator is to “cultivate thoughtful, critically reflective, socially engaged students” (PHILO-notes, 2021, 0:25). I strongly believe that students are more motivated and engaged in a child-centered, experiential approach to learning (Noddings, 2005). Studies have confirmed a green environment improves self-esteem and mood (Barton & Pretty, 2010) and that higher levels of neighbourhood green space show significantly better health and mental well-being for individuals (Beyer et al., 2014). In my literature review chapter the argument will be made that instructional learning and play time in nature is essential for the healthy

development of students. There will be an in-depth analysis of current research on learning from the land and its ancestors, how nature improves students' well-being, adventurous outdoor play leads to better development of relationships, and academic performance improves when lessons are outside.

## Chapter Two: Review of Literature

In this chapter the guiding argument is that students' mental well-being and engagement in the classroom improves as a result of instructional learning and play time in nature. This review will look at studies that have used varying degrees of learning in an outdoor environment to affect a positive change in the behaviour of students, with special attention to well-being and classroom engagement. The review will begin by discussing the history of outdoor education and bring to light the disconnection students have with nature. It will then move to describe the benefits of learning from the land, argue how nature improves the overall well-being of students, and demonstrate that risky, adventurous play leads to the healthy development of children. Then it will conclude with outlining barriers to students getting outside and how academic scores improve when lessons take place in natural settings. Through the review of available literature, there will be a clear case made that students learn and develop best when they are outside in nature during instructional time.

### History of Outdoor Education

Learning outside has its roots all the way back to the ancient philosophers, Socrates and Plato, as they would teach in beautiful, open garden landscapes. The founder of Kindergarten, Friedrich Fröbel argued, young children ought to be tended to like plants in a garden, and be given ample opportunity to explore the world (Gutek, 2015). Fröbel was influenced by the work of educational reformers, Johann Heinrich Pestalozzi and Jean-Jacques Rousseau, each understood what the value of learning through experience had upon children. According to Rousseau, a proper education allows nature to be the teacher and to guide one's natural self according to their nature (Peckover, 2012). In the first half of the twentieth century, American philosopher and psychologist John Dewey led the charge for a more hands-on, engaging learning

model for students, with his pragmatic approach to education. Known as the father of experiential learning, Dewey argued that learning came from interacting with nature, not passive observation. Hands-on, experiential learning and a holistic integration of subject matter are "hallmarks of early forms of outdoor education that evolved to address a lack of direct experience in education" (Asfeldt et al., 2022, p. 1522). Indigenous Peoples across the globe have always held the view of nature as a teacher (Thomas et al., 2018; Madjidi & Restoule, 2008).

In the early twentieth century there were two events that furthered the call for a natural, outdoor experience to reside within education systems. It was when the emergence of socially organized camping took hold, now popular today, and the creation of Forest Schools (FS) in Denmark (New World Encyclopedia, 2022). Outdoor education in Canada, appeared in the 1950s, due in part to a growing environmental movement (Asfeldt et al., 2022).

More recently, literature on this topic has begun to gain momentum, as society realizes the health benefits of innovative outdoor learning environments. A study by Asfeldt et al. (2022), analyzed K-12 outdoor education programs across Canada, and found them to be "strongly influenced by philosophies of learning that value hands-on experiential learning and holistic integrated learning" (p. 1519). At times, outdoor education pedagogy is viewed as providing a more inclusive education compared to the traditional school system.

The film, Found in the Forest (Cerhit, 2016), revealed how students can miss out on meaningful experiences by remaining in the four walls of their classroom. In the film, an educator states, "We know what we know, and yet we keep doing what we're doing". Embracing an outdoor pedagogy provides students with an education that gives ample opportunities for imaginative and developmentally appropriate play (Rekers & Waters-Davies, 2021). The next

section discusses how our society is experiencing disconnection, which negatively affects adolescents in their daily life, as well as in school.

## Our Disconnection Predicament

Anxiety among students is at an all time high. According to the Canadian Mental Health Association (2014), one in seven young people in British Columbia are diagnosed as having mental illness, which typically shows up before the age of 18. Often, adolescent children are struggling, and are the last group to be identified, when instead, they should be among the first. In Canada, "three in four children with a mental health issue can't get the care they need" due to the care not being available or not covered by health insurance (Canadian Mental Health Association, 2023). When a mental illness, such as anxiety, is left untreated in children it can lead to larger issues in adulthood, placing a strain on the healthcare system.

Awareness of how anxiety manifests itself within a school setting is important to understand, as students spend most of their waking hours in the classroom (Jones et al., 2019). There is a general lack of self-awareness demonstrated in students today. Some do not possess the tools or strategies required to think critically, problem-solve, or communicate effectively. At the first sign of struggle, students become overwhelmed, anxiety ridden and so, disengage from learning. Canadian psychologist and public speaker Dr. Jody Carrington (2023) states it bluntly as, "in the history of our lives…we've never been more disconnected, more unseen, as a globe, than we are right now" (p. 2).

### *A Nature-Deficit Disorder*

The concept of nature-deficit disorder proposed by Richard Louv (2008) suggests, "in the space of a century, the American experience of nature… has gone from direct utilitarianism to romantic attachment to electronic detachment" (p. 16). There continues to be a further disconnect

from nature, as technology and social media become mainstream (Dickson & Gray, 2022). Data gathered from the United Kingdom, Japan, and United States identified the rates of children playing outside has “dropped from 80 percent some 40 years ago to less than 10 percent today” (Dettweiler et al., 2023, p. 153). Society has become more sedentary as natural landscapes have vanished, replaced instead by high rise apartments or mini marts. Researchers in Israel discovered that almost all adults surveyed stated that natural outdoor areas were one of the most significant environments in their own childhood, where only half of the children surveyed (aged 8 to 12) shared this similar experience (Louv, 2008). Children today play differently than their parents did. Routinely indoors, spending more time being contained, today's children are afforded less opportunities for unstructured play, in- or outdoors, and play outside briefly, and for less time. As time passes, fewer people will possess the skills or experiences required to conquer this disconnection from nature (Dickson & Gray, 2022).

Due to colonization, many hold the belief that humans hold dominion over and command nature. There is no acknowledgement of the interconnected and interrelatedness of natural spaces with people, or the mutually beneficial relationship nature has with its visitors (Adams & Beauchamp, 2021). Nature-deficit disorder is “the human costs of alienation from nature, among them: diminished use of the senses, attention difficulties, and higher rates of physical and emotional illnesses” (Louv, 2008, p. 36). It is imperative, educators be intricately involved with leading the charge for a nature-child reunion.

Physically moving students from inside their classroom to working in an outdoor environment can foster creativity, collaboration, and allow space and time for individual learning styles to be nurtured (Davies et al., 2013). In the following section I will state how the well-being

of students and classroom engagement improves when students spend instructional time learning and playing in a natural environment.

**Improving Well-being and Classroom Engagement Through Nature**

Recent evidence has connected time spent outside to positive mental health benefits in K-12 students. A study of more than 300,000 Dutch medical records showed health is correlated to the presence of green space around living quarters, especially in children (Flom et al., 2011). Outdoor play "has been linked to improved emotional well-being and social behavior among students with no identified learning or behavioral issues" (Flom et al., 2011, p. 121).

Rodas et al. (2020) longitudinal study demonstrated typically developing children (TD) and children with an intellectual disability (ID) showed a positive linear increase in anxiety symptoms from ages 3-13 years. During this time period, it's important to note that, "from a developmental neurobiological perspective, childhood and adolescence can be described as very vulnerable phases in which biological systems develop" (Dettweiler et al., 2017, p. 2). Dodd and Lester (2021) echo this notion, describing that early to late adolescence is a critical time for the initial occurrence of anxiety issues and problems. When students connect with nature-rich experiences in educational settings it promotes creativity and increases engagement in the classroom (Adams & Beauchamp, 2021).

***Learning From the Land and its Ancestors***

"Indigenous knowledge reveals Western limitations" (Madjidi & Restoule, 2008, p. 80). Outdoor education programs are generally approached through Western knowledge systems and academic understanding (Thomas et al., 2018). Leroy Little Bear is quoted explaining that, "In Aboriginal philosophy… all things are animate, imbued with spirit, and in constant motion. In this realm of energy and spirit, interrelationships between all entities are of paramount

importance, and space is a more important referent than time" (Madjidi & Restoule, 2008, p. 81). Spirituality and connection with nature is an integral part of Indigenous perspective. It helps create meaning for the world around us. Teaching about the connection and interrelation we have with nature will help students gain a deeper understanding of their responsibility to preserve Earth's environment. When teaching outdoors, stories and connections must be shared through respectful relationships with the land, ancestors, educators, and the self (Thomas et al., 2018). Therefore, Indigenous knowledge must be united with outdoor learning. Canadian Indigenous academic, Cynthia Wesley-Esquimaux (2017) stated in her keynote speech, "We always understood the value of experiential learning, we've been telling you for 600 years that kids learn better on the land than in a box". The importance of learning outdoors is "often culturally specific and reflect[s] differing narratives about humans and our interrelatedness with nature" (Adams & Beauchamp, 2021, p. 130).

A group of seven- to eleven-year olds participated in a study, which looked at how mindful approaches, using the senses to engage with the environment, in native reserves made them feel. The children experienced "a different perspective of time, made accessible due to undertaking the mindful approaches at the native reserves, and something that teachers reported could not happen in school" (Adams & Beauchamp, 2021, p. 136). Becoming more mindful when in nature can lead to a transcendent experience of connectivity and interrelatedness with natural landscapes.

***Being in Nature Improves Overall Student Well-being***

The mental well-being of many children is in decline. More often than not, children are spending time isolated indoors, with limited play dates. The use of personal electronics and the rising popularity of social media, such as Instagram and TikTok have replaced outdoor playtime.

Children experience less unstructured time outdoors to play, create, and test their own limits. A 2012 study by Bentsen and Jensen, investigated the influence of the Danish word *udeskole*, the educational method of teaching outside, and the impact it had on students' overall well-being. It is common practice in Denmark to teach subjects outside — it is integrated within their typical day, not taught as a separate class. Research shows *udeskole* positively influences students' academics, physical activity, interactions among peers, and well-being (Barfod & Bentsen, 2018).

A 2017 study by Dettweiler et al. looked at whether or not, regular, outdoor teaching had an effect on students' stress responses. Cortisol measurements through saliva samples, showed a lower cortisol secretion among students taught in a forest setting at noon, compared to that of the control group, having been taught indoors. Students with a mental illness or attention disorder often benefit from medications, but the use of nature as an alternative therapy is routinely overlooked. There is new evidence to suggest the need for medication is increased due to students' disconnection from nature (Louv, 2008). The following subsections will convey how natural, green spaces have a positive effect on students well-being, Forest Schools benefit students mental health, and the brain physically changes when time is spent in nature.

**Green Schoolyards as Outdoor Learning Environments.** Green cover, such as trees, shrubs, or grass has been studied to explore the possible benefits of a student’s success within the classroom. A 2018 study in Chicago, by Kuo et al. looked at the relationship between “greenness” and academic achievement of disadvantaged grade three students. Through the collection of math and reading scores, it was noted, schools with nearby tree cover showed significantly higher academic achievements (Kuo et al., 2018). Studies have confirmed that experiencing a green environment improves self-esteem and mood (Barton & Pretty, 2010;

Dickson & Gray, 2022) and that higher levels of neighbourhood green space, show significantly better health and mental well-being outcomes for individuals (Beyer et al., 2014). Outdoor learning environments can reduce behavioural issues and problems of concentration for students, who typically struggle to remain focused during class instruction (van Dijk-Wesselius et al., 2020).

Although greenspace was found to decrease anxiety in disadvantaged students, a 2018 study by Ku et al. noticed that there was a lack of trees and greenspace around urban, high-poverty schools. The more disadvantaged a school was, the less tree cover was identified to be near the school and its neighbourhood (Ku et al., 2018).

**A Forest School Model.** There are many examples wherein European schools have studied the benefits of outdoor learning and play, as students have been given great independence through a Forest School (FS) approach. This informal and alternative approach to learning, weaves traditional curriculum into opportunities for children to learn and create, outside of the classroom (Coates & Pimlott-Wilson, 2019). The FS concept believes that regular amounts of time spent in a recurring outdoor environment, can facilitate independent learning and overall social-emotional growth and regulation of students. Adventurous, outdoor play promotes retention of knowledge (Kuo et al., 2018), improved student attention (Kuo, et al., 2019), and benefits children's physical and mental well-being (Dettweiler et al., 2017). International students in Estonia and Finland’s FS programs scored among the highest in math and science assessments (Cree & Robb, 2021). The impact that a Forest School can have on students' academic and social skills leads to increased confidence and improved social skills (Flom et al., 2011).

**A Positive Effect on Brain Function.** A growing volume of literature supports opportunities for children to be placed within natural environments, where they "experiment with uncertainty, associated physiological arousal, and coping strategies, which can significantly reduce children's risk for elevated anxiety" (Beaulieu & Beno, 2024). These findings are in agreement with Dettweiler et al. (2017), who acknowledged outdoor teaching to be beneficial for students' mental health and well-being, but has its limitations, as some phenomena in their data could not entirely be explained. Research in Stress Reduction Theory (SRT) has shown stress resilience occurs when individuals are immersed in natural environments (Dettweiler et al., 2023).

Dettweiler et al. (2023) conducted a year-long study of fifth and sixth grade students who were taught one day per week in a forest setting to explore their biological stress responses and brain development, when given a choice of activities. Their findings determined, nature positively influenced biological stress regulation during classes, and showed changes in the brain structure, as well as brain function when under stress. Students in the experimental group were more physically active in the outdoor class. During light physical activity there was a stress-buffering effect, which led to decrease of cortisol during the day. Cortisol is the body's main stress hormone. The inclusion of choicefulness in the outdoor group indicated "a greater effect on the maturation of the rACC in the intervention group" (p. 162). The rostral part of the anterior cingulate cortex (rACC) is linked to cognitive control and ability to choose a course of action. Analysis of the fMRI showed, students who had more freedom of choice in the experimental group, had higher brain activation than the control group.

Mindfulness activities have also been attributed to positive self-awareness in students. Mindfulness-based yoga interventions were used in fifth-grade students to reduce anxiety and

stress levels in a math class (Stapp & Lambert, 2020). Students took part in a mindful breathing exercise at the beginning of class and their perceived anxiety and stress levels were evaluated using a pre- and post-questionnaire. Mindfulness activities have been proven beneficial for making students more aware of their breathing, thoughts, and feelings (Britton et al., 2014). The next section demonstrates the importance of adventurous, outdoor play being integrated into students' education.

***Adventurous Outdoor Play Leads to Healthy, Holistic Development of Children***

Play in nature does not hold the same importance or frequency, as it has in the past. Opportunities to engage in outdoor free play, specifically risky play, has severely declined due to increased supervision and protection of children (Beaulieu & Beno, 2024). Scandinavia has taken a different approach and fully immersed students within nature and risky-play, which has "directly translated to happy, healthy, and well-rounded students" (Adams & Beauchamp, 2021, p. 288).

Dodd and Lester (2021) created a conceptual model, which targeted how adventurous play and exposure to fear-provoking events could be used to teach students how to solve their own problems, regulate their emotions, and reduce their ability to deal with uncertainty. Educators and researchers are now beginning to broaden their understanding of the benefits that nature and adventurous play can have on decreasing students' anxiety. A report by Beaulieu and Beno (2024) found "risky play encourages creative, spontaneous play, first by eliminating hazards, then by supporting risk-taking that is chosen and controlled by the child and appropriate to her/his experience and ability". The literature is clear that students' stress levels are reduced (Dodd & Lester, 2021), physical activity increased, and positive mental health and well-being (Dettweiler et al., 2017) are the result of adventurous and risky outdoor play (Beaulieu & Beno,

2024). Unstructured free play and learning in nature gives students a safe space to fail, succeed, and develop skills that will support healthy connections in the future (Adams & Beauchamp, 2021).

**Enhanced Relationships.** A 2011 study by Flom et al. discovered a Forest School model with regular time spent learning outdoors, led to children's enhanced ability to sustain conversations more easily, leading to students and teachers being better able to communicate. A study by McClain and Vandermaas-Peeler (2016) followed preschool children's interactions with nature during forest time, while at school. Researchers discovered children rarely had negative emotional responses to challenges they faced — remaining either happy, excited or in a neutral state. The children displayed high levels of collaboration and positive social interactions, moving from focusing on themselves, to being inclusive of others. Through adventurous play, children learn how to control their emotions and impulses and to solve their own problems (Dodd & Lester, 2021).

**Physical Literacy.** In 2022, the World Health Organization (WHO) stated, more than 80 percent of adolescents do not meet the recommended levels of physical activity. This decline goes hand in hand with the detachment from experiencing natural environments (Dettweiler et al., 2023). Studies have proved, children are more physically active in the natural world, as opposed to comparable environments. A study in Norway, compared two kindergarten classes' play and motor abilities, when placed in different environments. The control group had play time in a traditional outdoor playground. The other kindergarten class visited a forested area. The findings showed moderate "increased abilities to master the rough and unstructured landscape over time and significantly higher scores on a test of balance and coordination at the post test" in the Kindergarten class that regularly played in the forest (McClain & Vandermaas-Peeler, 2016,

p. 32). Unstructured, explorative, imaginative play is slowly becoming more recognized as an essential component to the healthy development of children (Louv, 2008). The research is clear that students' gross motor skills develop faster when playing in a more natural environment. The following section will detail barriers faced for students spending time in nature, both at home and at school.

### *Barriers to Students Getting Outside*

There is growing concern that overboard safety measures have impeded a child's natural development all but cutting off their freedom to take risks when they play. The evidence suggests, children have fewer opportunities to spend time in green spaces than their parents and grandparents once did. A study done by van Dijk-Wesselius et al. (2020) discovered common barriers for teachers not teaching lessons outside, which included, unfamiliarity and lack of inspiration, lack of time, lack of confidence, fear of losing control of students' behaviour, and not knowing how to begin.

**Teachers and Schools.** The fear of injury and concern for safety can also be evidenced within school settings, as many teachers limit outdoor learning activities, for fear of student injury (Barfod & Bentsen, 2018). The use of green spaces as a learning environment have not been included as part of teacher educational training or schooling, and so many educators are unfamiliar with how to teach in this setting (van Dijk-Wesselius et al., 2020). Traditionally, when lessons are taught outside there is a connection to either a physical education class, or science lesson. One of the biggest issues for teachers as reasons not to embrace outdoor education is "work pressure, overload in responsibilities, and a tiredness of educational changes" (p. 2). Teachers that are unfamiliar with the outdoors are often hesitant to move their teaching outside, as it requires a different mindset, which is more unstructured, and embraces a more experiential

and child directed pedagogy. Teachers must be recognized as the gatekeepers to the implementation of outdoor learning and as such, need proper training in order to break down the barriers (Barfod & Bentsen, 2018).

**Parents and the Community.** Parents have a great influence over their child's decisions, especially during adolescence. A 2020 study by Sandseter, et al. offers one explanation for why children remain inside more often, nowadays. The parents who were more worried about stranger danger and the possibility of their child being injured in traffic, placed restrictions on outdoor play (Sandseter et al., 2020). Another study found similar results stating, parents limited their children's play in natural environments, due to distrust of their neighbourhoods (Beaulieu & Beno, 2024).

A longitudinal study by Rodas et al. (2020) on the trajectory of anxiety symptoms in children, discovered a sharp increase in children with intellectual disabilities (ID), due to negative parenting (negative emotion, hostility, disapproval). The likelihood of parents encouraging their children to engage in adventurous play, will be a direct result of their own anxiety and parenting style (Dodd & Lester, 2021). Another example of this phenomenon comes from the work of Sandseter et al. (2020), where they surveyed Early Childhood Education and Care practitioners and parents in Europe. The study looked at each group's perception of risk in children's play, and discovered parents' own anxiety to be a barrier to children playing outside. The changing landscape of parks located in urban areas has also led to parents being concerned for their children, with an increased risk of being confronted by people experiencing homelessness, as well as those in the sex trade and drug scene (Beaulieu & Beno, 2024). Communities have "outlawed unstructured outdoor nature play, often because of the threat of lawsuits" (Louv, 2008, p.28).

Parents living in differing geographic locations have experienced a wide range of ways they perceive time children spend outdoors. Norwegian parents let their children roam free at an earlier age, which would imply that they are less anxious about their children playing outside or, they acknowledge the many health benefits of children roaming free outside, and choose to embrace that (Sandseter et al., 2020). European Early Childhood Education and Care practitioners in five European countries all acknowledge they are placing restrictions on children's outdoor play due to safety concerns.

If community members "desire to move towards a more environmentally sustainable future, it is important that parents recognize the role that they too can play in providing nature experiences that will have a lasting impact on their children and not rely solely on public education and summer camps to provide these experiences" (Asfeldt, 2022, p. 1521). The last section will show students academic performance improves when they spend time outdoors.

### *Improved Academic Performance, When Lessons are Outside*

The Attention Restoration Theory states, being in nature can "reduce mental fatigue and restore the capability for directed attention" (Beyer et al., 2014). When students' minds are able to relax through exposure to nature, their brain is better able to absorb and understand new material (Kuo et al., 2018). This is why tree cover around schools is significantly related to academic achievement and better mental health outcomes (Beyer et al., 2014).

**When Going Outside, Boosts Engagement Inside.** A study found third-graders who participated in an outdoor science unit, had significantly better transfer of knowledge, than the control group of students taught inside the classroom (Flom et al., 2011). Kuo et al. (2018) research findings showed disadvantaged students, whose lessons took place in nature, remained more engaged when back in the classroom. The lessons had immediate positive effects in the

classroom with 50 percent less interruptions than the control group. These findings show the benefits for both students and teachers alike. Teachers are dealing with less interruptions in subsequent lessons and students retain knowledge, through their experiential learning in nature. Through hands-on experience, students' "learning comes alive through a kinesthetic, sensory, and experiential learning style…[and] teachers become facilitators of learning and guide children through open and flexible real-life, bodily experiences that connect to a child's abilities, needs, and interests (van Dijk-Wesselius et al., 2020, p. 2).

In my literature review I have shown that students' mental well-being and engagement in the classroom improves when time is spent outside in natural environments during instructional hours. In my application chapter I will discuss the importance of decolonizing outdoor education and outline strategies for successful implementation of taking students outside in nature.

## Chapter Three: Application

In this chapter, I lay out strategies for implementing outdoor learning and play time into the elementary curriculum and outline prominent Canadian-based outdoor programs and courses for teachers. I begin by discussing how outdoor education must honour Indigenous wisdom and teachings, realizing knowledge is an ongoing process in understanding one's relationship with the land, community, and all created beings. Then, I move on to discuss five strategies for elementary teachers to follow, when implementing outdoor learning and play time into their curriculum. With each strategy I will provide examples from my own experiences as an elementary teacher, and as well, make references to outdoor education programs in Canada.

### Nature is Important, Now Let's Get Outside!

As shown in my literature review, the well-being of children is improved by spending time outside in nature, during instructional class time (Barfod & Bentsen, 2018; Dettweiler et al., 2017). Natural landscapes provide students the opportunity to learn in a different setting, which allows children to develop holistically and cultivate a sense of responsibility to the earth. The evidence provided in my previous chapter clearly shows that being in and around green environments leads to stress resilience (Dettweiler et al., 2017; Kuo et al., 2018; Beyer et al., 2014; Barton & Pretty, 2010; Dettweiler et al., 2023). With high rates of mental illness and attention disorders found in younger students (Canadian Mental Health Association, 2014), school districts must advocate for alternative strategies to be implemented. As asserted in previous sections, being in nature is beneficial for overall health and well-being; however, the effectiveness of outdoor education relies on educators having skills and knowledge of the outdoors (Dickson & Gray, 2022). Teachers need to be given the resources and tools to be supported, as they transition to more regular use of the outdoors as a teaching environment. In

my experience, when teachers are afforded the opportunity to learn first-hand from the experience of a new concept, they are more likely to apply it within their own practice. It is imperative that educators prioritize time to restore the nature-child relationship and the benefits it offers in the classroom, thereby, enriching the lives of students (Flom et al., 2011). Unfortunately, not every school has equitable access to nature and the outdoors, leaving many teachers unsure of how to proceed (Dickson & Gray, 2022).

### *Decolonizing Outdoor Education*

Indigenous voices are often left out when determining the future direction of society's educational practices and its issues of nature-deficiency (Dickson & Gray, 2022). It is important for students to be taught curricular concepts in tandem with Indigenous perspective of "unity with all creation" (Madjidi & Restoule, 2008). Indigenous and Western epistemologies do not have to be taught independently, but can be respectfully infused into education to complement one another when designing outdoor pedagogy (Thomas et al., 2018). The Truth and Reconciliation Committees Calls to Action, shows Canada has a commitment to educate students on the truth about how Indigenous Peoples were treated in residential schools, where their culture, language, and families were torn apart (Truth and Reconciliation Commission of Canada, 2015). Although not all subjects or lessons mention these topics specifically, it is important to include Indigenous perspectives on how everything is interconnected and dependent on one another.

Educators must assess their own biases and perspectives. Thomas et al. (2018) reveals an instance of colonialism where Captain Cook named a land formation, Mount Dromedary, but what "Captain Cook and the early settlers didn't realize…[is] that this mountain already had a name, which was and still is Gulaga" (p. 155). Learning from the land is central to Indigenous

Peoples' understanding of education, where learning takes place within the context of the natural world (Madjidi & Restoule, 2008). Many Indigenous groups hold the belief that humans were the last to be created, and as such, must humble themselves before creation. Their view of knowledge is an ongoing process in understanding one's relationship with the land, community, and all created beings.

The British Columbia (Government of British Columbia, 2024) curriculum includes Indigenous perspectives and knowledge through Kindergarten to Grade 12. I am proud of the inclusion of Indigenous voices into all subject areas, rather than standalone lessons. Students learn to view objects they encounter in their world from different perspectives (Thomas et al., 2018). Children need to learn to cultivate a strong connection to nature and to understand the importance of taking from the land only what is necessary. Bowers (2017) states, "many minority cultures have a smaller ecological footprint" (p. 11). This understanding should be used as a guide, since these minority cultures have resided on the land prior to the arrival of colonists. An eco-justice approach can teach students that they have a part to play in preserving the natural habitat, found right outside their classroom.

A key element to Indigenous knowledge is understanding the mantra, 'we do not own the land, the land owns us' (Thomas et al., 2018). Outdoor learning provides a cultural and material contrast to the traditional Western education system (van Dijk-Wesselius, 2020). It represents a space of freedom and support, as we learn that there is something bigger than ourselves. It is paramount that educators not speak on behalf of Indigenous peoples, but instead, should seek to design pedagogy from within their own connections and to respectfully include Indigenous knowledge and relationships (Thomas et al., 2018). The question educators must ask themselves is, 'What is our responsibility to honour Indigenous voices, when present in nature?'

At a time when students are experiencing the highest levels of mental illness (Canadian Mental Health Association, 2023) and disconnection from nature (Louv, 2008), educators must turn to an "Indigenous-based holistic framework for knowing and learning, to help humanity develop a sense of respect and relationship with all Creation" (Madjidi & Restoule, 2008, p. 104). The First Peoples Principles of Learning has been my guide, as I seek to honour and "recognize the role of Indigenous knowledge" (First Nations Education Steering Committee, n.d.). The principles identify common elements of Indigenous Peoples approaches to learning, which help me respectfully include each into my pedagogy. The following section discusses five essential strategies to aid elementary teachers and administrators in overcoming barriers to getting kids outside to learn and play during instructional school hours.

### *Strategies for Success*

As mentioned in my literature review, there are many barriers which prevent children from being in nature within an elementary class setting. Teachers may be unaware of how to teach within a more unstructured environment (van Dijk-Wesselius et al., 2020; Barfod & Bentsen, 2018), parents may express safety concerns (Sandseter et al., 2020) or communities may lack adequate park space (Beaulieu & Beno, 2024). Despite these concerns, there are many ways in which educators can begin an outdoor education program in their school, or can simply start taking their students outside more often. To keep up with the changing needs of students, outdoor education can be a strong advocate for "holistic and integrated learning that embraces experiential teaching methods, achieves a range of learning goals, and links that learning to student's everyday lives and local communities" (Asfeldt et al., 2022, p. 1522).

**Just Do It.** The landscape of teaching has changed. As stated in my literature review, students' disconnection from nature has led to negative mental health, increased attention

disorders, and an inability to meaningfully engage in the classroom (Louv, 2008). During the COVID-19 pandemic, everyone remained indoors in a heightened state of anxiety over a prolonged period of time. This negatively impacted students' capability to properly cope with stress that arises in their daily life. Teachers' workloads are at times barely manageable and so shifting to a new pedagogical mindset can seem an impossible task. The van Dijk-Wesselius et al. (2020) study, discovered the key to this mindset shift occurred despite the barriers and time constraints teachers experienced. By adopting a ‘just do it’ attitude, teachers often surprised themselves with this decisive choice. Flom et al. (2011) describes how merely being in the presence of greenspace can have a positive impact on health.

After witnessing my colleagues successfully develop their forest class model, I embarked on my own journey to teach outside, more often. The initial stages were at times awkward and filled with learning opportunities for myself and my students. It did not take long for me to see the joy in their faces whenever I mentioned, we would be heading into the forest. It simply took a little courage and a growing realization for me to understand that the outdoor environment was precisely what my students needed. In these surroundings, the children flourished, often collaborating with peers, which they never would have in the classroom. As shown in my literature review, education, which embraces an outdoor pedagogy, provides opportunities for imaginative and developmentally appropriate play (Rekers & Waters-Davies, 2021). When teachers sense their understanding of outdoor education methods to be inadequate, and lack confidence, they can choose to ‘just do it’, which can set in motion a drive to learn more, by participating in future professional development opportunities.

For teachers only just beginning their journey into outdoor education, Take Me Outside (2019) is a perfect website to source useful material and ideas. The organization's mission

statement is firmly aligned with that of my own. It states they, “believe in a future where spending time outside learning, playing and exploring is a regular and significant part of every learner’s day” (para. 1).

**Get Educated and Inspired.** Post-secondary education programs have not included a formalized method for teaching outdoors within their curriculum. During my Bachelor of Education degree through Thompson Rivers University (TRU) I was never taught how to teach in any other setting, than the classroom. We had an Indigenous course, which often found us outside, but there was no formal instruction or mention of outdoor education. Today, this is a primary reason teachers find it challenging “to formalize outdoor learning themselves, as they often they have no clear idea on what outdoor learning is and feel hindered by the demands of their existing curriculum” (van Dijk-Wesselius et al., 2020, p. 6). For teachers to overcome the barrier of unfamiliarity, they must first of all have opportunities to familiarize themselves with outdoor education. They need to be inspired by other outdoor educators, and then, provided with their own experiences outdoors (van Dijk-Wesselius et al., 2020; Barfod & Bentsen, 2018).

At my school, teachers who include an outdoor component to their curriculum often welcome other teachers on staff to experience a lesson with their class. They are afforded time to observe, gaining first-hand experience while administrators cover their classroom teaching duties. Lunch-and-Learn sessions hosted during the lunch hour have also been successful in providing an opportunity to ask questions. It is through this hands-on, experiential learning, teachers can be inspired in their professional development efforts. Once I had gained knowledge from other enthusiastic, outdoor teachers and had attended sessions on outdoor learning, I became hooked, and was eager to test new strategies with my students. Van Dijk-Wesselius et al. (2020) states this plainly saying, “without insight in the value and background of outdoor

learning, time spent in the green schoolyard will be no more than a change of scenery instead of an enrichment of children's learning experiences" (p. 13).

Recently, my school participated in the Wild School grant program, a three-year initiative, which included resources and mentorship from a WildBC facilitator. It was a great way to be inclusive of everyone's teaching style and to work toward the same goal as a staff, as well. The program, funded by the Habitat Conservation Trust Foundation, offers many options for educators to experience nature with their students (HCTF Education, 2024).

Teachers also need to be given access to the most current practices and strategies for the healthy development of children. Oftentimes, this is assigned to the role of the physical education teacher, and not each teacher on staff. A more recent Canadian Paediatric Society (Beaulieu & Beno, 2024) health bulletin encouraging students' engagement in risky outdoor play, endorses many of the arguments stated in my previous chapter. The literature strongly supports students' participation in learning and playing outside, as the health benefits are seen in physical, mental and social-emotional health (Barton & Pretty, 2010; Beyer et al., 2014; Beaulieu & Beno, 2024; Dettweiler et al., 2017; Dettweiler et al., 2023; Dickson & Gray, 2022; Dodd & Lester, 2021; Jones et al., 2019; Flom et al. 2011; van Dijk-Wesselius, 2020).

**Alter Your Teaching Attitude.** Much of the hesitancy of going outside can be due to fear of the unknown. Teachers are accustomed to commanding and directing students during lessons. Taking a class outside to teach or play, relies on trusting students' and their ability to demonstrate independence and a sense of responsibility. As shown in my literature review, when students learn outside, they become more creative (Adams & Beauchamp, 2021) and collaborative with their peers (Davies et al., 2013). To strengthen confidence in teaching methods outside of the classroom, van Dijk-Wesselius et al. (2020) found that, "instead of [teachers]

focusing on their own fear to stay in control, these teachers focus on what is beneficial for children to learn outside in regards to risk taking and developing independence" (p. 10). If we understand that teaching outside offers so many benefits for students and teachers alike, why are we then continuing to teach the same way we always have? When I take my students outside and enthusiastically play their games with them, I discover that their interest levels soar. When I am teaching a lesson, or showing my own curiosity as I interact with nature, my behaviour has a modeling influence upon my students.

Educators, unfamiliar with the outdoors, often state that playing in nature is too dangerous and leads to more injuries (Barfod & Bentsen, 2018). Beaulieu and Beno (2024) state the contrary, as research shows, children are injured more in organized sports, compared to unstructured play. Society's understanding of risk needs to be reframed. Teachers' and parents' first priority should be to protect children from harm, and then, to provide safe and supportive environments for children to spontaneously play together. Adapting your communication style to reflect a more supportive role, one which boosts children's confidence levels, will work to encourage them to become more aware of how best to manage or solve problems that may arise. I have taken this style of approach with my four-year-old daughter. Instead of telling her, 'Be careful', I instead make her aware of her surroundings, by saying phrases such as, 'Notice, how those rocks are wet and could be slippery?' or, 'How will you get down, once you climb up?'. Teachers can work to reframe their own language to become more supportive, when taking students outside. The Canadian Public Health Association (2018) provides an online toolkit, whereby schools can implement elements of risky play into their curriculum and physical spaces.

**Devote Time to Establish an Outdoor Learning Practice.** Teachers often feel overloaded and stretched thin with the volume of work-responsibilities required of them (van

Dijk-Wesselius et al., 2020; Barfod & Bentsen, 2018). The lack of available time creates a barrier, when teachers seek to include or schedule outside time. To overcome this, a study done by van Dijk-Wesselius et al. (2020), which included a group of teachers, suggested putting outdoor learning on your weekly schedule and to look out for opportunities to integrate the outdoors into existing lessons. Once an outdoor learning practice becomes established, teachers will be more aware of spontaneous moments that can inspire students to connect with themselves, nature, or a particular concept. Part of my school's practice in embracing outdoor learning opportunities was to invest in an outdoor bin, which made it easier for teachers to take their students outside. Items placed inside the bin included: a class set of square foam mats, silicon circle spot markers, a large tarp, a class set of clipboards, pencils, laminated greenspace scavenger hunts, teacher mini-whiteboard with markers, and first aid kit. The bin is mounted on wheels, which makes it easy for students to move about. Planning for outdoor learning to occur on regular days throughout the week will allow parents and students to be better prepared, ensuring proper outdoor clothing and footwear (Barfod & Bentsen, 2018).

Another barrier, common among teachers, is reframing students' understanding that learning can take place within a setting other than the classroom (Barfod & Bentsen, 2018). To address students' misunderstanding of the outdoors as not being merely for play, but as a learning setting, teachers must first begin by establishing routines and expectations of class behaviour when outdoors. With practice, students will then begin to view the outdoors as yet another teaching environment. It is my experience that when educators make time in their schedules to establish an outdoor learning practice, they will come to the realization that time spent learning and playing in nature improves both the quality of life for themselves and their students. For teachers to modify their practices and beliefs, “experiences can be gathered in both direct and

indirect ways: directly through self-experience, being outdoors and doing subject-based activities; and indirectly by, for example, watching movies, reading, or visiting colleagues for observation of practice" (p. 154).

Devoting time to plan outdoor lessons can be made simpler, by using ready made curriculum packages for lessons taught in nature. Wild Learning (2024) offers a curriculum in math for kindergarten to grade five students, and more recently, includes a reading curriculum. In previous years, I have used the grades three, four, and five Wild Math curriculum, finding it incredibly easy to use and incorporate into my units. Our school administrative team purchased the complete Wild Math curriculum, which inspired many teachers to reimagine what teaching math could look like, in an outdoor environment.

**Teamwork Among Like-Minded Colleagues.** In order to expand the practice of outdoor education, there must be opportunities created to include those teachers who are currently not practicing this pedagogical method (Barfod & Bentsen, 2018). Often, there are many reasons why teachers do not adopt a pedagogical mindset. But, when time is built in for teachers to schedule, prepare, and present a prepared lesson in connection with outdoor learning, it makes taking the leap more manageable and rewarding (van Dijk-Wesselius et al., 2020). This new learning and understanding of outdoor education is best supported when having colleagues who share the same decisive mindset.

Outdoor education has the potential to re-awaken joy in teachers. I had this experience occur during the pandemic years of teaching. As mentioned beforehand, in chapter one, I was on maternity leave during the onset of the pandemic, returning to work the following September. That year was one of the most challenging I have faced. I found poor behaviour, a lack of social skills, and an inability to self-regulate in the majority of students.

Turning to colleagues, who were already considered outdoor educators within my school district and connecting with teachers via the social media platform, *Instagram,* sparked a flame within me. I discovered worthwhile, outdoor learning accounts, which include: @discoverwildlearning, @teacheradventuresthroughmylens, @inspiredlittlelearner, @theoutdoorhomeschool, @latteslashesandlearning. The use of online educational resources and social media sites can be a great inspirational start to finding 'your people'. When I initially became interested in outdoor education, I searched Instagram for 'like-minded' outdoor educators that could inspire me with what they were already doing with their classes. Since then, I have regularly posted stories of what I am up to with my class, on my own teacher Instagram account. I want to be a part of a community that values getting students outside and collaborating on how best to do that with our student body.

**Summary**

In my application chapter, I have explained the importance of decolonizing outdoor education and have outlined five strategies for elementary teachers to use as ways to overcome barriers to teaching students in the outdoors. In chapter four, I summarize my argument, literature review, and application chapter, and describe further implications learning in nature has on students' health and well-being in the classroom.

## Chapter Four: Conclusion

In this chapter, I begin by summarizing my connections between all of the previous chapters. I then describe the success of my paper in advancing my argument. Next, I detail its theoretical implications and how this paper contributes to the overall conversation of the inclusion of outdoor education into the elementary school setting. I conclude by outlining the practical implications and the changes, which I would like to see occur within our society, based on my argument.

### A Deeper Understanding of Nature

The writing of my capstone paper is the amalgamation of my personal and professional experiences of how outdoor learning and play has a positive impact on the daily lives of students and subsequently, teachers. This opportunity granted me the space, upon which I could reflect on how and why, I believe students learn and develop best when in nature, grounded in my humanistic educational philosophy. As demonstrated throughout this paper, and especially in my literature review, there is strong evidence that children's connection to nature has significant impacts on their mental health (Louv, 2008). My journey of becoming a parent, and of engaging in masters courses specific to Indigenous healing on the land, has led me to a deeper understanding of the myriad benefits of nature.

Prioritizing instructional time to learn and play in natural landscapes, presents students with a holistic approach to learning, improving their overall well-being and class participation (van Dijk-Wesselius et al., 2020). Adventurous, outdoor play positively impacts academic performance and leads to better retention of knowledge (Kuo et al., 2018). Learning on, and from the land, gives students first-hand, experiential knowledge opportunities, which translates to increased engagement and collaboration within the classroom. Incorporating Indigenous ways of

teaching and learning into the curriculum, enables students to develop a connection with creation (Madjidi & Restoule, 2008).

My own classroom teaching experiences in outdoor education, adds to my argument that nature affords a space, which cultivates creativity, improves self-esteem, and reduces behavioural incidences (van Dijk-Wesselius et al., 2020). In my paper I am able to show that when students are immersed in alternative learning environments, such as nature, their health and well-being is enhanced. Fear of student injury, teaching in an unfamiliar environment, and an overburdened teacher workload are factors that prevent educators from fully embracing outdoor education. Despite barriers faced, the wider implications for students' health must evoke a call to action among educators.

Throughout my paper, I have successfully argued and presented evidence that demonstrates students' well-being and engagement in the classroom improves, when instructional time is spent learning and playing in nature. I have showcased various models of what education can look like, when students learn and play outside; from Forest Schools (Tiplady & Menter, 2021), to mindful nature walks (Adams & Beauchamp, 2021), to lessons taught outside (van Dijk-Wesselius et al., 2020). The whole of my research demonstrates the necessity for regular, instructional time spent in nature for elementary students. I am confident that student engagement in the classroom will increase, as well as, the health and well-being of students and subsequently, teachers, as school systems prioritize the implementation of a holistic approach to education, through outdoor learning.

**Theoretical Implications**

A student's learning environment has a significant impact on engagement, focus, and retention of knowledge (van Dijk-Wesselius et al., 2020). The loss of natural, outdoor

experiences for students, has negatively impacted their healthy development and well-being (Louv, 2008). Our connection to nature has been fractured, which holds lasting physical and mental repercussions for society. Research has shown that students learn best in a safe, supportive environment, which encourages hands-on, experiential learning (Asfeldt et al., 2022). Outdoor education affords time and space for students to construct knowledge and develop socially, through their interactions with others (Davies et al., 2013). Teachers must work to provide an education that develops the 'whole child'. School districts and administrators must realize the importance that outdoor learning plays in the healthy development of students.

**Practical Implications**

It is my aim that those who read this paper will consequently come to understand that outdoor education is essential for the healthy development of children and therefore, it must hold a place within elementary practices. Too often, the expectations of schools focus exclusively on academic achievement. The general public must come to understand that when students attend school, they are learning much more than 'how to read' or complete math problems. The goals of education must be student-centered, to develop critical thinkers, to encourage connection and collaboration, and to cultivate students to become passionate creators of their own learning journey. I would like to see the British Columbia Ministry of Education include outdoor learning opportunities into the curriculum as a priority, not just a stand alone subject. Thereby, encouraging school districts to begin providing teachers professional development on how best to utilize nature as another environment, in which to teach.

My understanding of education, and of how students learn best, will continue to evolve well into my teaching career. But my conviction that nature is an essential component for students to spend time in, connect with, learn from, and to engage with — by way of adventurous

outdoor play — will not change. “We have such a brief opportunity to pass on to our children [and students] our love for this Earth” (Louv, 2008, p. 316). The time we have with our students is brief, we must all make it count.

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