

ECO-ARTS EDUCATION

**Eco-arts education: Developing a connection with the natural world
through yoga and mindfulness**

by

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Abstract

This research studies how yoga and mindfulness, in an outdoor setting, helps elementary students connect to and understand the natural world. The four interrelated spheres of holistic development created as the conceptual framework for this research were based on Sauvé's (2009) framework, and focus on student wellbeing, yoga and mindfulness, forming community, and understanding the natural world. This research borrowed from narrative inquiry, and arts-informed research practices (both qualitative methodologies), focusing on student discussions, journaling, drawing, and a clay creation to inform the research. Through their journey in a program called *Snowga* (yoga in the snow), four students learned about mindfulness and living in the present moment through yoga postures and meditations over an eight-week period (one-hour session each week). This thesis describes the positive changes observed through my reflective journaling (i.e. expressing care for the natural world; expressing a sense of belonging and understanding of the natural world; showing that they feel a connection to the more than human world and to understanding it at a deeper level) that occurred in student understanding and growth of the natural world as they explored self, community, and the natural world through yoga, mindfulness, and the creation and discussion of their journals and artwork. Through my research, I hope to engender awareness of the efficacy of mindfulness and yoga practices in an outdoor setting, and advocate for these practices to become a part of everyday class time in an effort to move students outside and build a connection to the natural world.

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Chapter 1: Introduction

Every morning I wake up in the shadowy grey of morning, before the sun even begins to grace our world with its delicate rays. Two sets of eager eyes peer at me from over the bed covers. A little whimper and a loving nudge from my two furry friends tell me that it's about that time again – time for a walk. After dressing quietly in the darkness, moving as if to not disturb even the air around us, we prepare for our morning walk. The gentle jingle of my dogs' collars and the clicking of their little toe nails on the floor are the only sounds to disturb the air. I swing the back door wide and feel the rush of the cool autumn air as it grazes my face. My being is filled with the scent of woodstove in the distance and the smell of colourful leaves as they drop gently from the trees. I notice with appreciation the white-tip frosted blades of grass and slight crunch under my feet as I make my way down the dirt driveway. We're going to our favourite little place; the place we visit every morning to clear our heads, our lungs and our minds – just me, and my two doggies. It is mornings like this that I feel humbled and lucky to live in a place where minutes from my doorstep I can be surrounded by a gently wooded area. Every morning I marvel at how lucky I truly am to smell that distant wood burning, the smoke lingering in the air just out of reach, to hear the crunch of the autumn leaves beneath my cold feet and to see my breath dance through the air. This is home – Thunder Bay – and I'm so happy to be here to appreciate all the beauty it has to offer.

To begin, I'd like to tell you where I have been and how I came to be in this place of awareness (Greene, 2014). I say awareness because I was not always awake to the comforts that I now marvel at on a daily basis. I'd like to take you back with me, to 2011 when I was living in Busan, the second largest city in South Korea. At this time in my life, I had just completed the concurrent education program and was a keen, new graduate looking to work as a teacher. Busan

was a massive city compared to the small Northern Ontario city, Thunder Bay, Canada where I grew up. With nature always nearby (just steps out of my back door and a family farm down the road) I never really thought about the natural world or how it affected me. I was one of those fortunate people surrounded by nature, but unfortunate in that I didn't even realize my good fortune. That is, until it was gone.

The area that I lived in in Busan was called Choryang-dong. It was a business area near the train station, which meant an easy commute to school and to areas where my friends lived. For the first time in my life I couldn't sleep with the window open. The noise pollution from the busy street below kept me awake at night. The stench of the vehicle exhaust-polluted air filled my small, one-room apartment, forcing me to shut the windows, keeping the air cleaner, but stale. I remember feeling boxed in and alone. The city lights never slept and due to the honking horns, vehicle exhaust, and non-stop neon lights shining in my window, I drew the blinds in an attempt to shut everything out. There were no nearby parks, trees, or even grass. I didn't spend much time inside this little one room apartment; I felt too depressed and alone. The four walls felt like they were always closing in on me. I longed for a way out. Looking back, I was excited about living in the big city and assumed that some of my anxieties had to do with living in a foreign country. I see now that it was more than that for me.

Eight months into my first twelve-month contract I felt lonely and longed for the companionship of my family dog, back in Canada. Knowing it was near impossible to bring him to me, I decided that the best thing to do was rescue a dog in Korea. I found a four-month old puppy, and immediately my life changed. I fell in love with Winston and through him discovered what I was missing. This puppy was scared of everything, and when I say everything, I mean *everything*. He was afraid of his leash, he was afraid of the stairs, he was afraid of the elevator,

he was afraid of the street, the cars, the traffic, and the noise. It was all too much for his little system and he cried. I had never known a dog to not like walks, but this poor puppy cried each time I tried to take him outside. I should have cried too, for it was impossible to engage with trees, grass, or other animals in this location. Through his sadness, I realized that this concrete jungle was no place for us. That perhaps what we were both missing and needing was some greenery. Of course Winston was scared to go on walks – I was scared! The unrelenting honking, cell phone conversations, beeping and blinking lights, and speeding vehicles were enough to overwhelm us both.

Fast forward five months. Winston and I had just moved into our new apartment on a small island named Yeongdo. It was further from my school, further from my friends, but minutes away from a beautiful mountain area filled with hiking trails. Along those trails were beaches that led to fresh ocean air, a river that led behind my apartment, and a beautiful winding walkway surrounded by trees and grass. Suddenly, my illnesses faded away. I may have been more secluded but I had never felt happier. Similarly, Winston began to enjoy walks and looked forward to them. The peaceful escape became routine for us, and soon our long walks became meditative. At the end of a stressful day, everything seemed right again after a walk with my furry friend. It was at this time that I realized there was something to this natural world that was bigger than me. There was some kind of connection that made me feel happy, fulfilled and content, and there was something about this natural world that connected my dog and me together as well. It wouldn't be for a few more years, through a course in my first year of my master's degree, that I would begin to explore these connections at a deeper level.

Motivation

My first course in the first year of my master's degree was an outdoor education course. I had never taken outdoor education before and although I was always a big advocate for getting students outside and being active, I did not fully understand what outdoor education was. As the small class walked through the trails behind Lakehead University, the autumn leaves just changing colours, a quotation that I had not thought of in years danced through my mind, carelessly. I loved literature and, in particular, loved *Anne of Green Gables* by L. M.

Montgomery (1915):

It was November--the month of crimson sunsets, parting birds, deep, sad hymns of the sea, passionate wind-songs in the pines. Anne roamed through the pineland alleys in the park and, as she said, let that great sweeping wind blow the fog out of her soul. (p. 161)

It may not have been November at the time, but those colours, the breeze and being back in nature took me back to my childhood fantasies of being *Leanne of Green Gables* and imagining that all the things that the main character, Anne Shirley, saw were things that I could see as well. This connection to my childhood memories and feelings warmed my heart and I realized through this course that I was onto something very special. I learned to ask questions, to be curious, and to bring out the Anne Shirley that was within me. This deep love and connection with the beauty of all things around me made me realize that my passion, my calling, was to help others find this beauty – this *love*.

Through many of my readings – Mitchell Thomashow (1995) in particular – I realized that the connection and love that I felt could be defined as an “ecological connection” with the natural world. Through more reading, I discovered that so many before me felt these connections and the drive to do something with this understanding. For me, my passions are in education with

primary/junior grades and with helping students to also discover these inner connections to an outer world. Thomashow (1995) writes, “ecological literacy conveys an attitude, ‘driven by the sense of wonder, the sheer delight in being alive in a mysterious, beautiful world’” (p. 175). The concept of the world being “mysterious” and “beautiful” perfectly sums up my feelings and curiosity about the natural world. I wonder if there is some way that I can help others develop their curiosity about the natural world.

Goals and Objectives. My aim is to help students build an understanding of the natural world through yoga movement, mindfulness, and meditation while enjoying, discovering, and being in the outdoors; the goal is to help students enhance their personal wellbeing and feelings of connection with nature. My life has changed by being outside and taking time to identify with nature through movement; I hope to impart similar awareness to my students in the hopes that they too will benefit as they move through the four levels of being, as derived from Sauv e’s (2009) conceptual framework. The framework centres wellbeing as the first level and central priority, which is then followed by yoga and mindfulness practice as a way of executing self-care and wellness. The third level extends to connections from the self out into community and to place. The final level moves from place, wellbeing, and love of self to a love and respect for the natural world through mindfulness and stewardship. In Chapter 2, I describe each of the four levels of the conceptual framework in detail, particularly how they interconnect with one another. However, I conclude this introductory chapter with the necessity of defining terminology specific to this thesis, followed by a discussion of the research purpose, my research question, and the significance of this study.

Definitions

For the purpose of clarity, it is necessary that I define several terms, which I will refer to throughout my thesis, the first of which is “holistic education.” According to Miller (2007), “holistic education attempts to bring education in alignment with the fundamental realities of nature” (p. 3). A connection between the self and the natural world is vital. Oftentimes we find there is an inner struggle between the mind and the heart caused by the tensions that schooling can create between the two (Miller, 2007). Holistic education aims to rekindle those connections between the mind and the heart through experiences and learning in the natural world.

The term “natural world” refers to the outdoors, nature, and any setting that is green whether it is a park, forest, lake, river, hiking trail, or any other place where one might visit to feel connected and at peace with nature. The natural world is complex and diverse in both its definition and in the physical sense. For the purpose of this research, I espouse Bonnet’s (2009) perspective and refer to the natural world as the world of the earth, sea, and sky. Bonnet explains “natural things befall us in their own manner and time. They do not compose themselves for our gaze; we come across them” (p. 178). In other words, Bonnet believes that the natural world is as it is, whether humans interfere, marvel, or study it; nature exists in its own habitual way.

Combining holistic education with the outdoors is complementary as the two seek the same inner connections to the outer world.

Research Purpose and Significance

My research purpose is to combine holistic education with environmental/outdoor education that aims to benefit student wellbeing through exploration of self, community, place, and the natural world through yoga and mindfulness. Specifically, my research asks: How might practicing yoga and mindfulness in the natural world affect student connections to self, place, and community?

In Jickling's (2007) article he discusses (among other ideas) the importance of defining the problems with environmental education and working from that point forward. He argues that "in light of recent criticisms of environmental education, it is timely and important to renew discussion about how environmental education is defined. This, I argue, means giving more attention to the educational dimension of environmental education" (p. 86). The dimension that Jickling refers to is the ability to connect environmental learning to the environment. One example of how this dimension can become embedded in the enacted curriculum is through various means of supporting connection and learning. It is about more than one method of teaching and learning and going further than defining environmental education as one concrete term, but understanding the complexities of the natural world. Jickling is pointing to the need for change in environmental education, change that includes an ethic of care, sense of belonging, and physical connection with the environment – the natural world.

My research offers a way to enhance learning and connection with self, community, place, and the environment through practicing yoga and mindfulness *in* the natural world. While yoga and mindfulness are beginning to find a place in school systems and teaching, outdoor, and environmental education (EE) have been in education for decades. Combining the two will hopefully add to the already large body of literature surrounding EE and mindfulness. My research is important because it begins to explore the benefits of using both mindfulness and yoga in combination with environmental and outdoor education, deepening the literature that already suggests that these subject areas are beneficial for students. Though my research is small, it is important to see the positive changes in students as they move through my conceptual framework, showing that mindfulness, and yoga in an outdoor setting can lead to student connection to the natural world.

The next chapter begins with a review of the relevant literature, including: disconnection from nature; connection with nature; environmental education; outdoor education; mindfulness in education; and, mindfulness in outdoor environmental education. This is followed by an explanation of my conceptual framework as derived from Sauvé's (2009) work. I conclude by discussing the benefits of using mindfulness and yoga in order to encourage self-care and in turn develop a connection to the natural world.

Chapter 2: Literature Review and Conceptual Framework

The purpose of this literature review is to explore the research relevant to my question that asks: how might practicing yoga and mindfulness in the natural world affect student connections to self, place, and community? Throughout the following pages are examples of researchers exploring environmental and outdoor education and how they pertain to students' formation of connection with nature. The following literature touches on ideas, concepts and projects that inform this research which seeks to explore the journey students encounter in their exploration and formation of nature connection. The goal of this research connects to Burkhart's (2001) premise that the importance of experiential educational methods are "understood to be especially powerful for the development of ecological literacy and consciousness in students, both of which are crucial if we are to develop healthier and more respectful ways of interacting with the land" (p. 19). While my research focuses on connections with the natural world, I do feel that developing ecological literacy (the ability to understand natural systems) will move students towards developing a deeper connection to nature.

The following literature review explores the contention that being outside helps students form an understanding of the natural world and presents a novel way of educating students that is relatable and holistically beneficial for all ages. All people, whether learners or educators, need to have access to and experiences with the natural world in order to better acknowledge the more-than-human and address complex sustainability concerns (Barrett et al., 2016). Natural experiences also help promote emotional wellbeing and connection to place and to community (Sameshima & Greenwood, 2014).

Disconnection from Nature

One of the leading causes of disconnection from the natural world according to Lowenstein, Martusewicz, and Voelker (2010) is anthropocentrism. They believe that humans have separated themselves from the natural world, in part, as a means of controlling other beings. Learning to respect the natural world as it wholly exists is vital to human survival and our understanding of the world (Lowenstein et al., 2010). Cultural perspectives play a role in this as some cultures have practices already set in place that combine well with environmental education.

For example, Eastern practices are making their way into environmental education around the world as evidenced by Eppert (2009): “Educators in different countries and communities are seeking wisdom and guidance in hopes of finding creative solutions for the many problems of today. Several are reaching for texts and practices composed and cultivated in ancient India and Asia” (p. 191). Eppert (2009) goes on to explain that in a Western perspective the natural world is “regarded as exploitable” (p. 192). However, not all share Eppert’s views that Western perspectives always view the natural world in the same “exploitable” sense. For example, Barrett et al. (2016) stated, “this is not to say that all educational programs and courses reproduce this separation and silencing, but given the many ways in which both neoliberal and anthropocentric agendas dominate educational practice and policy, many do” (p. 2). Regardless, in order to begin the journey of connection to the natural world, we need shift away from anthropocentric thinking and move towards biocentric thinking and a relationship between the natural world and humans (Taylor, 1986). In addition, Boyes and Stanisstreet (2012) suggest:

One aim of environmental education is to enable people to make informed decisions about their environmental behaviour; this is particularly significant with environmental problems that are believed to be both major and imminent, such as climate change

resulting from global warming. (p. 1591)

As Boyes and Stranistreet (2012) conveyed in the above excerpt, one key to improving environmental behaviour is by enabling people to make better, more informed decisions. If we are informed, we will be more inclined to make decisions that include the best interests of the natural world, rather than only what is perceived to be in the (often short term) best interest of the humans inhabiting it. While this view gives us hope, Kollmuss and Agyeman (2002) remind us that,

research showed that in most cases, increases in knowledge and awareness did not lead to pro-environmental behaviour. Yet today, most environmental Non-governmental Organisations (NGOs) still base their communication campaigns and strategies on the simplistic assumption that more knowledge will lead to more enlightened behaviour. (p. 241)

In order for knowledge to lead to better decisions, then, an exploration of positive change and how it influences a connection with nature is important. Influencing positive change in behaviour towards the environment requires challenging traditional teaching approaches. Hungerford and Volk (1990) echo Kollmuss and Agyeman's (2002) argument and view:

The traditional thinking in the field of environmental education has been that we can change behaviour by making human beings more knowledgeable about the environment and its associated issues. This thinking has largely been linked to the assumption that, if we make human beings more knowledgeable, they will, in turn, become more aware of the environment and its problems and, thus, be more motivated to act toward the environment in more responsible ways. Other traditional thinking has linked knowledge to attitudes and attitudes to behaviour. (p. 9)

If the attitudes that Hungerford and Volk (1990) refer to can be linked to emotional connections to the environment as a way of helping students gain more knowledge in a holistic manner, then perhaps behaviours can change. Promoting a child's connection with nature can inspire discussions that are necessary for shifting from an anthropocentric view to one of understanding and connection to the natural world. One place where children can be affected by this change is in schools.

Disconnection in schools. Within the current version of the environmental education curriculum document for Ontario schools for grades K-12 (Ontario Ministry of Education, 2011), it is evident that some focus is placed on environmental education, but it does not provide considered attention to student experiences with the natural world. Unfortunately, the environmental curriculum is not the only issue. Teachers are struggling to find funding and preparation time, while working with larger class sizes and an expanding curriculum (Russell, Bell & Fawcett, 2009). This, according to Russell et al. (2009) "can mean that environmental education is treated as an add-on, not deserving of the same attention and funding as 'core' subjects" (p. 202).

Furthermore, Chawla (2009) suggests that teachers need to find ways to involve all five senses in appreciating the more-than-human while competing with student interest in two-dimensional technologies. One wonders how change can occur when children have the opportunity on a daily basis to watch television that depicts the more-than-human and allows them to feel a sense of connection but not a deep understanding that comes with real-life interactions that are more than two-dimensional (Fawcett, 2002). One method that could help with this "disconnection" is through interactions with the more-than-human through mindfulness and a focus on the wellbeing of all who inhabit the Earth.

Experiences with mindfulness. One route that may help students to connect with the natural world can be found in slowing down and practicing mindfulness. If we are to consider the role of mindfulness in environmental education, another oversight in the curriculum becomes apparent: a lack of clarification of what constitutes wellbeing and holistic education (Ontario Ministry of Education, 2011). Holistic education is founded on three basic principles: balance, inclusion and connection (Miller, 2007). The current K-12 curriculum does discuss expectations of student wellbeing but focuses on identifying feelings by looking for external qualities rather than self-regulation qualities. One example can be found in the all-day kindergarten curriculum document wherein students are expected to:

Begin to demonstrate an understanding of the effects of healthy, active living on the mind and body. Student Talk: . . . ‘Feel my forehead. I’m sweating from playing outside.’

Investigate the benefits of nutritious foods and explore ways of ensuring healthy eating . . .
. Sample Contexts: field trips to a farm or grocery store . . . (Ontario Ministry of Education, 2011, p. 14)

These examples simply have students notice feelings and look for things outside of themselves in order to identify their feelings. Yet what is vital to focus on, beginning in kindergarten, is mindfulness and self-regulation that come with holistic education (Miller, 2007); this process begins with relationships. According to Miller (2007):

The focus of holistic education is on relationships: the relationship between linear thinking and intuition, the relationship between mind and body, the relationships among various domains of knowledge, the relationship between the individual and community, the relationship to the earth, and our relationship to our souls. (p. 13)

Relationships extend from the self, to the community, to place and to the natural world.

While mindfulness can provide a helpful method of connecting students to the natural world, that in itself is problematic as argued by Fletcher (2016) who writes, “the very idea of ‘connection with nature’ (CWN) is fundamentally oxymoronic in that the way this notion is both discursively framed and materially manifest paradoxically exacerbates a sense of separation from the very entity with which it seeks reconciliation” (pp. 1-2). CWN sets up the sense, a hidden notion, that humans and the natural world are separate. While mindfulness opens up the possibility of finding connection (Rechtschaffen, 2014), the connection is incomplete if no link is made with the natural world; mindfulness can be a way of forming deeper connections while simultaneously situating the self as one with nature rather than separate from nature (Fletcher, 2016).

Making such connections in educational settings is not necessarily straightforward, however. Oftentimes nature is viewed as other and the experiences offered are problematic according to Russell (1999) who writes,

Too often, I have treated nature experience as an isolated activity, a quick fix, a commodity. Provide nature experience, and presto! Such straightforward models mirror traditional top-down, transmission-of-knowledge approaches to education wherein the learner is seen as the passive recipient of content that has been decreed from above (i.e., by powerful adults) to be important to ‘civilization’. (p. 125-6)

Knowing that this method of top-down teaching does not work, how can environmental education be taught and connection with the natural world fostered in a way that moves beyond anthropocentrism when “the result is that participants in environmental education activities intended to reconnect them with nature are commonly instructed simultaneously that nature is both something separate from them and something of which they are part” (Fletcher, 2016, p. 4)?

What can be done when environmental education remains on the outskirts of formal education, orbiting around the other subjects (Russell et al., 2009)? There needs to be a pedagogical shift wherein environmental education becomes more of a central focus (Barrett et al., 2016).

Unfortunately, the inclusion of environmental education as a more central focus in the enacted curriculum is mostly only happening in institutions where there is a committed faculty member, teacher, or principal (Russell, Bell, & Fawcett, 2000). According to Russell et al. (2000), “even then, with the exception of a few programs, environmental education at best is offered as a single course among many electives. At worst, some institutions do not offer even a single course” (p. 201). This raises questions for me. Where does this situation leave schools without a keen environmental advocate? How can we teach environmental education in a way that helps students to “connect” with nature without simultaneously “disconnecting” by framing ourselves as “separate?” These questions among others guide this literature review and my research as I seek to answer these questions while considering the possibilities for wellbeing, community, and environmental education of the holistic practice of yoga and mindfulness outdoors. Like Haigh (2006), I think that in order to see change, there needs to be development of “a deep personal bond with Nature as the most important goal for both individual[s] and society. A key concept is ecological Self-realization, which provides the way and a goal for deep ecological (and possibly all) education” (p. 44). With these goals in mind, this review turns to the literature concerned with connection with nature and its importance within environmental education.

Connection with Nature

Connection with nature is a fitting place to begin given my interests and because such connection is thought to be influenced by experiences with nature. In this section, I will discuss how

allowing for these outdoor experiences to occur in a meaningful and fun way is important, how these experiences can be positive for students, and what teachers can do to prepare lessons that encourage connection with the natural world.

Experiences with nature. Oftentimes when someone is asked about a special space that they hold dear in their hearts, they think of a place somewhere in nature where they established a deep emotional connection (Thomashow, 1995). Sometimes these memories are from childhood in a place where they had positive or meaningful experiences during their formative years (Chawla, 2009; Thomashow, 1995). To aid in nurturing such connections, it is important to try to understand the experiences of children (Chawla, 2009; Fawcett, 2002). Chawla (2009) submits that, “insights into formative interactions between children and key socializers, as children experience nature and learn how to respond to it, come predominantly from retrospective studies of adults recalling childhood” (p. 19). However, Chawla further explains that though these retrospective studies have been useful, it is also important to conduct actual interviews with contemporary children about their firsthand experiences with nature and not to rely solely on memories shared by adults. In her work, she has found that, “Sticks, stones, leaves, earth and water—promote cooperative and creative social play and therefore social competence. In addition to contributing to a sense of agency, these positive experiences can be expected to contribute to an emotional bond with nature” (p. 16).

In a similar vein, knowing and caring about nature also supports building a connection with nature. An example of developing a sense of knowing and caring is discussed in Bell’s (1997) article about her own personal experiences cultivating the practice of natural history; she writes, “those encounters were a catalyst to my later appreciating and planting the lupine native to southern Ontario . . . in my backyard. I now know about lupine and care about it, and the

knowing and caring go hand in hand” (p. 136). Bell focuses on her adult learning and development that was nurtured from her interests as a child and Chawla (1998), too, writes about the how early childhood experiences of empathic perspective toward the environment can provide a solid foundation: “An animistic relationship with the world, first felt in early childhood, remains people’s initial entry into the sequence of variables that eventually lead to responsible environmental citizenship” (p. 18).

Accepting this idea, that a personal bond or connection with nature can begin to form through childhood experiences, it then becomes clear that nurturing more of those experiences may be important in environmental education. But as Chawla (2009) states, it’s not that simple: “Children’s environmental experiences are in fact transactional, based on characteristics of the child, the child’s responses to a physical world in which nature fills a larger or smaller part, and how other people structure and define these experiences” (p. 10). Chawla brings to the table the idea that it is not merely interactions with the environment that are important influences, but the one must also consider other influences, including other people. For the purposes of this research, I am particularly interested in teachers as the “other people.”

Teachers. It is important for teachers to be aware of their role in a child’s learning and to be particularly aware of their influence in regards to “‘students’ incomplete completeness, and recognize both the abilities and the potential of each child, the extent of her or his current knowledge and future interests, and provide the needed support and challenge” (Blenkinsop, 2014, p. 150). While these duties fall heavy on the shoulders of educators it is important to also remember that much of this work is taking place in busy, crowded classrooms where “the context of the group . . . is also interacting and growing, [with] a teacher who is changing and re-thinking practice” (p. 150). In such contexts, how can teachers reflect on their progress to ensure that they

are following through with teaching children how to develop a connection with nature?

Blenkinsop suggests developing an “eco-intuition” where teachers feel the direction the lessons are taking and can predict or sense when old and new patterns of thinking are occurring. In using eco-intuition teachers are able to become perceptive to the subtle energies in the room allowing for a more creative process to form.

Flowers, Lipsett, and Barrett (2015) engage with the idea of energy and the creative process and how it “supports the development of empathy, perspective taking, creative problem-solving, a capacity for ambiguity, and understanding of multiple ways to know—all considered key capacities for nature connection” (p. 123). Problem-solving, ambiguity and understanding multiple ways of knowing when applied to a group setting, such as a class of students, can arguably bring about a sense of togetherness and community (Flowers, et al., 2015). Kollmuss and Agyeman (2002) argue that attention to the emotional dimensions of such processes to be important; they write, “we see emotional involvement as the ability to have an emotional reaction when confronted with environmental degradation. In other words, it is one’s emotional investment in the problem” (p. 254). To simplify, when people, including students, emotionally engage by working on something that is meaningful, the work can become passionate and lead to emotional investment. Suddenly there is more to the issue at hand than one might get from learning from a text; it can feel personal, and that is when connections with nature can develop and deepen.

Developing connections with nature is complicated and context-bound so all of the answers or a complete “how-to” guide to help students form these nature connections does not exist, nor could it ever exist. But through carefully crafted experiences that enable meaning making (i.e. yoga and mindfulness in the outdoors), allow students to pursue their passions,

involve group work and problem-solving but leave room for ambiguity, and facilitate personally meaningful interactions with nature that instil wonder and curiosity, an educator may develop, enhance, or deepen student connections with nature (Fletcher, 2016). Much depends upon the quality of the experiences and what the students each take from their own experiences, which are, of course, grounded in each student's background, personality, parental and teacher influence, and previous encounters with the natural world that determines the development and depth of nature connection (Kollmuss & Agyeman, 2002). As Russell (1999) explains,

I have come to wonder if “experience” and “story” may be intimately interrelated, each influencing the other. The stories we tell ourselves about nature and human/nature relationships influence what, if any, nature experiences we seek out, and then, our interpretations of such experiences. In turn, these various experiences contribute to the development, reinforcement, and occasional disruption of these stories. As new or recovered stories emerge, we reinterpret our past experiences and seek out new ones. And so the interrelationship of experience and story continues. (p. 127)

Russell drives home the point that nature experience is not neutral nor a panacea, but what we take away from them, how we learn and grow, and what we do to challenge them, may inspire and motivate us and, sometimes, others. In the teaching world, educators enter the profession presumably to help children grow in positive, healthy ways. I would suggest that would be an example of something positive that could be nurtured in school. Environmental education provides a window of opportunity for this to occur.

Environmental Education

It is important to first acknowledge that there are many diverse ways of practicing environmental education and to acknowledge that even the term “environmental education” in

itself is debated among environmental researchers. “Some argue that environmental education is no longer a useful term and ought to be replaced with, or supplemented by, sustainability education which is said to move beyond a perceived narrow focus on natural environments” (Russell, et al., 2000, p. 204). This point is important to consider as questioning what has been used in the past and what we continue to use now in terms of language and definition are important to understanding what it is that we are working towards. For the purpose of clarity, “environmental education” is used to encompass all that includes the natural world (human and more-than-human) to explore ways of developing a connection with nature with young students. Sauv  (2005) summarizes,

An overview of the literature in the field of environmental education shows that, despite their shared concern for the environment and their recognition of the central role of education in enhancing human-environment relationships, various authors (researchers, professors, educators, facilitators, associations, organizations, etc.) adopt widely differing discourses on environmental education, and propose diverse ways of practicing educative activity in this field. (p. 11)

Given the diversity of environmental education approaches, the following section outlines how environmental education is contextualized within this research.

More than a subject in school. According to Sauv  (2009), environmental education is defined as a topic that “invites us to renew our intrinsic connection to nature” (p. 332). However, merely teaching *about* the environment is not enough. She writes, “There is a need to pursue the construction . . . whereby the learners are accompanied in the global development of their cognitive, sensorial, sensual, affective, spiritual and physical potentialities through (and for) holistic environmental encounters” (p. 329). Developing these potentialities may require

stopping, listening, and feeling when in the natural world, but these pedagogical strategies are not always comfortable or easy for educators, especially those with little experience in the field. Teachers try their best but it is no surprise that their default is what feels comfortable for them (Barrett et. al, 2016; Bell, 1997)). Often this looks like structured indoor work even when students are outdoors (Bell, 1997). Bell argues that this is problematic because “in so doing, ... we forgo the opportunity to settle into our senses, broaden our attention, and quietly receive what a place and its inhabitants have to offer” (p. 138). She continues by suggesting that it is important to allow “time and space for digression, interaction, conversation and contemplation” (p. 138).

According to Barrett et al (2016), modern civilization is built on unsustainable practices. When you stop to think about it, it is evident in the choices we see our politicians make and the way that society functions. Though some groups are focusing on bringing sustainability to the forefront of concerns, the question of where to continue on from arises. A good place is in schools, specifically by incorporating environmental education. Barrett et al (2016) suggests that, “An ideal starting place for reorientation is to start with a focus on expanding the ways of knowing that students respect, understand and/or engage with” (p. 11). This leads me to ask what are the “ways of knowing” that teach students to respect and understand the natural world through engagement? I also like Bell’s (1997) question, “how can we hope to recognize and reaffirm our deep interconnections with the rest of nature if we fail to venture beyond the classroom walls?” (p. 133). Environmental education is more than reading texts inside four walls or studying units *about* distant rainforests contextually removed from students. Instead, students need to spend time *in* the outdoors and feel a sense of belonging in order to engage *with* different ways of knowing about the more-than-human world. As Bell suggests, “the touch of a chickadee,

the sweetness of a wild grape, the scent of a crushed sassafras leaf [are] such rich occasions for experiencing and understanding [that] are systematically foregone” (p. 133). These experiences do not need to be omitted from school curricula, but can be brought about through discovery of place, which brings us to the topic of place-based education.

Place-based education. Learning about the natural world that includes more-than-human experiences and discussions about environmental issues is important in environmental education (Chawla, 2009). As noted above, it is important to also take into consideration that when students are taught these lessons from a book or indoors in a classroom, helping students develop a connection with nature may be more challenging. Thus, as Chawla (2009) suggests, educators in environmental education can focus on “positive experiences in nature, [helping] children gain both knowledge and an emotional connection with the natural world” (p.7). Through these positive experiences and a combination of discussions about environmental issues and other experiential activities, emotional connections to specific places can form.

Place-based education is an expansive, more inclusive approach to traditional school-based learning that can foster a sense of belonging and security. Sobel (2004) discusses what place-based education is and how this approach can be brought into environmental education: “Place-based education takes us back to basics, but in a broader and more inclusive fashion. Desirable environmental education, or what we’re calling place-based education, teaches about both the natural and built environments” (p. 9). This type of experiential education focuses on helping students develop stronger ties to their community and the natural world that surrounds them (Bai, Elza, Kovacs, & Romanycia, 2010).

Place-based education can be an important component of environmental education in schools. It is argued that by including the heart and fostering love of a place that is associated

with positive thoughts and feelings, we are better able to make decisions based in understanding and empathy rather than greed (Chawla, 2009; Gruenwald, 2003; Sobel, 2004). A pedagogy of place is “a theoretical framework that emphasizes the necessary interpenetration of school, community, and environment, whether it’s urban, suburban, or rural” (Gruenwald, 2003, p. 11) which allows students to see themselves as part of their community and as assets who can advocate for the natural world through their understanding of place (Gruenewald, 2003; Sobel, 2004).

Outdoor Education

Clearly, the approach to environmental and place-based education that speaks most to me is one that emphasizes outdoor education, but one that is about more than simply children being outdoors learning through osmosis to love nature. It is also more than studying types of trees or memorizing names of species. It is more than farming, gardening, playing, and camping trips. While these are all great forms of nature experience, they are not enough in themselves to automatically create environmental awareness, commitment, and action (Russell, 1999). An important consideration when discussing or considering outdoor education, then, is the acknowledgement that, “if one were to assume that knowledge were static . . . then lateral thinking would be eliminated and learning constrained. If, on the contrary, one believes that understanding is inter-relational, ambiguous, and complex, a fertile ground opens up” (Blenkinsop, 2014, p. 149). To this end, it is important to nurture ambiguity and complexity in order to open space for discovery and connection. As Chawla affirms, “the natural world . . . affords unlimited scope for new discoveries” (p. 15). Keeping space open and allowing the time for curiosity to be piqued and questions to emerge may give students the opportunity to form deeper connections and make “new discoveries.”

If students are rushed into inauthentic experiences or if relationships are not nurtured, the connections will not be as strong (Chawla, 2009; Fawcett, 2002; Potter, 2007). Consequently, it is important for teachers to teach from a place of authenticity to help nurture connections that provoke students to think for themselves and really dig into their understanding of the natural world (Fawcett, 2002; Potter, 2007). Teachers need to approach each outdoor learning situation in “regards to each student, to the place where the teaching/learning is occurring, and to the curriculum, and having carefully nurtured that curiosity of the world and the flexibility to respond to it, to make use of that situation to generate learning” (Blenkinsop, 2014, p. 150). This method of teaching is challenging and requires significant preparation and research in order to make the most of the experience (Blenkinsop, 2014) and to give the lessons a feeling of spontaneity (Chawla, 2009).

Teachers who are willing and able to dedicate the time to their craft are going the extra mile for their students by teaching outdoor education in an arguably “natural” way (Fawcett, 2002; Potter, 2007). After all, the natural world is unpredictable. Taking students outside and allowing for the uncontrollable to emerge means relinquishing some control and allowing students to be students and nature to be nature so that both can come together in harmony; as Chawla (2009) says, “As places that are usually beyond adults’ direct control, natural areas allow children to use their ‘outside bodies’ as well as their ‘outside voices,’ with all the pleasure that this free autonomous movement involves” (p. 15).

Creating such spaces necessarily requires being outside as well as being less constrained by the typical expectations of a school day and class time. Conventional school, as it stands, tends to box students in and emphasizes rules for what is appropriate in terms of learning, behaviour, exploration, and so forth (Potter, 2007). One of the ways this is problematic is how

control is used to influence student behaviour and learning tends to subdue creativity in students, taking away their spirit (Blenkinsop, 2014) and the freedom to just be children. Potter (2007) argues that it is important for a school to be a learning community wherein there is give and take, with some limitations. Potter recommends an “implementation of education for sustainability [that] incorporates all elements of school life: school governance; resource management; school grounds and physical surrounds; networks and partnerships” (p. 13). This would resist the in-the-box type of learning that subdues student creativity and spirit and would work towards environmental and sustainability education in outdoor settings that promote creativity, questioning, and learning (Potter, 2007).

Blenkinsop (2014) uses the example of a tourist as a way of dissecting the roles students and teachers often take up in a traditional classroom where students “consume” the information presented by the teacher without space to question and engage with the material directly, not venturing beyond face value: “Despite an active interest in [students’] surroundings, there is a deep passivity to this curiosity, a lack of awe that inspires and drives one to look further, go further afield, or seek explanations to questions raised by the information provided” (p. 148). He argues that educators need to eliminate teaching styles that foster such passivity, to go beyond having students memorize and regurgitate material and to find ways to nurture curiosity. Doing so would allow teaching to be more authentic and organic in nature and would entail spending more unstructured time outside allowing students to explore, ask questions, and be curious. This may be challenging for teachers initially, especially if they themselves were taught this way, but in time and with practice, students can be taught to be more perceptive and observant of, and curious about, their surroundings. I wish to argue that one possible method that would be useful to teachers is through the practice of mindfulness, which is the focus of the next section.

Mindfulness in Education

Mindfulness plays a huge role in holistic practices and is a key concept that guides this literature review. Kabat-Zinn (1994) describes it in this way:

Mindfulness means paying attention in a particular way: on purpose, in the present moment, and non-judgmentally. This kind of attention nurtures greater awareness, clarity and acceptance of present-moment reality. It wakes us up to the fact that our lives unfold only in moments. If we are not fully present for many of those moments, we may not only miss what is most valuable in our lives but also fail to realize the richness and the depth of our possibilities for growth and transformation. (p. 4)

Practicing mindful awareness can encourage students to relate to their internal and external experiences in ways that allow them to stay present and responsive rather than focusing on the future or concerns out of their control (Meiklejohn et al., 2012).

According to Rechtschaffen (2014), preliminary research on mindfulness and self-regulation practices have shown positive effects on student learning and on their overall feelings of wellbeing: “Research on mindfulness in [students] has been shown to raise test scores, reduce impulsivity, enhance wellbeing, and build executive functioning” (p. 5). Mindfulness also helps students in other areas that require focus: “Positive attributes such as the ability to emotionally self-regulate, demonstrate empathy, pay attention, and exhibit improved executive functioning go up, while destructive tendencies such as impulsivity, violence and stress go down” (Rechtschaffen, 2014, p. 34).

In a busy classroom, it can be a struggle for teachers to inspire and facilitate meaningful conversations regarding concepts such as environmental stewardship, but in a classroom where students are able to mindfully self-regulate, this becomes a very real possibility. Teachers cannot

be expected to know how to help their students with this, however, if they have never had any personal experience or professional development in mindfulness practices. Meiklejohn et al. (2012) describe three research studies on mindfulness programs for teachers. The first study was on the Mindfulness-Based Wellness Education (MBWE) program that uses a “wellness wheel” as a framework. The wheel is used to demonstrate the principles and practices of mindfulness such as being present in the moment, and acknowledging that the moment is as it is. It cannot be changed or altered. The MBWE experiential curriculum uses techniques such as mindful listening (listening without judgement or intent) and wellness (focusing on self and how to care for oneself) as teaching strategies not only within classrooms but also at home by providing information for parents as well (Soloway, Poulin & Mackenzie, 2011). The study focused on bringing mindfulness in all aspects of life, including at school and at home, and was taught as part of an ongoing curriculum; mindfulness was viewed as a technique to be used throughout everyday life, not just in once specific place at a specific time.

The second study was on the Cultivating Awareness and Resilience in Education (CARE) program. This program for teachers focused on mindfulness learning within schools and was offered in several formats. One format involved a two-day training session for teachers that incorporated sessions on mindfulness (how to practice and teach mindfulness for self and for students). The other teacher training sessions varied in length, some as one-day sessions and another as a five-day intensive retreat. In these sessions teachers learned about quieting the mind, following the breath, listening to the body, and experiencing the present moment, consciously. Additional individualized coaching for teachers was provided by facilitators between mindfulness training sessions via e-mail and phone. This coaching allowed teachers to begin their own mindfulness practice immediately and apply their learning in the classroom (Jennings,

Snowberg, Coccia, & Greenberg, 2011). Meiklejohn et al. (2012) report that, “Preliminary studies, one with experienced teachers and the second with student teachers and their mentors, illustrate promising results related to improvements in teachers’ levels of mindfulness, well-being, and in using a more autonomy supportive motivational orientation in the classroom” (p. 5).

The third study was on the Stress Management and Relaxation Techniques (SMART) in Education program for teachers focusing on breathing and calming techniques. Preliminary findings of this study illustrated high rates of program completion with teachers expressing high satisfaction rates and reporting that the program positivity influenced their interactions, not only with their students, but with co-workers as well. Meiklejohn et al. (2012) report that, “Teachers going through SMART reported increased mindfulness, decreased occupational stress, and increased work motivation from pre- to post-intervention” (p. 5). I would argue that teachers who are feeling less stressed in their professions are better able to help encourage and practice mindfulness in the classrooms.

Although each of the three programs approached mindfulness education differently, they all focused on the holistic wellbeing of teachers with the goal of helping participants practice personal mindfulness and hone their own relationship-building skills (Meiklejohn, 2012). Some of these skills included listening deeply and developing emotional awareness, empathy, and compassion. Meiklejohn et al (2012) conclude that, “The ability to be with students and improving the felt sense in the classroom is a central benefit to learning and development and thus a foundational component of mindfulness training for teachers” (p. 5).

As noted earlier in this section, mindfulness practices aim to help people gain emotional connections to the lived-in world and to be present in the moment as often as possible. I would

argue that through such practices, students can come to know the connection between self and the natural world. Having said that, “coming to know . . . is never just a matter of learning the ways of a place but learning about how to carry oneself in such a way that the ways of this place might show themselves. Education, perhaps, involves the invitation of children into such living ways” (Jardine, 1998, pp. 94-5). Other school activities may promote these living ways as well, such as yoga and meditation (Potter, 2007).

Mindfulness and yoga combined. Stone (2008) notes that, “the path of yoga is concerned with inner freedom, and there are many ways and methods of practice within the various schools of yoga” (p. 26). Students can learn to use yoga as derived from Eastern practices as a form of mindfulness and to develop a sense of connection with nature. By focusing on wellbeing through yoga, students can appreciate and understand the natural world; this understanding can be achieved through “promoting the well-being of the planet and humanity . . . to introduce views and practices that will help people to inhabit a non-dualistic, intersubjective consciousness” (Bai & Cohen, 2008, p. 39).

Examples of using yoga can be found not only in elementary and secondary school systems worldwide, but also in higher education. For example, Simon Fraser University has a graduate program in Education that encourages mindfulness practices, including yoga:

A tenet of Buddhism, [mindfulness] means being fully aware of the present moment without being distracted by things like texts, emails, to-do lists, worries, and whatever else makes the brain wander. It also forms the core of a new graduate program at Simon Fraser University [SFU]—the first of its kind in North America. (Johnson, 2014, para. 1)

Bai, the leading professor of the SFU program, explains that there is a need for the world, the academic world in particular, to stop rushing: “Civilization is hell-bent on doing more and more, and that manifests in many forms of stress. People are rushing to yoga or rushing to their meditation class, then they end up rushing to the emergency ward, metaphorically speaking” (Johnson, 2014, para. 4). Yoga thus is not a panacea per se if practiced in the way Bai is criticizing above. Instead, she argues it must go hand-in-hand with slowing down.

Experiential and emotional learning that unfolds through mindfulness practice and through yoga can connect us to the natural world (Bai & Cohen, 2008; Bai, Elza, Kovacs, & Romanycia, 2010; Noddings, 1992; Rechtschaffen 2014). Aldo Leopold (1970) said, “we can be ethical only in relation to something we can see, feel, understand, love, or otherwise have faith in” (p. 251). If we can find a way to nourish emotional understanding and form deeper connections to the natural world, then we have hope of nurturing the ability to make informed decisions as environmental stewards. Bonnet (2009) explains why we need to nurture these conditions:

[W]hen not preoccupied with other matters, we can sense ourselves as a part of [nature] and recognize its authority: it is part of *our* nature. And yet there are times when we override it; taken up with getting on in life, our sense of responsibility towards it can get left behind. (p. 181)

Echoing Bonnet, Thomashow (1995) suggests developing connections with nature requires the ability to overcome distractions coming from both the internal worlds that we create ourselves and the external worlds we encounter everyday. Mindfulness, according to Rechtschaffen (2014), “helps us cultivate the balance, patience, and attention we need to wade through the muck of

mind chaos” (p. 58). I would argue that one good place to overcome day-to-day distractions and search for mindfulness is through movement in yoga practice.

Adele (2009) describes yoga as “a sophisticated system that extends far beyond doing yoga postures; it is literally a way of living. Yoga is designed to bring you more and more awareness of not only your body but also your thoughts” (p. 15). Stone (2008) believes the path of yoga is consumed with inner freedom that can be expressed through various forms of yoga and practice: “Beginning with body, mind, and breath as they are experienced in the present moment, yoga practice deals with the common hypnotic state of suffering and a conditioning existence in which we find ourselves spinning” (p. 29). This type of practice allows the mind to connect to the body and to take in the experiences of the world in its positive and negative lights. This quiet existence and watching can also act as a method of assisting students in learning self-regulation techniques, benefitting them emotionally (Shanker, 2013).

Yoga, as a component in mindfulness practice, is one way for students to learn self-regulation. Yoga builds mindfulness in that its very base of teachings uses calm, breathing techniques that connect the mind with the body (Adele, 2009). Further, Adele (2009) contends that one of the key components of yoga practice is in the development of self-love and compassion, and states:

When we begin to expand the boundaries of our heart, we can see clearly to act in ways that truly make a difference. Compassion is a clear response to the needs of the moment. We see this truth lived out in the lives of the great ones. They act in a compassion and skill that truly changes things. (p. 36)

Bringing self-love and compassion into the classroom means allowing the students to regulate their own emotions. When students feel connected and in control of the self, they are then better

equipped to extend those feelings of compassion to others (Noddings, 1992; Rechtschaffen, 2014). I would argue that those feelings may also be extended to the natural world.

Yoga uses movement, postures, and breath work to build compassion and self-love, allowing the mind and body to act with intention. Modern culture is often perceived as treating the mind and body as if they are separate entities (Gallop, 1988; Ratey, 2008), but through yoga and mindfulness a connection is possible. In the eight limbs of yoga, the key components of a balanced yoga practice, special focus and attention are paid to: *yama*, external restraint; *niyama*, internal restraint; *asana*, posture; *pranayama*, breath and energetic regulation; *pratyahara*, withdrawing of the senses; *dharana*, concentration meditation; *dhyana*, absorption; and *samadhi*, integration (Stone, 2008). In applying the eight limbs of yoga to everyday life, mind and body are able to connect at a level deeper than if attention is paid to just the mind or just the body. Selby (2004) elaborates that using inner journeying can bring the physical, mental, and emotional aspects of our being to an awareness that includes “oneness of everything” (p. 28).

In yoga it is common to hear about *karma* – that every action has an effect. Previous experience influences the present and in turn the present influences the future (Stone, 2008). Through awareness of, and conscious effort to, treat others with kindness and compassion, many often discover that the self is not treated with enough kindness. Adele (2009) summarizes this concept: “we can have hearts that are full of love for others and intentions to love that are pure. But the truth is, we will express that love for others by treating them the same way we treat ourselves” (p. 31). Therefore, when teaching these concepts to students it is important to remember to nurture self-love first, then move outward to community, and finally to the natural world.

The yoga self-compassion model directly follows Bronfenbrenner's (1979) Ecological Systems Theory of development with the focus beginning on the individual self, moving to the microsystem of direct impact (family, friends), and through extending concentric circles, to include the earth and culture. It stands to reason that using the self-compassion of yoga to extend outwardly to others can also be extended to the more-than-human world. Outdoor environmental education seeks to cultivate or enhance connection with nature and I would argue that using mindfulness and yoga in combination with outdoor environmental education could develop an even deeper sense of connection with nature.

Mindfulness in outdoor environmental education. There has been some attention to mindfulness or related ideas in outdoor environmental education, especially when one remembers that mindfulness and yoga encompass being fully present and aware of the occurring moment. An example of becoming fully present in the moment is discussed by Blenkinsop (2014) who writes, "to engage is to allow oneself to immerse completely in the place and the project, to be aware of the need to do things differently, to recognize when one is lapsing into old habits and to work at changing them" (p. 154). Doing so can be challenging, however. Quieting the mind sounds much easier than it really is. In my experience, noticing sounds, smells, and sensations associated with being in the natural world helps to focus on the more-than-human world and less on the mind's wandering. It is important, both as teacher and as student, to work towards embracing the more-than-human world as an active participant, whether in class (Blenkinsop, 2014) or a yoga session.

Selby (2004) asserts that "a common deep ecological reading is that spirituality is a recognizing of deeper levels of connection within ourselves and between ourselves and the world" (p. 28). Yoga and meditation have a spiritual side to their practices in the sense that they

allow the mind and body to slow down and take in one's surroundings in the present moment. Hitzhusen (2006) takes this notion of spiritual connection further, explaining that yoga, meditation, or inspirational readings can be a form of experiential education by "demonstrat[ing] the complementarity of religious and environmental program elements . . . suggest[ing] some ways that religious teachings and traditions can theoretically translate into environmental education" (p. 14). This is an interesting concept, as religion and environmental education would not ordinarily be paired, especially in the public school system. Hitzhusen (2006) elaborates, "the integration of religious and spiritual themes into environmental thinking is still evolving, and thus educators should not be dogmatic about how to proceed. New approaches are yet to emerge, and different contexts will invite different applications" (p. 21). Keeping an open mind in terms of partnering these two concepts is vital as opening this new pathway could allow for deeper discovery.

The notion of developing spirituality through mindfulness can similarly be applied to yoga in combination with mindfulness. Yoga poses often inhabit names of the more-than-human world allowing yoga students to move into a certain posture, and while holding the pose, enter into a mindful state of understanding and being. Burkhart (2011) explains,

this response could occur on more than one level of awareness for each person, including, but not limited to, the emotional, physical, mental and spiritual levels. As the body mimics each unique element or creature, the space is created for awareness to expand into these elements. This enables, for example, an experience of "tree sense" with the tree pose or of "cat consciousness" with the cat pose. And in these moments of novel and spacious experience, the teachings of the land and its beings begin to emerge. (p. 19)

It is within these opportunities that students begin to connect on a deeper level, moving from

“box” learning to open learning. In these moments of connection students could nurture their curiosity and connection through what Blenkinsop (2014) calls “eco-reflection,” which includes asking: “What does the nonhuman world think of what . . . we are doing? Have we been successful in integrating the natural world? How did we learn from and involve the more-than-human today?” (p. 152). Asking these questions allows the more-than-human world to join in the lessons and have a voice through students.

The most important goal of my research was to explore if students were able to form a connection with nature through using mindfulness and yoga in outdoor environmental education. Yoga and mindfulness provide a safe way for students to explore, ask questions, and be curious. By doing these practices outside, embracing the ambiguity of the more-than-human world, there is potential for an expanding nature connection. Burkhart (2011) expresses her confidence in hatha yoga in assisting with this expansion: “For me, this clearly indicates the powerful potential for reflective hatha yoga to aid in expanding students’ awareness of ecological interconnections, which, in turn, is the foundation for developing an ecological consciousness” (p. 20). Selby (2004) further argues that, “it is unlikely that environmental and global education can ever impact our culture unless we embrace a radical interconnectedness that revives mystery, a sense of the ineffable, the unknowable” (p. 28). These qualities – “mystery, and a sense of the ineffable” – are the exact qualities I hoped to uncover in my research on how yoga might nurture students in developing and/or deepening their connection with nature.

I now turn to the final section of this chapter where I discuss Sauv e’s (2009) conceptual framework and the ways in which I revised it for this research.

Conceptual Framework

The conceptual framework used to structure or frame this thesis is an expanded version of a conceptual framework developed by Sauv  (2009). In her framework, she discusses three interrelated spheres of personal and social development: The Self; Other Humans; and the Environment (see Figure 1). Sauv  defines the meaning of environment within the spheres: “here the environment is certainly not just a context, scenery or set of manageable ‘resources’. It consists of all levels of being and manifestation” (p. 330). I would argue that while the self is important and should be placed at the core, the love of self is missing in the first sphere in beginning the process of loving the natural world. At the centre of the framework, within its core, should be emotional wellbeing of the students.

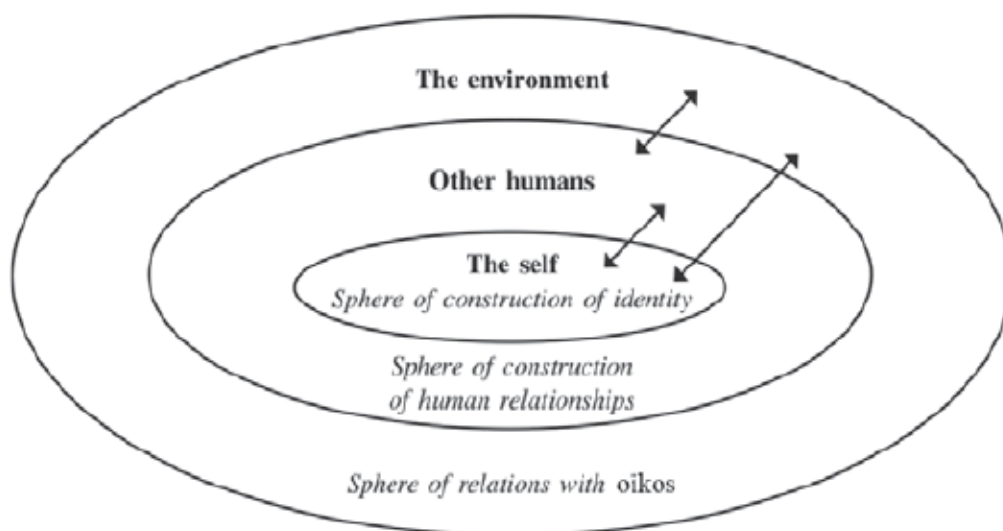


Figure 1. Sauv 's (2009) three interrelated spheres of personal and social development (p. 330)

The second sphere focuses on the importance of human relationships with other humans. However, here too I suggest a revision to the model by including an element of mindfulness that can extend into the more-than-human community rather than being limited to only other humans.

The third sphere focuses on relationship to the environment, but I suggest it also is missing a step that allows students to feel connected to a specific place. The important constituent here is the connection between the learner and the place that allows for student learning to occur. Finally, an additional sphere to deepen Sauv e's (2009) framework is inclusion of direct love and care for the natural world through feelings of self-love, mindfulness through movement, and love of place. This sphere would act as the connection to the natural world that links all other spheres together (see Figure 2).

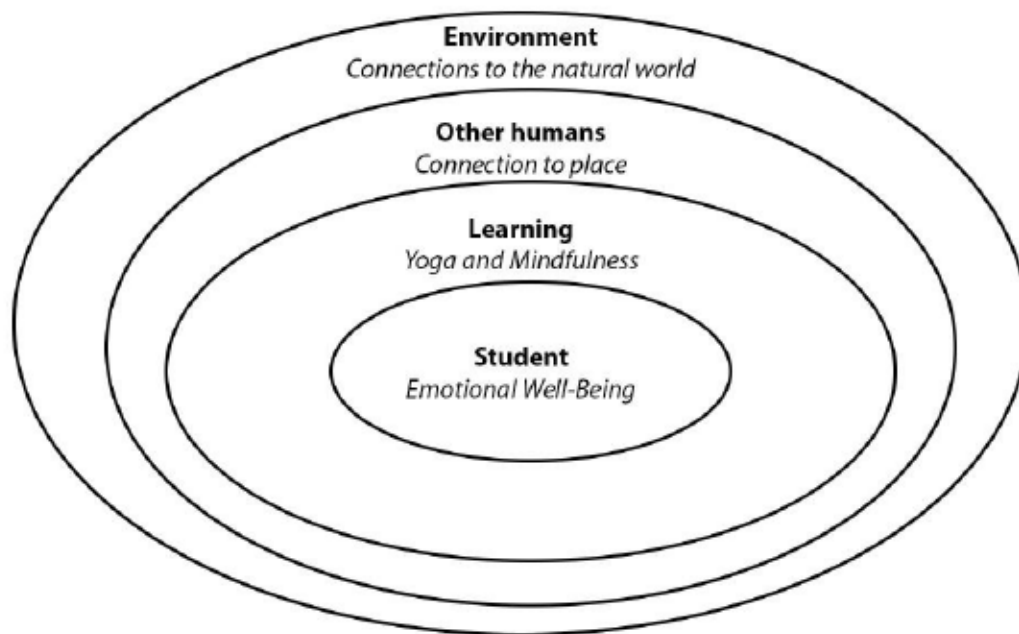


Figure 2. Author's conceptual framework for this research, adapted from Sauv e (2009)

In revisioning and subsuming Sauv e's tenets, this conceptual framework includes student wellbeing at its core and environmental connections at its periphery; the model worked more cohesively for my own thesis research.

My thesis research attempted to fill a gap in the field. While some research has been

conducted on mindfulness and its benefits (e.g. Noddings 1992; Rechtschaffen 2014; Bai & Cohen, 2008), there has been little research that examines yoga and mindfulness as a form of environmental education. Using the conceptual framework, I explored the various spheres while exploring the natural world through yoga and mindfulness. The next chapter describes my research process.

Chapter 3: Methodology and Methods

How can yoga and mindfulness practices in an outdoor setting assist students in experiencing a deeper understanding of, and connection to, the natural world? The methodologies that were used to explore this question and facilitate data gathering regarding the students' and my understanding of the natural world, were a combination of arts-informed inquiry and narrative inquiry, both of which fall under the qualitative research umbrella. Through artwork and discussions, the students showed me the connections they made to nature and I interpreted them in my own narrative reflecting on the students and their journey as well as my journey as researcher-educator. Following a brief explanation of qualitative research, I introduce arts-informed research and narrative inquiry as the research methodologies from which I drew. I detail the specifics of the study using an example of a lesson outline. I then explain how I connected mindfulness and yoga postures as a way of teaching about the natural world. In the next section I discuss the teaching methods I used, which were derived from the mindfulness practices of Daniel Rechtschaffen (2014) outlined in his book, *The Way of Mindful Education: Cultivating Well-being in Teachers and Students*. I then describe my step-by-step process of teaching mindfulness and yoga. The yoga lesson plans were based on ideas from four short storybooks by Alanna Zabel: *Asana's First Yoga Class*; *A Chair in the Air*; *The Seven Doors*; and *Searching for Light*, as well as *The Kids' Yoga Deck* (Appendix A). Finally, I describe the ethical dimensions of this research given the participants were children and are therefore considered vulnerable and require additional means of protection.

Qualitative Research

The benefits of using mindfulness in yoga practices as a way of teaching about the natural world can be explored through qualitative research. Hoffman (2010) argues, “while benefits . . . cannot be measured on standardized tests, they are echoed with resonance in narratives throughout the field” (p. 83). Therefore, I determined this research would be best explored through a qualitative approach. Denzin and Lincoln (2011) define qualitative research as “a set of interpretive, material practices that make the world visible. These practices transform the world” (p. 3). When research is used in a way that promotes self-expression, it allows space for change to occur. This research explored the complexities of developing a sense of connection to and love of the natural world that begins with general emotional connectedness. Although this process is undoubtedly complex – it’s not a matter of emotional connection leading in a straight line to informed environmental decision-making – it may be a step in the right direction of working towards solving the problem of humans not caring or knowing about the more-than-human world. Like Denzin and Lincoln (2011), I am keen about “research becom[ing] praxis – practical, reflective, pragmatic action – directed to solving problems in the world” (p. 21). Charmaz (2011) writes that “qualitative research has long attracted researchers who hope that their studies will matter in the public arena as well as in their disciplines” (p. 359) and her words echo my hope as a researcher-educator. My research sought to explore the potential of attending to emotions, wellbeing and mindfulness as an effective form of outdoor environmental education.

According to Ryan, Coughlan, and Cronin (2007), “qualitative research follows the naturalistic paradigm based on the assumption that multiple realities exist and such realities are constructed by the research participants. It aims to explore the phenomenon in question by focusing on the individuals who experience it” (p. 738). Vishnevsky and Beanlands (2004)

explain that, “in addition, qualitative research is done in the ‘field’ or natural settings and requires ongoing data analysis. Data collection and methodology are typically elastic, allowing for modifications throughout the research process” (p. 234).

The potential emotional connections made by participants was one of the key things that interested me in this study. As an educator, it was vital to me that the students demonstrate that they were emotionally connected in some way to the natural world as a precursor to promoting care and understanding for the natural world. In qualitative research studies, “the researcher must approach the subject as a ‘collaborator’ and an equal in the research process, as it is the support and confidence of these individuals that make it possible for the research to be completed” (Vishnevsky & Beanlands, 2004, pp. 234-5). This idea that the researcher is a collaborator meant that the participants and I needed to work together throughout the study, allowing for change and observations to be made on both sides (Burns & Grove, 2003) and creating what I argue is a more inclusive and holistic approach to qualitative research. This idea resonates with what Ryan et al. (2007) state: “qualitative research asserts that a phenomenon is more than the sum of its parts, and must therefore be studied in a holistic manner” (p. 738). Further, Ryan et al. (2007) explain, “qualitative methods are concerned with experiences, feelings and attitudes, as opposed to precise measurement and statistical analysis” (p. 738), meaning that using qualitative methods can assist in getting to the root of understanding a person’s experiences and feelings such as connections to the natural world. I thus saw this approach aiding in addressing my research question. In the next section, I get more specific, describing how I incorporated a combination of arts-informed inquiry (Cole & Knowles, 2008) and narrative inquiry (Chase, 2011; Clandinin, 2007) in my study.

Arts-Informed Research

Arts-based research goes by many names – arts-based research, arts-informed, A/R/Tography, and so forth – each with slightly different emphases or approach to using arts as a way of informing the research. For my research I have chosen to use the term arts-informed research. I see it as being more inclusive, encompassing a variety of ways for students to express and communicate their learning, understanding, and connections to the natural world within the arts.

Arts-informed research allows for creative outlets of research to be represented in academia and beyond. Some examples of recent masters theses that used arts-informed research include Bailey (2012), McKellar (2015), and Slingerland (2015). Bailey (2012) explored recreational canoeists development of a sense of ecological identity through experiential learning. She explained that arts-informed research allowed her to give voice and meaning to the canoeists' narratives about ecological identity. Her research was a story of stories, describing a canoe trip that did not happen and telling the story through pictures and words as her research. For McKellar (2015), sharing her story of living with PCOS (Poly Cystic Ovarian Syndrome) through both story and painting helped her better understand it herself, and including her own creative work alongside analysis of the narratives of her participants, her intent was to provide hope and inspiration for others living with PCOS. She asserts that, "The arts can provide a language of expression that is often found lacking in academic literature" (p. 3). Art has the ability to add a richness and authenticity to research representations that can reach audiences on varying levels. Slingerland's (2015) thesis explored how art could be used in traditional education systems. She used Community-Based Art Education (CBAE) "to examine what it can bring to individuals and communities that traditional education systems cannot" (p. 1). While

narrative inquiry was used to tell the story of the journey of the participants and researcher, Slingerland also created a visual art series to represent the themes in her research.

There are many different forms of art practices used in arts-informed research. In this study, I chose to use journaling, poetry, creative writing, drawing, and story sharing. Marshall and D'Adamo (2011) explain that practices such as these can allow for an approach that highlights and extends the research process, and opens up these processes to include creative, non-verbal ways of understanding a subject. Moreover, art practice introduces ambiguity, complexity, emotion, intuition, lived experience, and that celebration of personal interpretation or subjectivity into a realm that often strives for clarity and objectivity. (p. 12)

Further, I found that using the aforementioned practices for gathering data provided a "more natural process of engagement relying on common sense decision making, intuition and general responsiveness to the natural flow of events and experiences" (Cole & Knowles, 2008, p. 61).

Cole and Knowles (2008) explain that, "arts-informed research representations ... are not intended as titillations but as opportunities for transformation, revelation, or some other intellectual and moral shift" (p. 66). Arts-informed research is intended to allow participants as well as the research audience to connect to the research: "the arts make such empathic participation possible because they create forms that are evocative and compelling" (Barone & Eisner, 2012, p. 3). To help the student participants connect with the natural world I created what I deemed a safe space for students to question, explore, and share as a group ideas and convey this meaning through their art, choice of descriptive words in speaking, and in their writing.

According to Coles and Knowles (2008), the central purposes of arts-informed research is "to enhance understanding of the human condition through alternative . . . processes and

representational forms of inquiry, and to reach multiple audiences by making scholarship more accessible” (p. 59). Further, they suggest that:

Arts-informed research is a way of redefining research form and representation and creating new understandings of process, spirit, purpose, subjectivities, emotion, responsiveness, and the ethical dimensions of inquiry. This redefinition reflects an explicit challenge to logical positivism and technical rationality as the only acceptable guides to explaining human behavior and understanding. (p. 9)

Barone and Eisner (2012) elaborate: “Arts based research is an effort to extend beyond the limiting constraints of discursive communication in order to express meanings that otherwise would be ineffable” (p. 1).

An important aspect of arts-informed research is the consideration of the presence of the researcher in the work. According to Cole and Knowles (2008):

The researcher is evident in the research text in varying ways depending on the focus and purpose of the inquiry... Although we operate on the assumption that all research is inherently autobiographical—a reflection of who we are—arts-informed research is not exclusively about the researcher. (p. 11)

Unlike other methodological forms like autoethnography or self-study, arts-informed research typically requires participants and their stories to appear somewhere in the text (Barone & Eisner, 2012). Sharing participants’ voices can bring more life to the research and make it authentic for the audience and this is something I sought to do.

Narrative Inquiry

The second methodology utilized was narrative inquiry. Chase (2011) explains that, “narrative inquiry revolves around an interest in life experiences as narrated by those who live them” (p. 421). As Clandinin and Rosiek (2007) describe, “narratives are the form of representation that describes human experience as it unfolds through time” (p. 40). According to Patton (2015),

narratives and stories reveal and communicate our human experiences, our social structures, and how we make sense of the world. The flow of a story – beginning, middle, end – is essentially a sense-making structure. As we interact with each other, we create and tell stories. (p. 131)

Narrative inquiry thus focuses on stories and the telling of stories, allowing for human examination to take place through lived experiences (Bell, 2003; Patton, 2015). Stories organize and shape our experiences, allowing us a window to peer into someone else’s worldview, even if just for a moment. According to Patton (2015), stories tell others about our “lives, relationships, journeys, decisions, successes, and failures. Researchers and evaluators collect stories about formal education and planned program experiences and outcomes, as well as informal experiences of daily life, critical events, and life’s many surprises as they unfold” (p. 128). These personal life stories can be captured in interviews or through artistic expressions of the students (Flowers et al, 2015). While narrative inquiry is an approach that relies heavily on the written or spoken words retold by the researcher, it can also incorporate visual representations (Creswell, 2007).

I took inspiration from narrative inquiry in a few ways. I was interested in students’ learning journey towards becoming environmental stewards and I observed these through my interpretation of their artwork, movements, facial expressions, tone of voice, word choice,

writing, drawing, use of colour, and body language. I also incorporated narrative inquiry in the form of a research journal to aid my analyses of observations; the students used art-based methods to communicate their emotional connections with the natural world to me, and I interpreted these and communicated them through my own narrative. Ultimately, the narrative in this thesis is my own reflections on my teaching and what I observed in students. However, vital aspects of narrative inquiry are the analytic lenses.

The four analytic lenses in narrative inquiry are important as they help researchers develop meaning in their research. According to Chase (2005) the first lens is to treat narrative as a distinct form of discourse, meaning that what was observed needs to be written to show its retrospective meaning making. Chase explains that the second lens views narratives as “verbal action – as doing or accomplishing something” (p. 657). The third lens views narratives as both enabled and constrained using a “range of social resources and circumstances” (p. 657). Finally, Chase explains the fourth lens as being socially situated interactive performances. All four lenses are applied to both the researcher and the researched. The final point that Chase makes is that in narrative inquiry the researcher must view themselves as narrators.

Specifics of the Study

This research study was conducted on a community-based children’s yoga program that I led. I had three primary sources of data: circle discussions, student journals (which included artefacts like drawings and poetry), and my own researcher journal. For the circle discussion groups, I made brief notes during the discussion of main points or phrases that felt meaningful to me and to my research. Immediately following the classes, I would then go home and spend two to three hours journaling and reflecting on what was said by the students, interpreting using my conceptual framework. During this time I practised self reflection, one of the four levels of

reflections in education: surface, pedagogical, critical, and self-reflection (Larrivee & Cooper, 2006). In a methodological sense reflection or the term reflexivity specifically refers to the process of critical self-reflection on one's own biases theoretical predispositions, preferences and so forth. This kind of self-inspection brings a level of trustworthiness to the research process (Larrivee & Cooper, 2006). After each class, I would make notes about their journals and what they shared with the group. The aim was to develop and document my understanding and interpretation of student connections to the natural world through my conceptual framework. As an educator, I wanted to teach about feelings of understanding, compassion, love, wellbeing, wholeness, and inclusion that extended to the natural world. As a researcher, my goal was to authentically record in my reflection journals what I saw and felt when observing and conversing with the students. The students also journaled at the beginning and the end of every class and shared portions of these with the group.

The research study was conducted at the Canada Games Complex, in Thunder Bay, Ontario, Canada; an information letter and consent form were provided to the program's director (Appendix B) in order to gain permission to gather data from a study through a program being offered on the property of the Canada Games Complex. A separate permission form and information form were created to inform the parents and students in the program about the study and to explain what the study would entail and to ask permission to use the data gathered from the students. Both the students and the parent/guardian needed to sign the permission forms in order for me to use the data. My supervisor was present during my explanation of the study and was available to answer any questions. Once everything was explained, I left the room so I would not know which students were participating in the study. My supervisor knew who signed the forms and was able to inform me that I had enough participants for the study to be worth

continuing. I did not know who was participating until after the final class. In the end, all four students and their parent/guardian gave permission for me to use their information.

The program, “Snowga,” began mid-January 2016 and ran for eight weeks. I was paid by the Complex to run the program and the students needed to pay a registration fee. Snowga was based on a previous pilot program/study called “Eco-Yoga” which I had facilitated with success in the fall of 2015. Eco-Yoga had more participants and was a trial run for me as an instructor to see what would and what would not work in terms of lesson plans and student participation. Ethics approval was not finalized while Eco-Yoga was already running therefore I was unable to use that program as a source of data. Unfortunately, there were more students (eight) in the pilot program than in the research study (four). Four of the students in the Eco-Yoga class had vacation plans that overlapped with the Snowga program so of the eight students in Eco-Yoga, only two were able to also participate in Snowga. I advertised Snowga through social media and the Complex in order to recruit additional participants. The advertisement for the Snowga class that appeared in the *Thunder Bay Key* (a city-wide recreation program guide) was:

This yoga class for kids [ages 8-12] focuses on flexibility, mindfulness and balance through yoga postures. The class includes journaling exercises, allowing students to express themselves creatively. A portion of the class will be held outdoors in the snow as a way of establishing a meaningful connection to the natural world through movement and poses, so please bring appropriate attire for all weather conditions (we will be enjoying the outdoors, rain or shine, snow or wind). (Appendix C)

The students who were registered did not need to have any prior experience with yoga or mindfulness practices and those who registered were not obligated to participate in the study.

The classes were held once a week for one hour with each session focusing on a new mindfulness component, yoga practice, and outdoor experience. The lessons on mindfulness and meditation were inspired by Rechtschaffen's (2014) eight-week lesson plans of: "Opening mindful moment; check-in and report back; new lesson introduction; practice; sharing/council; journaling/artwork; world discovery; closing mindful moment" (p. 145). Each class was comprised of a journaling component both prior to and following an outdoor yoga and/or mindfulness experience and the creation of an artistic piece by the group. Each part of the class took between fifteen to twenty minutes of the hour. I believe that this flow matched well with my framework of four spheres: student emotional wellbeing; learning yoga and mindful practices; connection to place and community; and connection to the natural world (see Figure 2). Each of these spheres was included in each of the eight lessons designed to deepen students' mindful ecological literacy through yoga practices.

Before any of the lesson planning could begin, it was important for me to understand the ages of the students coming into the course, the setting, and consider the main focuses of the research study. Working from Rechtschaffen (2014), it was important to first understand that these students would be in the third to sixth grades (ages 9-11). I thus planned the lessons to focus on reflection time – journaling, drawing, and listening – and incorporating movement, games, and activities in line with age/grade level abilities. At this age students were able to listen and understand instructions and were able to focus on mindfulness for approximately ten minutes (Rechtschaffen, 2014). The lessons also aimed to have short practices at the same time each week to help create a routine. As part of their routine, the students learned mindfulness techniques step-by-step, listened to a story about yoga postures, or learned some of the postures step-by-step through play and yoga cards designed for children to use. On each card there is a

picture of a person doing the yoga pose on one side, and a brief description of how to do the pose on the other side. It was important to keep the space open and safe allowing for creativity and inspiration to flow through quiet time and group discussions.

Setting boundaries with the students helped establish the classroom routine and experience both indoors and outdoors. We talked about being respectful to one another, to practice active listening, and to take turns when speaking so everyone was able to share. We talked about how everyone was entitled to share but also had the choice to not share. The space was meant to be safe for everyone and if at any time the students wanted to speak in private with me, they were encouraged to do so. The students were also reminded that these sessions were not like normal “subjects” in school. According to Rechtschaffen (2014), “mindfulness is a very different subject than reading, writing and arithmetic. Academic subjects are like different movies streamed out of a projector. Mindfulness is the process of examining the projector itself” (p. 139). I explained to the students that in this “class,” everyone gets a metaphorical A+ just for being there. What I wanted for each lesson was to provide space for conversations before, during, and after participating in yoga and meditation in a natural setting, and I wanted lesson plans that allowed for flexibility and for learning to be emergent and based on the conversations that occurred naturally within the group.

Gathering data. As noted above, I took notes during each class based on observations of the students’ body language, word choice, and facial expressions. These notes were taken while the students were speaking and they were prepared for this since I had discussed at the beginning of the first session that I would be writing notes and that there were to just continue doing what they were doing, that there were no “wrong answers.” I would jot down a phrase or key points to help me remember what was talked about then, after the session was complete, I

went home and wrote reflections in my researcher journal. I did this in a quiet location that allowed me to write undistracted. Using my notes to help me remember smaller details, I relied heavily on my memory and the feelings that I had while observing the students' journals, discussions, and actions.

The group circle discussions pertained to topics that emerged naturally during student conversations. I prepared questions ahead of time to kick off discussions, but many times the topics veered off from where I thought we might go, which was fine given I wanted to see what naturally emerged. Each session would typically begin with a conversation about their journals which they would show me when they entered the room. These gave me a window into what was on their minds and a starting place for discussion. Later, as we ventured outside we would talk about natural things that we saw. I would ask about the weather or wonder out loud about something that we encountered on the walk outside. The students had the opportunity to express their thoughts, opinions, and ideas in each class through their journaling, movement (yoga postures), pictures, poetry, dance, speech, or any other form of communication they chose. I welcomed all forms of art and communication. To aid my memory, I took photos of their drawings and journals after the session was complete. I would always ask their permission before I took a photo and every time I asked, all four students gave me permission. I always made sure their names and faces were not obvious in any of the photos and would upload them onto my computer at home and save them under their pseudonyms.

Analyzing the data. Once the data were gathered, I analyzed them by using my conceptual framework (see Figure 2). I reflected on the sessions: what was talked about, what the students drew or wrote in their journals, and what happened while we were outside doing yoga and engaging in mindfulness practices. I linked my observations to the four spheres of my

conceptual framework. For example, if a student talked about how mindfulness helped them feel peaceful, I would link that to the mindfulness sphere.

It was through rich description that the presentation of the findings became trustworthy. Following Patton (2002), trustworthiness was built through three ways of data gathering: open-ended conversations; direct observation; and written documents. In my study, the written documents were the notes and my research journal as well as student artwork, poetry, and journals. I took the students' words and artwork as representations of their connections with the natural world as interpreted through me. I attempted, as best as is conceivably possible, to maintain neutrality and to listen and see (facial/bodily cues and expressions) what the students were saying. I could not actually *know* what students were thinking and feeling, but I felt that through our conversations and my observations I was able to interpret their words accurately and then link them to the conceptual framework.

In order to ensure that the data gathered were represented authentically, I used rich description focusing on answering these basic questions asked by Patton (2002): “*Who is involved? What is being done and said [...] How do they go about what they do? Where do activities occur? When do things happen?*” (p. 285). Patton (2002) states that “thick, rich description provides the foundation for qualitative analysis and reporting. Good description takes the reader into the setting being described” (p. 437). In using carefully chosen descriptive words, I hoped to bring my audience into the study with me, allowing you to read and feel what I saw and felt during the research and data gathering process.

Establishing Trustworthiness. According to Lincoln and Guba (1984):

The basic issue in relation to trustworthiness is simple: How can an inquirer persuade his or her audiences (including self) that the findings of an inquiry are worth paying attention

to, worth taking account? What arguments can be mounted, what criteria invoked, what questions asked, that would be persuasive on this issue? (p. 291)

Asking these questions while focusing on: truth value, applicability, consistency, neutrality have helped researchers bring trustworthiness to their research. The naturalistic terms that reflect these four areas are: credibility, transferability, dependability, and confirmability (Lincoln & Guba, 1984). Trust and triangulation are also factors in research. In my research trust comes from demonstrating truth value by asking students open-ended questions and allowing the mood and energy of the students to set the pace of the session. These tactics can be applied to many settings, including the average classroom. Each session consistently used the same set-up and idea of working through the conceptual framework through yoga and mindfulness in the outdoors. I was consciously neutral in asking questions and allowing the students to make their own observations and connections.

Worldviews. My research focused on the emotional connections that the students felt towards the natural world. Their stories are told through movement, art, and yoga. The interpretation of each mode is mine and ultimately their stories are told through my lens. Can a person ever really see from another person's worldview? While the stories were being told and re-presented through my lens, it is important to remember that while we can clean or change our lens from time to time, one cannot ever fully see through the lens of another (Adele, 2009). The story belongs to the storyteller, in this case, to me, but with one stipulation: "no one is the sole proprietor of his or her own story or POV [Point Of View]" (Barone & Eisner, 2012, p. 134).

The words and thoughts come from the students but because these are interpreted by me and their identities are masked, their stories come through me (Creswell, 2007). Barone and Eisner (2012) ask how a researcher can create a text that is simultaneously owned by the

collaborators and the perspectives of those inhabiting the text? They respond that a researcher needs to ensure that she is following ethical procedures and taking the right precautions to guarantee that her worldview does not interfere with the research, or if it does interfere, that it is done so intentionally and transparently. I did this by writing in the moment and reflecting on action. I focused on the students and their interpretations of their connections to the natural world. They were given the capacity to share whatever they wished to share and I wrote in a way that I believe best represented their connections. Doing so meant putting myself in the place of being “incomplete and becoming,” according to Barone and Eisner (2012) who remind us that a researcher is “a character in the text, although one who is seen as changing within the process of researching and writing” (p. 134). Indeed, through the process of participating in this study, both I and the students changed on this emotional journey we took together.

Ethics

Prior to the start of the Snowga program and the data collection, I sought formal approval from the Lakehead University Research Ethics Board (Appendix D). Upon receiving approval, an emailed or hand-delivered information letter was given to the parents/guardians of the participants with a brief explanation of the study and an invitation to participate. A formal consent form was also provided to parents/guardians of participants to sign (Appendix E). Additionally, consent was obtained from the students in a manner appropriate to their age (i.e., a text-based letter that was written for the child’s age/grade level and read to them) (Appendix F). My supervisor was present at the time of consent form collection and kept the forms in a sealed envelope in her office. I did not know who was participating in the study until after the program was complete.

All data gathered remained confidential; the participants' identities were masked by pseudonyms. There was no physical or psychological harm or potential risk to the participants during the study. There was no deception involved in the study. Data will be securely stored at Lakehead University in a safe and secure location for five years, after which time it will be destroyed. The findings of the study will be available to participants at the completion of the project upon request. They have access to my email and phone number and were encouraged to contact me at any time if they had questions about the process or research results.

Limitations

There are always limitations in research, especially those as small in scope as master's theses. I can identify a number of limitations in mine. First, my research involved only four children between the ages of nine and eleven years who were fairly homogenous in their backgrounds. The generalizability to larger groups and students of different ages of learners is thus limited. One flipside of this limitation, however, with a small class of four, I was able as an educator to give each of the students much attention and as a researcher there was time for each of them to speak and be heard by all members of the group. Another limitation is that having only one hour for each session made it difficult to complete everything I originally planned and to have space for emergent conversations to fully unfold. Having more time would have benefitted the group, so if this program was to be implemented in a school setting, I would recommend more time be allotted. In the next chapter, Findings and Discussion, I describe the results of my research with the children during our Snowga classes and consider their meaning within the research literature and a larger context.

Chapter 4: Findings and Discussion

In this chapter, I describe the Snowga program and the students who participated in the classes. I then provide a window into the first class to give the reader an idea of what happened, where the students appeared to be starting, and where I was coming from myself at the beginning of the study. Then I present the data using the four interrelated themes from my conceptual framework (student emotional wellbeing; learning yoga and mindfulness; connections to the community and place; connections to the natural world) using both photographs of student work and quotations from the students as examples.

Snowga Program

The first Snowga class was comprised of three students, two of whom were part of the previous Eco-Yoga pilot project and one of whom was new. In the second class we had a fourth student join our group who was also new. To protect the anonymity of the students, their names have been changed to pseudonyms that I assigned. Dakota was 11 and a previous Eco-Yoga student; Devon is Dakota's brother, 9, also a previous Eco-Yoga student, and the only male student in the class; Casey was 11 and new to Snowga but she had practiced some yoga and mindfulness before; and Jamie was 9, new to Snowga, new to yoga and mindfulness, and had just moved to Thunder Bay from California. Jamie joined Snowga one week later than the rest of the group (see Figure 3).

Dakota	Devon	Casey	Jamie
Age: 11 - Had previous experience with yoga and mindfulness. - Older sister of Devon - Attended a French immersion school with her brother and Casey. - SES: Middle - Very comfortable and confident. - Very mature student who took her time in all parts of the sessions.	Age: 9 - Had previous experience with yoga and mindfulness. - Younger brother of Dakota. - Only male student in the group - Attended a French immersion school with Dakota and Casey - SES: Middle - Very high energy and enjoyed moving around. - Struggled with parts of the sessions, especially with quiet sitting	Age: 11 - Had previous experience with yoga and mindfulness - Friends with Dakota and Devon outside of the program - Attended a French immersion school with Devon and Dakota - SES: Middle - Very shy at the beginning of the program and nervous about her information being used for research	Age: 9 - No prior yoga or mindfulness experience - Recently moved to Thunder Bay from Los Angeles - Had never experienced snow or cold winters before - SES: Middle - Struggled to make friends with the group but once she felt comfortable she opened up and shared.

Figure 3. Participant Information Chart

As we began our first class together on the Snowga journey, I explained that Snowga was about doing yoga postures in the snow as a way of finding connections to the natural world. I explained that the class schedule would be as follows: The first five minutes of each class would be spent doing a journaling exercise where students were encouraged to draw and/or write about where they were in *that* moment – the *present* moment. They would learn and practice going into their hearts and their minds, asking, *where am I now? And how do I feel?* Next, they would communicate their feelings or thoughts with a drawing, picture, or other representation with which they felt comfortable. Following the journaling we would go outside – dressed in warm clothing – where we would move through various yoga activities. I explained that each lesson would be a little bit different, depending on the energy in the room and the weather outside.

Living in a northern climate meant that staying outside in stillness when temperatures drop to -30 degrees Celsius was not possible and some flexibility was needed in planning week to week. After the yoga session, we would move inside where we would create another journal entry. This time the focus would be on the present moment *after* Snowga outside. Again, they drew and/or wrote in their journals. Once they completed their journal entries, we would share in a circle discussion as a group. The last ten to twenty minutes of the class was spent creating and working together collaboratively on an art project of their choosing. The collaborative project was done as a group project and students were told they could create whatever they wanted to represent what they learned in Snowga. As a group, they decided they wanted to use clay and paints to demonstrate their learning.

A Window into the First Class

After the description of the class breakdown and the explanation of the research and signing of consent forms were complete, we started our first session with journaling. “Journal about the place you are in right now. What’s on your mind? What’s the first thing you’re thinking about? How was your day? Choose any one of these prompts and tell me about the energy you feel at this very moment.” The session began late so the class breakdown was not what it usually would be. We did journaling, yoga – using yoga cards, inside – more journaling, and ended by talking about our plans for the group art collaboration. We did not begin the art project in the first week, but discussed what they would like to do in the weeks to come. The discussions were done in a circle and everyone had a chance to speak.

For the yoga portion, I had a yoga card deck and shuffled the cards in a messy pile on the floor in front of the group. I asked the students to close their eyes and choose one card. Each student had a turn to demonstrate the yoga pose on the card and to read the description that told

us how to get into the pose and what we should think about while in the pose. All were calming, deep breathing, and relaxing postures. We took turns giving the postures creative names such as: sleeping pose, the relaxed pose, and the X pose. We had just enough time for each of the three students to show one card before moving into our journaling activity.

During this part of the class, everyone participated and seemed interested in the cards and in trying new poses with creative names. I watched the students read the cards then move their bodies into the postures, breathing deeply on the inhales and exhales. Watching them explore and learn on their own was moving for me as the researcher. Their body language was undeniable; they were smiling and looked relaxed moving from one posture to the next. The yoga was done inside, and Dakota and Devon both told the group that they felt calmer after just a few short poses. I too felt a calmness enter the room and hover above us. There was still a slight buzz of energy that could be felt by everyone, but it was less a nervous buzzing and more one of excitement.

We wrapped up the session by talking in a circle. We sat around a table, at the same level, and everyone appeared to be feeling comfortable. I asked the group what they wanted to do for a collaborative project to show their feelings about Snowga. Perhaps because we didn't end up going outside this first class, their thoughts were focused on abstract things like feathers, buttons, statues, and paints. The group decided that they wanted to physically create something: a structure or statue made first of clay to which they could later add other objects as they thought of them.

We finished the class by talking about what Namaste means. I asked if anyone had heard that word before and both Dakota and Devon indicated that they had (which makes sense since they were in my Eco-Yoga class in the fall). I asked them to share what they thought it meant and

Dakota said, "It's something like feeling peace and saying hello and saying goodbye." I asked what Devon thought and he said that it was something about feeling peaceful in your heart. I replied that I liked both of those descriptions and then I shared with them what I learned from my own past yoga teachings: "The light inside me honours and respects the light inside of you." Looking around the circle, everyone nodded their heads. I asked if we could come up with a definition that worked for all of us. Casey said that she liked the idea of light and energy. Casey said, "I feel like I can feel [the light] inside [me]."

As the weeks continued I saw evidence that the four children grew as they moved through each of the four spheres in my conceptual framework. There were themes that were repeated each week and which were taken up by each child in different ways. For example, sometimes one student would demonstrate their emotional wellbeing during a session one week, then demonstrate an environmental connection the next week, and a connection with community the week after. Each student moved through the spheres at different rates in different weeks in different ways. Below I share details of my observations of the students moving through the spheres of the conceptual framework.

Themes

The following section outlines the themes from my conceptual framework by moving through the spheres beginning with student emotional wellbeing, moving to learning yoga and mindfulness, then to connections to community and place, and finally connections to the natural world.

Sphere one: Student emotional wellbeing. This sphere was one of the easiest spheres for the group to move through. The students' journals showed me where the students were each day at the beginning and the end of the sessions and they were able to articulate what was on

their minds in those moments. They often began the sessions by focusing on either past or future events. Typically the first journal of each class portrayed an intense emotion, either something they were very excited about or something that they were very upset about, with some even describing both in the same entry. One example can be found in Devon's journal entry (see Figure 4) where he lost his mitten on the way to Snowga. He entered our room visibly distraught: his eyes and face were red and he was sniffing back tears as he told us, "I lost my mitten and it was really important to me. My mom and dad said they would look for it, but I think it's gone." He buried his face in his elbow on the table. His sister Dakota patted him gently on the back, "We'll find it," she whispered. Everyone including me nodded in agreement. "We'll all keep our eyes peeled for it when we walk outside to our spot under the tree. Maybe it fell near the entrance", I suggested. When we finished the Snowga lesson, the mitten was still nowhere to be found, but Devon appeared to be much more cheerful and did not mention the mitten again. Luckily, at the end of class when his parents picked him up, they brought good news. They found the mitten in the driveway at home!

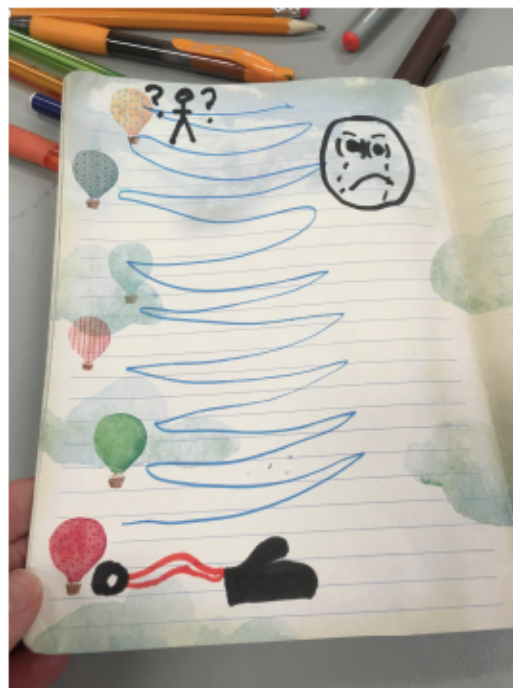


Figure 4. Devon's "Missing Mitten" Journal Entry

I found the transition between the first and second journal entries of each child interesting; it varied among students over the weeks depending on what was going on in each student's life. What was consistent was that Jamie and Dakota were mostly able to leave the past/future focus and come into a present state of mind, appreciating *this* moment, as demonstrated in their journal entries. As a class, we spoke about being in the present moment as mindfulness. Almost every week Jamie and Dakota were able to make the transition to mindfulness. Jamie often told me how keen she was to learn mindfulness and yoga and devoted a lot of time and attention to it outside of the Snowga sessions. Dakota was also able to make the transition to mindfulness likely because she told me that she practised yoga and mindfulness at home and at school. Casey would sometimes make the transition but it depended what was going on for her in a given week. I observed that she would often talk about what she did at school that day or what she was going to do later that night for most of the class time. Mindfulness was new to her, and I did not have the sense that she practised it on a regular basis outside of class time. As time went on, however, she improved. Devon really struggled to make the transition. While he had been exposed to yoga and mindfulness and had been part of the Eco-Yoga class, he struggled to sit still. He was the same age as Jamie and the only boy in the group.

For all the children, the focus on the present was most apparent in the journal entries *after* doing yoga. For example, Dakota shared a drawing with stars and lots of bright colours (neon oranges, pinks, and yellows). The stars had lines that were flowing out of them. In describing this journal entry, Dakota said, "I feel excited and excited feels like the lines that are kind of sharp with bright colours." In this way, Dakota showed me how she was feeling in that moment. The

word “excited” could mean any number of things, but when combined with the drawing of the jagged lines jumping, her feelings are clear. The colours also are evocative. In my interpretation, the oranges, pinks, reds, and yellows are happy colours that show vibrancy and connections. As she spoke, Dakota’s eyes were bouncing just as the lines were: with happiness and radiance. Not only could I see the excitement in her drawing and appearance, I could *feel* it.

Another area that the journals touched on was the connection of the present moment to their feelings of wellbeing. For example, Jamie described a blue and pink “backwards” flower that she had drawn: “the flower forgot she wasn’t supposed to face that way. She wanted to touch the sky but she was facing the wrong way.” I interpreted the flower who was “facing the wrong way” to represent where Jamie was in the moment. The flower was trying to find the “right” way and had some kind of knowledge that it needed to look in a certain direction in order to grow, but somehow the flower just could not get it right. Knowing that Jamie had just moved to Thunder Bay and was having a difficult time adjusting to many new things in her life (e.g., cold, snow, winter, and making friends as she told me often throughout our sessions) led me to this interpretation. Listening to Jamie talk about the struggles of the flower gave me a glimpse into the struggles of a nine-year old child trying to fit in in a new city and “look the right way.” In that moment, I realized that we needed a focus in the classes on inclusion and community and a good way to do this might be through movement and exploration of our surroundings in nature. Every flower should be able to look wherever it pleases and feel safe in knowing that it is the *right* way.

Not all of the students explicitly expressed feelings of wellbeing (e.g., feeling happy, content, in high spirits) in their journals or in our circle discussions, but when practicing yoga and mindfulness outside, I could observe through their body language that they were in the

moment and feeling well; there were big smiles, playful behaviours, and adventurous actions. I turn to this in more detail in the next section.

Sphere two: Learning yoga and mindfulness. Yoga and mindfulness were the key elements of Snowga and the backbone of the entire conceptual framework. Each week through yoga and mindfulness, I watched the students form stronger connections to each other and to the place where we practiced. As noted above, the students showed through their journaling – typically in their second journal entry of the session – that they were shifting from a past or future focus to mindfulness. I believe that this shift came, in large part, because the yoga and mindfulness exercises were conducted outside.

I observed and later wrote about the transformation I witnessed in the students each time we went outside. In doing yoga exercises – whether partner yoga (yoga poses done with a partner, in unison, focusing on breathing together and moving together), chanting *ohm* together, stretching, sequencing, or group work – the students experienced the outdoors together as a group and, in turn, grew as a group. An example of the growth of them as a group came from observing the smiles and the laughter as they became more comfortable with one another over the weeks. I also noted that they were more playful in their movements outside than when sitting inside around a table, on hard plastic chairs. The squirming and moving was welcome outside while in the classroom they appeared less comfortable. Below is an excerpt that stood out for me, from my journal after our Week 5 session:

On a day when the temperature dipped below -20 degrees Celsius, we did a mindfulness walk outdoors, thoroughly bundled up for the cold. During the nature walk it was impossible not to notice the depth of the snow. In some areas it was up past my knees and to the waists of the children. The air was cool and fresh, the kind that makes your nose drip. The children were

playful; at one point I could only hear laughter and the crunch of snow. Dakota stopped a few times – arms spread out, eyes closed, and chin lifted to face skyward. I could almost see the stress and tension leave her as she exhaled. A small smile danced across her lips and her whole face relaxed. Devon explored the mountain of snow piled up from the parking lot nearby. As I watched, I imagined Devon exploring a real mountain, facing biting winds and blizzard conditions. Was Devon searching for something, perhaps a better view of the crimson sunset? My speculation was answered when I saw him gaze towards the bright sunset for several minutes, hand protecting his eyes from the brightness. I chose to not ask him outright what he was doing; I felt it would spoil the quiet moment for him. Jamie followed my path in the crisp snow, branching out to eat some of the snow and hold it in her hands. She picked up a twig at one point and inspected it, feeling it, and turning it over in her hands. Jamie moved onto another pile of snow, keeping the stick between her mittens. Casey rolled and smiled all along the way, grinning ear to ear. Together, without a word or a cue, we all paused for a moment to gaze and admire the majestic setting sun before heading back towards the parking lot, and back inside. This walk was memorable to me in that I recognized that without much planning, talking, or resources, the students were able to become present, which is the key to mindfulness. During our short nature walk, in the bitter cold, each student was fixated on something in the natural world and connected with it in some way through their senses. You do not need to be a yogi or yogini, or a specially practiced person in mindfulness to be able to stop in the moment, and find peace and balance through nature.

Following our nature walk, the students depicted their experiences in their journals, which they then shared in circle discussions. Casey described a drawing that focused on her five senses: “Touch – I couldn’t feel anything because of my mittens, but I could feel that I had warm

hands. The sound was quiet – I drew squiggly lines. Taste – it was nothing. Smell – I smelled fresh air outside, but now I smell chlorine inside. See – I could see the sunset – it represents nature and my heart” (see Figure 5). Moving through all five senses is a good example of what mindfulness is about, experiencing the world in different ways, in the present moment, as it exists and as you exist. Casey, using the description of “warm hands” and drawing the calm squiggly lines to show quiet and peace in light blue hues, showed me where she was in that moment; Casey was present, in the field, feeling and reflecting on being in nature. Again, it was more than her words I was interpreting, but also the colours, her calm smile, and the deep inhale as Casey said, “I smelled fresh air outside.” I must admit that the contrast between the fresh air and the smell of chlorine in the Complex was surprising to me. Although I had noticed the smell of chlorine myself, I did not think that the smell would enter into their journals. Casey showed me that through all her senses, she was comparing the peaceful sensations of being outside (in the cold, no less) with the warm, chemical-filled air inside.



Figure 5. Casey's "Five Senses" Journal Entry

Sphere three: Connections to community and place. These two concepts did not correlate the way I expected them to. I speculated that the students would bond as a group and, together as a close community, immediately feel a strong connection to the place where we practiced, and that this would be represented in their journals. While they did make some connections to place – the field where we practiced each week – by the time we traveled back inside to journal, I think they forgot about these connections and focused on what might have been the more fun parts of their outdoor experience. While we were outside they were playful and clearly enjoying being outside in a natural area, as I mentioned before, only sometimes they would write about their nature connection in their journal and other times they would write about their plans for later that night.

I did notice that each week the relationships among the students appeared to deepen, including into new friendships for those who did not previously know each other. I suspect this was largely due to partner and group yoga as I purposely paired them with a different partner each week. Dakota and Devon were siblings and both were friends with Casey before starting Snowga. Jamie was new to the group and at first participated by playing and exploring on her own, but by the end of the course in its entirety she would strike up conversations with Dakota, Devon, and Casey, seemingly comfortable. They talked about things they had in common or shared feelings about their outdoor experiences. The students told me throughout the sessions that they felt a connection to each other as a group, especially when they would hold hands in partner or group yoga. I too felt that connection. After our second session, I reflected in my journal on the energy that I felt while we chanted our first “ohm” together:

I looked around the circle and what I saw and what I heard made my heart melt with joy. We were all holding hands, and standing in a circle in the middle of the field. In unison and without practice or guidance, we all took a deep breath in and paused for the briefest of moments. As we each exhaled, a gentle vibration and low hum filled my ears: “Oooohhhhhmmm.” The sound rang out into the air around us, quiet and powerful all at once. It was as if magic was forming in the circle that very moment. I felt this energy move through my hands and up into my arms. “Whoa,” I thought to myself. “Is this happening?” As each one of us reached the end of our exhale the sound trickled off into the distance. As the last “mmmm” sounds trailed off into the distance the group inhaled again as if on cue, filling our bellies with air before slowly releasing it into the universe, in our second “Ohm.” This time the sound was longer and a little louder as if everyone wanted to see just how far we could send our vibrations. Again, I felt this surge of energy move through my hands, up into my arms, and this time into my chest. It was as if I could

feel the energy of the group with my breath and my heart. Looking around, I wondered if the students felt this same alive calmness; given the peaceful expressions on their faces I felt certain they could feel it too. On our last breath in together, I felt the connections among the group growing stronger. The last “Ohm” was beautiful – almost harmonic. The sound rang out into the still night darkness, bouncing off the nearby trees and returning back to us to open our hearts and our minds. This moment was powerful beyond words. The children gently fluttered their eyes open. There was barely a moment of quiet stillness – so brief it felt like time had stopped – before smiles spread and our hands dropped. “That was coooooooooool,” breathed Devon.

This was one of several times that we chanted *Ohm* as a group, but by far it was the most powerful. When we finished we moved through some yoga postures together, then waded through the snow back inside. After this particular session, most of the students wrote in their journals about the funny yoga postures that we worked on, but none went into any depth about the *Ohm* experience although Dakota, for one, did mention it. In her journal, she drew trees with a radiant sunset in the background on one page, telling me that while we did our yoga, she found the beautiful colours were distracting, that she wanted to stare at them and just breathe. She clarified that the distraction was not a “bad” distraction, but rather that it was so beautiful. She said that when we said *Ohm* together it was like magic. Dakota said she imagined there being a clock outside but instead of numbers, it displayed “now” over and over again (see Figure 6). Dakota told me she wanted to remember to be in the present since she really liked it. Once Dakota reminded the group of the *Ohm* moment, they all nodded, saying that it was indeed “cool.”

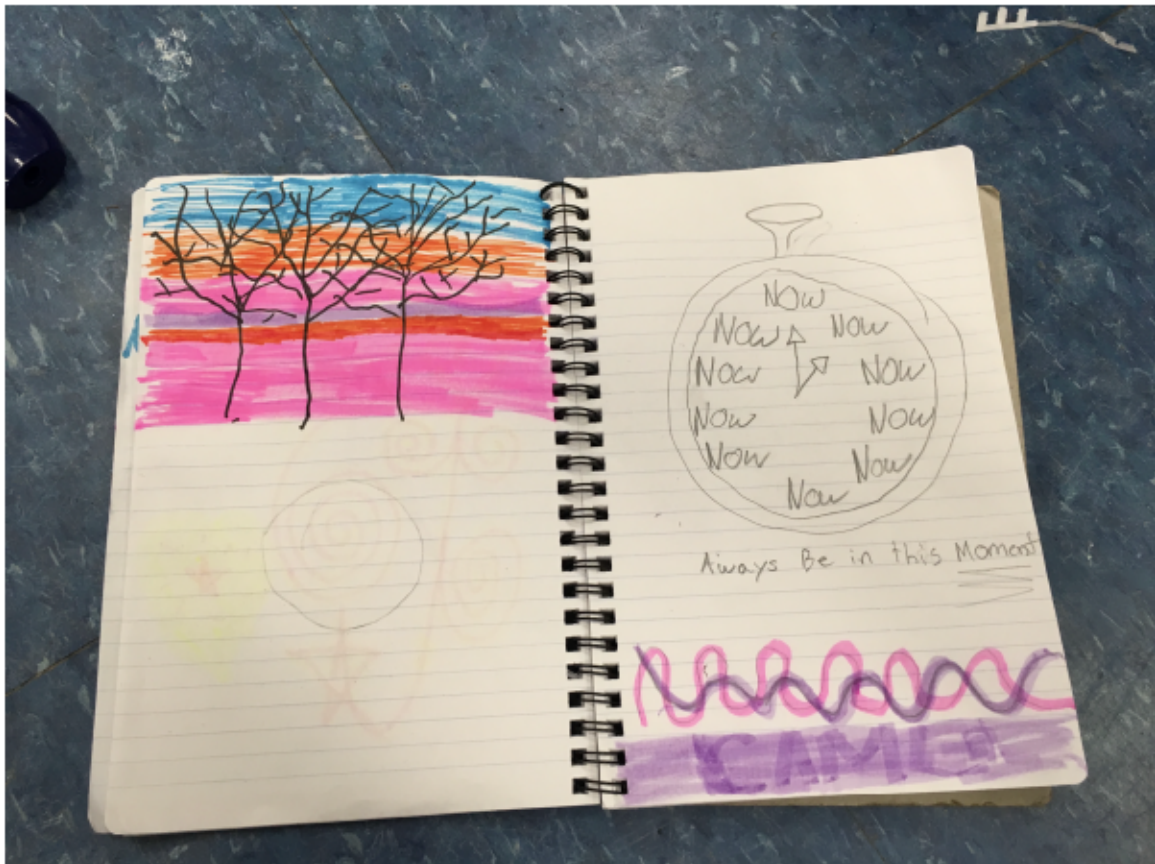


Figure 6. Dakota's "Ohm" Journal Entry

While it was difficult for me to interpret if they felt a connection to our social community *and* to the place where we physically practiced yoga and mindfulness, there were glimpses of this. In our final session together, we spent the entire session inside finishing the clay art piece that represented what they learned and talking about the Snowga program. The children told me that they did not feel a connection to the Complex building, but that they felt our yoga place in the field was very special. When I asked why, Dakota said, "because I know that field; outside is more nice. It's like me. It's where I do yoga." Jamie explained, "It's where I feel the best if I want peace. Breathing in fresh air and looking at the sunset helps me reach that place." Devon said, "I feel relaxed, and peaceful there. It's a fun place." I was not surprised that the students

would feel more connection to the outside field where we practiced than the Complex, especially after the session where they mentioned that the smell of chlorine bothered them.

None of the students lived in the area and only used the field when they were at Snowga. Using words like “relaxed, and peaceful” and “fresh air” tells me that they did enjoy being outside and that perhaps they felt a connection with nature by being mindful in nature. The part that really exemplified the possible connection for me was when Jamie explained, “looking at the sunset helps me reach that place,” meaning a place of peace, quiet, and stillness where the stresses of her schedule and everyday life do not interfere. All four students expressed numerous times through the sessions that they felt stress and pressure from school and that yoga and mindfulness was an escape for them.

I found it thought-provoking when the students were working with the clay during Week 2, telling me that each cube they were building represented something that they experienced or learned during Snowga. Dakota told me: “It symbolizes us working together; it’s a partnership. Sometimes it doesn’t work, but that doesn’t make it less good.” When they talked about how it sometimes does not work, they were referring to how the clay blocks would not stick together in the way they wanted them to. Instead of being angry or upset by this, Devon suggested that the pyramid they created out of clay cubes represented the big snow pile beside the parking lot outside. Some weeks the snow would be hard and they could climb and build on it, and some weeks it would be soft and melting and they would sink through, just like the clay.

All four students always tried to climb that mountain of snow no matter what happened the week before. They approached their art in the same way. No matter what it looked like in a given week or eventually turned into, it represented their time together. They said that the artwork relaxed them in the same way that yoga relaxed them; the art was like a big journal entry

where they could express their feelings and thoughts. Each piece represented something that they learned or did in the class. Jamie commented about the artwork, saying that nothing lasts forever, just like in nature. This was a huge moment for me as a researcher as it showed me that Snowga got through in some ways to them, not only in connection to each other as a group, but in linking back their experiences and life in general.

Sphere four: Connections to the natural world. While the students were outside exploring and enjoying the sunsets, genuine conversations occurred where they questioned and played freely. The words they used to describe their experiences were positive and enlightening. For example, Jamie said, “The snow was icy. I liked how the top layer of the snow was crunchy and at the bottom of the snow it was soft. It looked like crystals. I liked the snow the best because it was shiny and it brought out the trees. The snow looked like glitter.” This observation of Jamie’s happened in the second session and this attention to nature continued right through to the end of the program. Snow seemed magical to Jamie and was something of a mystery; she had just moved to a snowy, northern climate from a place where it was “always summer,” as she said to me once. Week after week, the changing snow mesmerized Jamie. One week it was crunchy, the next it was soft and melted. Jamie often touched and tasted the snow, seemingly trying to get as much out of the experience as possible.

Here is an excerpt from Week 7 of my journal that describes a typical moment we experienced together outside and the connections made by the children:

We decided to take a wander through a small thicket of trees after yoga. The snow was very crunchy on top, but soft and deep underneath. The children enjoyed the experience of their feet falling through the snow; they had to struggle just to walk and laughed out loud as they helped one another out of the snow. As soon as we arrived by the trees – a mix of pine, birch,

and cedar – Casey shouted, “Watch out for the rabbit poop!” Jamie was really interested in seeing the animal tracks and asked how long ago the tracks were made. Devon speculated that they looked pretty fresh. We walked by a big cedar tree and everyone climbed or touched the tree in some way. They seemed to enjoy the rough feel of the bark and the winding, meandering creases in the wood. Like the animal prints in the snow, the tree had untamed trails and grooves in its trunk as its bark naturally twisted up the tree. Jamie lifted a snow-laden mitten to move her hat that had gone awry and pointed to the top of the tree, “Hey, I think I see a nest or something up there.” I asked where that nest might have come from. Everyone gathered at the root of the tree and stared skyward. Puzzled, Jamie was frozen in place, but Casey started reaching for lower branches trying to hoist herself higher up. Devon spoke through squinted eyes, “I see white! Like egg shells! It must be a bird’s nest!” The energy level soared. Everyone nodded in agreement, craning their necks to get a better look. “Yep. That’s what it is,” he confirmed. Before heading back inside, Dakota made a smiling face in the snow, cut it out, and because it was firm and sticky, was able to place it on the tree so others could see it (Figure 7). Casey laughed and said the smiling face looked a bit like a scary face. Dakota told me, “I really like that the snow was so hard that I could cut out a mask from it. I hope people know that this is a happy face.” Casey assured her that people would know. As we walked back inside, Dakota wondered if the mask would still be there by next week.



Figure 7. Dakota's smile mask.

Back inside I asked how everyone was feeling after being outside. Casey described her experience this way: “At school there are all the things in your head that make you feel stress. Snowga makes you feel fresh and not stressed; cool and not boring; super awesome, amazing; fresh.” With that, we finished the session and everyone prepared to go home. The word that stuck out the most for me in this particular session was “fresh” as they all kept saying it; they all indeed appear to feel fresh after being outside. They wanted to explore and be in the natural part of the field. They found the tracks and asked questions and they all connected and played together as a group. Reflecting at home later that evening, I looked through the photos that I

took of their journals that week (7), reflecting on the changes between their first and second journal entries. I thought about how fun it was to explore and the look of curiosity and excitement in the eyes of the children. Finding the tracks and talking about real, live animals in the small thicket of trees was another breakthrough moment, and then I remembered the fun we had in our poses even before the exploration of the thicket. In reflecting on the entire lesson that evening, I think the yoga encouraged play that led to exploration. It was not until I was at home, reflecting in my own journal, that it dawned on me what happened:

The transition from Journal One to Journal Two for each student was huge today. Not only were the moments outside magical, but also so were the journal entries that followed. Jamie arrived to the class feeling sad and frustrated. She told me about some bullies at school and how they were picking on other children. This made her group of friends feel “small and bad.” Jamie did not want to talk about it in the group circle, but she did show me her journal. In viewing her journal entry, it was very dark. The lines were scribbled carelessly on the page in dark shades of red, grey, and blue. Stick figures were crudely drawn with unhappy faces and red X’s over them. On the top of the page scrawled in handwriting was the word “dead.” Upon seeing this word written not just once but twice on the page, I felt concerned. While the others were chatting about their drawings, I sat beside Jamie and quietly asked, “What does this mean?” and pointed to the word “dead.” Jamie shrugged, “It’s just the word I feel right now.” She closed her journal. The others in the group kept colouring quietly, and didn’t seem to notice our conversation. I felt unsure of what to do in that moment. I decided to see how the rest of the class played out and gauge whether or not I needed to speak with her more on the subject in private.

The others wrote about feelings of stress from school and having to learn too much about math and studying for their upcoming science test. The energy in the room was not positive and I

wondered if it would be possible to uplift these little spirits today. I arbitrarily asked Devon and Dakota to choose four yoga cards each and take us outside to lead the session in some postures. According to Devon the chosen poses were challenging in comparison to some of the other postures we had done and looked like more fun. Devon led us through the poses in a fun little sequence. Each movement made was exaggerated and had the group giggling immediately. They tumbled around in the snow and laughed at the names and descriptions that Devon used.

One of Devon's poses was the "Gorilla" pose according to the back of the card. He bent over and dragged his arms, grunting at the group, twisting his body round just like the card showed. The last pose, Devon informed us, was his very favourite. He told us that the card said "Flying" but he thought it looked more like a smile. He lay on his side and arched his body to make a "C" shape. He reached his arms up, and made two dots in the snow above the curve of his spine and went back into his pose. "See," he said, "It's a smile!" Everyone laughed and exclaimed that they liked Devon's version of the pose better than the card. So we all sprawled ourselves out onto the snow-covered field, each playfully punching two eyeholes in the snow, then curving our bodies with our arms and feet up, and bellies away from the eyes, to make our own "smiles" in the snow. Thinking back to the moment now, I realize that these yoga poses opened a gateway for both comfort and curiosity. Now I see connections between Devon's "smile" pose in the snow and Dakota's "smile" mask made out of the snow and placed in the tree for walkers to observe and enjoy.

As I sit here at home, I open the photos on my laptop of the journals from the day. I look at Jamie's first journal entry, then at her second. I remember feeling concerned at the beginning of the class, but after watching her throughout the class, the sadness and anger seemed to slip away, replaced by smiles and laughter. When we said goodbye, Jamie's face was bright, with

rosy cheeks and dancing eyes. She was happy when she left. Is it possible that the short, one-hour session of play outside and a wander through the tiniest of forests changed her emotions from being so dark, with her writing “dead” in her journal entry, to so happy, vibrant, and warm? Her second journal entry that day depicted a darkening sky in the distance and the base of a large, brown tree. As your gaze moves down the page, you can see the snow and the little animal tracks that we encountered. Jamie included swirling, gentle lines with shades of purples, blues, and oranges – the colours of the sun setting in the background of our little excursion. Little paw prints were drawn carefully around the page, in pairs no less. It looked like a little group of animals was at this thicket in her journal, perhaps even our little group of children. The contrast between the two entries was like night and day. This is it! This is what I was hoping to find. In one hour she showed me through her smiles and laughter that she was feeling a sense of wellbeing: the first sphere. While playing outside she talked and explored with the other students happily, while doing the yoga poses, showing a connection to community: the second and third spheres. Finally she drew about nature in her journal and talked about how she felt better after playing outside: the fourth sphere (see Figures 8 and 9).

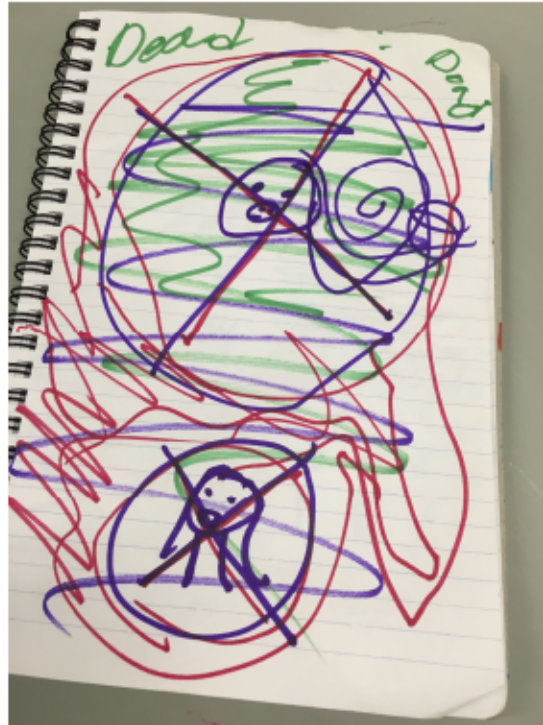


Figure 8. Jamie's Week 7 First Journal Entry.



Figure 9. Jamie's Week 7 Second Journal Entry.

Had it not been for me engaging in my own self-reflection, I may have missed this huge step for Jamie and a key moment in my research. The journaling gave me the opportunity to think back on the experiences of the class, to look at my notes and reflect on what was said and how I felt through reflexivity. In this instance, clearly I felt uneasy and worried about a student at the beginning of the class, but by the end she and I had both forgotten about the bullies and the dark images in her first journal entry. By the end of the class, not only were all the students feeling happier and more upbeat, so was I. It was not until I was home, however, that I realized what a huge change came into effect right under my very nose. This is why my own reflections were so important to this research process; they helped me unravel the meaning of what changed in the children, especially in the above example with Jamie. I needed to engage in reflection to remember not just the positive parts about going outside and exploring, but to also remember where the children were starting, a place of sadness and anger in Jamie's case that week. I found recalling these transitions between the beginning and end of class to be moving and the reflective journal provided me with the opportunity to sit back, think, wonder, and write about what I observed. Taking notes alone would not have captured every moment of the experiences in the class; some distance was also needed to analyze my memories and emotions to really piece the puzzle together.

Connecting Back to the Literature

Through this research, the data revealed evidence of the beginning of a connection to the natural world through yoga and mindfulness when practiced outdoors. In their journals and group discussions, each student demonstrated to some degree that they were moving through the four spheres of development outlined in my conceptual framework and methodology. I could see glimpses of how our time together showed them what it means to care for the self through

mindfulness, helped them develop a little community, and strengthened their connections to the natural world.

For example, through the Snowga classes, the students were able to address their stress and find healthy ways to respond to it. By connecting with the self through movement, the students articulated in their journals and group discussions how they were able to release their stress through play, curiosity, yoga, and mindfulness. I argue that this is something that should be available for all students, not just those few, like these students, who register for a community recreation program like Snowga. Yet the publicly funded curriculum as it currently exists in Ontario, Canada does not include attention to helping students develop the ability to inhabit their bodies, senses, and feelings through mindfulness as recommended by some scholars (e.g., Bai, Scott, & Donald, 2009).

Many students are feeling overwhelmed and stressed, which is why it is so vital for students to learn how to inhabit their whole being from a young age. The four students who participated in Snowga tended to normalize feeling stress. Hearing these children say they need a “break” or that they were “tired” disturbed me and tells me that there is a lack of attention to this in a traditional school setting. Increasingly, we know that movement and connectivity is important, as one dimension of learning through the body (Blenkinsop, 2014; Chawla, 1998; Potter, 2007). Yet as Bai et al. (2009) note, “the way we educate students, from kindergarten to university, tends not to encourage them to inhabit deeply and continuously in their body, sense, feeling, and for that matter, even in their thought” (p. 324). One of the best sites for this to happen is outside so children need opportunities to explore, to experience, to be outside in nature. As Bai et al. (2009) state, “it is when a person goes out and interacts with the landscape, experiencing the land intimately through her sense perception, thoughts, and feelings that she

comes to know the land as if it is part of her” (p. 324). Movement and being outside is not a priority in most schools, but my research illustrates the potential of such an approach.

An important part of this approach in Snowga was the space for creative expression by both me and the students. To build on Perl (2004) who draws on Gendlin’s (1996) work, writing “establishes a link between what we think (our minds) and what we feel (our bodies), or between what we know implicitly (before words come) and what we ultimately write or say (with words) explicitly” (p. 5). I witnessed that the students were able to take advantage of moving through processes that helped link mind and body. They expressed their learning through written words and drawing in their journals, and through spoken words in our circle discussions. Pennebaker (2000, 2004) conducted several studies on the role of writing and its connection to psychological healing through embodiment. While his focus was on healing, I see connections to the journaling experienced by the Snowga students as their increasing mindfulness seemed to provide them a sense of healing and wellbeing.

The Snowga program also allowed students to experience the love of the outdoors through movement in yoga and wellness in mindfulness and meditation. Through their journal entries and the creative, artistic piece they produced together, the students were able to communicate their understanding of and connections to the natural world. Using the outdoors in teaching gives learners the capacity and ability to use their imagination, to play, to learn, to explore, and to be children (Flowers et. al, 2015). This is an important concept to remember in education as these are too often brushed aside in classrooms. As Brown (2004) states, “teachers need to create a place that enables students to develop the courage and confidence required to try new things, to explore, and to create in spite of today’s outcome-based direction” (p. 23). As their teacher, I sought to create an environment that nurtured their curiosity and their creativity

and allowed them to be playful in the natural world. I hoped that in doing so they might move through each of the four spheres of my conceptual model: emotional wellbeing; learning yoga and mindfulness practices; connection to place and community; and connection to the natural world. If we teach students to learn from a place of love, the hope is that they will then move forward in life respecting and caring for the natural world.

A final connection I see to the literature is the importance of teachers bringing their authentic selves to their work (Brown, 2004). This is something that I felt I started to accomplish in Snowga. I worked to be passionate and caring and to provide a space that nurtures outdoor, place-based activities that facilitate the development of mindfulness skills. I would argue that bringing mindfulness and outdoor experiences into teaching and learning can lower stress levels for everyone and place emotional wellbeing at the centre of learning, much in the way that Sauvé (2009) suggests in her model.

Chapter 5: Conclusion

I have learned much from this research and while there are limitations to my research as discussed in the previous chapter, I feel comfortable looking forward and making some recommendations for both practice and future research.

Implications for Practice

First, I would recommend to teachers that yoga and mindfulness be incorporated in the classroom. In many cases teachers do not have the background or the training in mindfulness and/or yoga, so the first place to begin would be to implement teacher training into schools or provide incentives to motivate teachers to practice mindfulness and yoga in the outdoors on their own time. My opinion is that once teachers realize the benefits that come with practicing yoga and mindfulness regularly, they will feel inspired to implement it into their every day schedules in their classroom. They do not need to be relegated to an afterschool program but neither do they need to be limited to specially allocated times during the day. Rather, these practices can be used frequently, whenever students need time to refocus (Hitzhusen, 2006). I realize that not every teacher will find the passion and motivation to implement or practice yoga and mindfulness on their own time, but my hope is that through research like mine teachers will find inspiration to bring these ideas into their classrooms and into their own lives.

Further, as outdoor educators have long argued, connections to the natural world can be incorporated in all or most subject areas in schools. For example, students can go outside in science class and see changes occurring in natural settings (Blenkinsop, 2014; Burkhart, 2011). Plants can be brought into the classroom, windows can be opened, and special areas can be set up in the classroom for students to visit when they feel overwhelmed or when they wish to find their centre (Burkhart, 2011; Jardine, 1998; Potter 2007). Yoga mats, blankets, quiet music, and

natural sounds can be used indoors to help inspire connections to the natural world if an outdoor setting is not available (Selby, 2007) although I do believe that being outside, even in adverse weather conditions, is important whenever possible (Blenkinsop, 2014). The yoga and mindfulness practices such as I used in Snowga can be easily modified to suit any age and does not require expensive supplies to help all students find peace and a better connection to the natural world. What is needed is time. In our current fast-paced world, not many are able to quiet the mind quickly, so practicing everyday over a period of time (one year, for example) could do wonders for helping more students find peace and connection.

I believe that this method of teaching can play an important part in promoting student wellbeing as a way of teaching about the self, mindfulness, yoga, community and the natural world. I think that my research is valuable because it provides some evidence that the techniques that I used, as derived from my sources (Adele, 2009; Kabat-Zinn, 1994; Meiklejohn et al, 2012; Rechtschaffen, 2014; Sauv , 2009; Shanker, 2013; Stone, 2008; Zabel, 2013), may be effective in helping guide students to learn about, feel comfortable in, and connected with the natural world. According to Bai and Scutt (2009), “mindfulness practice cultivates subject-object integration and bonding, rather than subject-object dichotomy and alienation. From this integration and bonding flows love of life (biophilia) and deep appreciation of other beings’ sacred existence” (pp. 99-100). Mindfulness can be integrated into education generally and outdoor environmental education specifically. What better way to find connection, love, and respect for the earth than to express it in a way that is meaningful and deep! Yoga and mindfulness practiced outside offers an opportunity to quiet the mind and body and appreciate what surrounds us here, in this present moment. Bai (2001) summarizes the goals of environmental education through yoga and meditation: “I am convinced that the more we can

dwell in the contemplative/aesthetic mode of being, the less damage we will incur to the world through hyperactivity and hyper-production/consumption. ‘Do less and be more’ should be our motto” (p. 11).

This research and method of teaching echoes the growing awareness that we, as educators, need to craft ways of enhancing the mental health and wellbeing of children. We need to develop new, or recover old, ways and focus our classrooms on the wellbeing of students. We live in an ecologically threatened world where issues such as climate change are very real problems (Klein, 2015). One way to teach about caring for the natural world is to focus on love. What better way to teach love than through the heart with mindfulness and yoga. These practices are thousands of years old and based on traditions that have been proven in the past to bring peace and wellbeing to its practitioners (Rechtschaffen, 2014). It is important to schedule time for students to pause, reflect, meditate, and enjoy the present moment, and to just be children.

Implications for Research

In terms of future research, there is so much more that remains to be discovered about the potential role of yoga and mindfulness in fostering connections to the natural world. Conducting research on programs like Snowga with more students and over a longer period of time – over the course of a few months or a year, for example – would provide us with a better idea of how deep the learning and connections might go. I feel like we just skimmed the surface of what these students were feeling and were capable of, especially in terms of environmental education. Topics related to the environment were scattered throughout their journal entries and with more time, I believe that we would have touched on more topics and addressed more ways to interact and connect with the natural world. Through observations of and conversations with the students, I noticed that each moved through the four spheres identified in my framework. I imagine that

with longer sessions several times in a week, there is real potential here for integrating yoga and mindfulness as a way of teaching connection to place and the natural world. I would like to see more research on this topic to see if my hunch is correct. I turn now to one last reflection as a way of ending this thesis.

Final Reflection

The last class was emotional, and saying goodbye, knowing it was the last time we would be together, was more difficult for me than I anticipated. In the end, for me, the experience was not about the research so much as it was about teaching to love and be passionate about outdoor experiences. These are the memories that I will cherish and hold dear, and I wonder if the students could sense that. This group was special, this moment was special, and another will never come along just like it, but that does not mean that we cannot sit back and reflect on it time and time again.

Close your eyes for a moment and take in a long, deep breath. No matter where you are in the world, imagine that breath is full of fresh, clean air. Imagine the taste of that air as it fills your lungs. Feel your belly expand with air, as if your lungs just cannot get enough of it. When your breath is as full as can be, pause for a moment before slowly exhaling all the air back out. Imagine that each time you breathe in, you breathe in that fresh, cool, air with a familiar lingering scent. Feel all your stresses melt away as you release not only the breath, but any tension you're holding as well. Enjoy that moment of "freshness" as my students would say.

Why would you limit yourself to doing that only on special occasions? Why does it have to happen only during a family camping trip? Or during a purposeful walk in the woods? Or perhaps on a planned hiking trip to a new location? Why does it need to be a "special" event and not something practiced daily? If everyone could just stop, breathe, take in the moment, and

cherish this wonderful Earth, wouldn't the world be a better place? Wouldn't we be in a better place to make informed decisions from the heart? My ultimate goal in this research was not only to explore how yoga and mindfulness can help students find connections to the self and to the natural world, but also to show how teaching from a place of love can help students as well. If I could choose an overarching theme, I would have to say it is *love* because kindness, understanding, appreciation, wellbeing, and living in the present moment all stem from a place of love.

As I walk out of the Complex building, into the parking lot towards my car, my head swirls for just a second. I stop to catch myself and the realization hits me – Snowga is over. In a moment of reflection I find myself feeling sad, nostalgic even. I gaze across the fenced lot to the field where we spent eight evenings. I wonder when I'll look over at that field or sit there again. Will my students stop by and explore the thicket of trees without me? Will they be inspired to explore other thickets? Did I fulfill my "teacher" duties for these students? Did I accomplish all that I set out to do?

In those last moments before heading home, my heart was full. Although it had only been eight short sessions, I felt I was leaving a class I had taught for a year. I knew these students and felt a connection to them and to our special place. I realized right then and there that this love of teaching was the reason that I first entered the field of education. I feel passionate about inspiring those around me to feel balanced physically, mentally, and spiritually. Everyone deserves to feel love, affection, and belonging, and everyone deserves to interact with the natural world. Movement, breath work, mindfulness, community, and place are all elements that bring benefits to our lives and that engender light and warm fuzzy feelings in the heart. Everyone deserves this, and I believe it is my job to bring that to every student I encounter – this is my passion in life.

As I write the first draft of my final chapter, it is the warmest day of the year so far. The arrival of spring marks the end of Snowga – and winter – and the beginning of a new chapter – spring. I’m moving on to another phase in my life, leaving Snowga and Thunder Bay behind for now. What will the next chapter bring for my students? Will they continue to play and explore through the spring? Will they be inspired by the warm weather to get outside, to be mindful, and maybe even breathe into a few yoga postures? Maybe, just maybe, when they are feeling inspired, they’ll stop to admire a sunset or take fresh air into their lungs as they pause and be present in that moment. And maybe in that moment, they’ll remember Snowga and smile. I know I will think back to my winter spent in Thunder Bay and I’ll miss the crunch of the snow and the little thicket of trees in the field where we practiced Snowga, and I’ll feel nostalgic.

I was inspired to write a *Snowga* Haiku using the words, ideas, and phrases that the students often used to describe their thoughts and feelings. A *Snowga* Haiku felt fitting as it is often taught in elementary schools and is a simple, yet profound way to cultivate mindfulness (Greenwood, 2015). Donegan (2008), in her book, *Haiku Mind: 108 Poems to Cultivate Awareness and Open Your Heart*, writes:

A fine haiku presents a crystalline moment of heightened awareness in simple imagery, traditionally using a kigo or season word from nature. It is this crystalline moment that is most appealing. However, this moment is more than a reflection of our day-to-day life—it is a deep reminder for us to pause and to be present to the details of the everyday. (p. XI)

Below is my own deep reminder to be present and to cherish the time in Snowga with my students. Through their words I have found meaning in place, and through their journals, sharing,

and community, we have all grown and connected to self, community, and nature through yoga and mindfulness.

Snowga

present is here, now

quiet, peaceful, heart - time stands

crisp air - breathe in: Fresh

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Appendix A: Resources

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Appendix B: Canada Games Complex Information Letter

Faculty of Education

November 17, 2015.

Leanne Bazdarick
955 Oliver Road.
Thunder Bay, Ontario
P7B 5E1

Information/Cover Letter

Dear Donna Perrault,

The purpose of this letter is to provide information about an exciting and potentially significant research project I wish to carry out at the facility of the Thunder Bay Canada Games Complex. The project is entitled: Eco-Arts Learning: Integrating Arts, Mindfulness, and Yoga in Ecological Education. This qualitative study centres on an exploration of using yoga and mindfulness as a way of teaching children to love and appreciate the natural world. I am a Master's of Education student who has completed her Bachelor of Education in the concurrent program through Lakehead University. I am a yoga and dance instructor and enjoy spending time outdoors as a way of connecting myself with the natural world.

My topics of foci are student wellbeing and holistic education in relation to environmental education through the use of mindfulness and yoga. I specifically focus on mindfulness and yoga practices in connection with the self and with the natural world. The framework that I will be using for my research centres child wellbeing as the priority, which is then followed by yoga and mindfulness practice as a way of executing self-care and wellness. The next level extends to connections from the self out into community and to place. The final level moves from place and wellbeing of self to a love and respect of the natural world through mindfulness and stewardship. I believe my research will demonstrate that using holistic education through mindfulness and yoga in order to encourage self-care and, in turn, Earth-care, will benefit children.

How can yoga and meditation in an outdoor setting assist children to connect with the natural world? In order to answer this question, I will gather data by observing the students while taking brief notes that focus on reading body language, word choice, and facial expressions. After each session is complete, I will take time to review what was discussed and write more detailed notes of what I observed in journal form. I will be

conducting group circle discussions with the children, asking questions pertaining to the topics that arise naturally in conversations. The children will have the opportunity to express their thoughts, opinions, and ideas through journaling, movement (yoga postures), pictures, poetry, dance, speech, or any other form of communication they choose. All forms of art and communication will be interpreted and recorded by the researcher. Photographs will be taken of any artwork, movement or poetry but the identities of the children and their faces will always be masked. All data will be interpreted and narrated by me.

There is no foreseeable harm associated with participation in my research. All data gathered through this research project plus my own qualitative data will be stored on a removable hard drive at a secure (locked) location in my supervisor's locked office at Lakehead University for 5 years, after which time, it will be destroyed. Only my supervisor and myself will have access to the raw data. The children's anonymity and confidentiality as participants in my research will be guaranteed, as far as possible, through the use of pseudonyms in the data analysis and reporting processes. In the case of children, both the child's and the parents/guardians' signed consent will be obtained.

The children's participation in my research study is entirely voluntary. The parents/legal guardians of minor research participants will have: the right to not participate; to withdraw at any time during the data collection phase without prejudice to pre-existing entitlements, and to continuing and meaningful opportunities for deciding whether or not to continue to participate; to opt out without penalty and to have any collected data withdrawn from the data base and not included in the study (until completion of the data collection phase of the study; if you choose to opt out, any data pertaining to your participation will be destroyed); to privacy, anonymity and confidentiality; to safeguards for security of data; to disclosure of the presence of any apparent or actual conflict of interest on the part of the researcher; and to a copy of the summary report. The results of this research will be used only for presentations, written articles and/or teaching lectures for other educators. A summary report will also be given to the Faculty of Education, Graduate Studies and Research Department.

If at any time, you have any concerns regarding the project, please feel free to contact me by email, lbazdari@lakeheadu.ca, or by telephone, (807) 472.5139 (cell); or contact my supervisor, Dr. Joan Chambers at joan.chambers@lakeheadu.ca or (807) 343-8935.

The plan for this study has been reviewed for its adherence to ethical guidelines and approved by the Research Ethics Board (REB) at Lakehead University. For questions regarding participant rights and ethical conduct of research, contact the REB at (807) 343.8283.

Your support as a coordinator of the Canada Games Complex will be a valued component to this proposed research. I would be grateful to have the opportunity to work in your facility in the "Snowga" program being offered through the Canada Games Complex. Thank you.

Sincerely,

Leanne M. Bazdarick
Master's of Education Student
Faculty of Education
Lakehead University

Appendix C: Canada Games Complex Consent Form

Faculty of Education

November 17, 2015.

Leanne Bazdarick
955 Oliver Road.
Thunder Bay, Ontario
P7B 5E1

Lakehead University
Canada Games Complex Consent Form

Study title: Eco-Arts Learning: Integrating Arts, Mindfulness, and Yoga in Ecological Education.

I, _____, (coordinator of the Canada Games Complex) have read and understood the above information, including the potential risks and benefits of the study. I hereby consent to the use of the Canada Games Complex facility in the research with consenting participants of the Snowga program.

I understand that:

All information gathered will be treated confidentially;
Following the completion of the project, all data will be securely stored for five years before being destroyed;
A summary report will be made available to me by the researcher upon request; and,
The participants will not be identifiable in any publications or public presentations resulting from this research, unless I explicitly agree to have their identity revealed.

I also understand that the results of this research will be used only in the following:

Presentations, written articles and/or teaching lectures for other educators.
Summary report to the Faculty of Education, Graduate Studies and Research Department.

(Print Name)

(Signature)

(Date)

Please sign and return this form. This consent form will be given to the researcher. For further information concerning the completion of this form, please contact:

Leanne M. Bazdarick
Master's of Education Student
Lakehead University
Office: (807) 343.8935

Appendix D: Canada Games Complex Program Advertisement in The Key

CANADA GAMES COMPLEX
www.thunderbay.ca/thekey

Youth Programs

1-10 week session (except where noted) starting the week of January 11, 2016
HST will be added where applicable. Fees subject to final approval of City Council.

Program	Day	Time	Barcode	Fee
KARATE (ISSHIN RYU)				
Tots (4 to 6 yrs) 10 weeks	Sat. Jan. 16	9:45 am to 10:30 am	349638	\$60
Beginners & Yellow Stripes (7 yrs & up) 10 weeks	Sat. Jan. 16	10:30 am to 11:30 am	349641	\$68
Advanced – must have yellow belt (7 yrs & up) 10 weeks	Sat. Jan 16	11:30 am to 1:00 pm	349644	\$95

****NEW** - Snowga**
This yoga class for kids focuses on flexibility, mindfulness and balance through yoga postures. The class includes journaling exercises, allowing participants to express themselves creatively. A portion of the class will be held outdoors in the snow as a way of establishing a meaningful connection to the natural world through movement and poses. Please bring appropriate attire for all weather conditions (we will be enjoying the outdoors, rain or shine, snow or wind).

Ages 8 to 13 (8 weeks)	Thursday	5:30 pm to 6:30 pm	353622	\$40
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Jr Development Squash				
Beginners (10 weeks)	Sat. Jan. 16	9:40 am to 10:30 am	349646	\$38
Intermediate (10 weeks)	Sat. Jan. 16	10:30 am to 11:20 am	349647	\$38

Neighbourhood Recreation Program Thursdays 6:00 to 8:00 pm **Free**
5 to 12 years. Call 684-3314 for start date and more information. Games, crafts, sports, fun, fitness and friends!


Teen Programs

1 – 10 week session starting the week of January 11, 2016

Program	Day	Time	Barcode	Fee
Teen Total Workout*	Sunday	3:15 – 4:15 pm	349648	\$50
1 – 10 weeks	January 17			

*Free program to Complex members; registration still necessary

March Break Madness
March 14 - 18, 2016



\$161 for the week,
\$133 additional children
\$34 per day, \$28 additional children
Registration will start February 1st.
Call 684-3314 for more info.

P.A. Day Activities

This program provides a variety of recreational & sporting activities for children 5 - 12 years on the P.A. Days.

Public P.A. Days: **January 15 & February 12** and
Separate P.A. Days: **January 22**

Fee: \$34/day, \$28/day additional children,
\$23.50/half day

- Time: 8:15 am to 5:00 pm
- Public Swim (dryland option available) 2 to 4 pm
- Children bring lunch & beverage

*Please register a minimum of 3 days in advance to avoid program cancellation.



Babysitting Services

January 4 to March 19, 2016 Note: Babysitting program cards may be purchased at the start of each session. This card will entitle you to Babysitting on the days you attend your class.

Fee: \$3.80 per hour per child.

NO REFUNDS FOR MISSED DAYS.

Monday to Thursday8:45 am to 2:30 pm & 4:00 pm to 8:00 pm
(last sign in is 7:45 pm)

Fridays.....8:45 am to 2:30 pm & 4:00 pm to 7:00 pm

Saturday.....8:30 am to 1:00 pm

Ages: 4 months to 8 years

Deluxe Members - Free

General Members
\$85 1st child per year
\$64 2nd child per year

Day Use Fees
\$6.00/hour 1st child
\$3.80/hour 2nd child



AQUATICS & FITNESS
Thunder Bay
Approved by Neuron

Appendix E: Lakehead University Research Ethics Board Approval Letter

Research Ethics Board
t: (807) 343-8283
research@lakeheadu.ca

December 2, 2015

Principal Investigator: Dr. Joan Chambers
Student Investigator: Leanne Bazdarick
Faculty of Education
Lakehead University
955 Oliver Road
Thunder Bay, ON P7B 5E1

Dear Dr. Chambers and Miss Bazdarick:

Re: REB Project #: 097 15-16 / Romeo File No: 1464924
Granting Agency: N/A
Granting Agency Project #: N/A

On behalf of the Research Ethics Board, I am pleased to grant ethical approval to your research project titled, "Eco-arts education: Connecting to the natural world through yoga and mindfulness".

Ethics approval is valid until December 2, 2016. Please submit a Request for Renewal to the Office of Research Services via the Romeo Research Portal by November 2, 2016 if your research involving human participants will continue for longer than one year. A Final Report must be submitted promptly upon completion of the project. Access the Romeo Research Portal by logging into myInfo at:

<https://erpwp2.lakeheadu.ca/>

During the course of the study, any modifications to the protocol or forms must not be initiated without prior written approval from the REB. You must promptly notify the REB of any adverse events that may occur.

Best wishes for a successful research project.

Sincerely,

A handwritten signature in cursive script that reads "L. Chambers".

Dr. Lori Chambers
Chair, Research Ethics Board

/scw

Appendix F: Parent / Guardian Information Letter and Consent Form

Faculty of Education

January 14, 2016

Leanne Bazdarick
955 Oliver Road.
Thunder Bay, Ontario
P7B 5E1

Information/Cover Letter

Dear Parent and/or Guardian,

The purpose of this letter is to provide information about an exciting and potentially significant research project I wish to carry out with your child. The project is entitled: *Eco-Arts Learning: Integrating Arts, Mindfulness, and Yoga in Ecological Education*. This qualitative study centres on an exploration of using yoga and mindfulness as a way of teaching children to love and appreciate the natural world. I am a Master's of Education student who has completed her Bachelor of Education in the concurrent program through Lakehead University. I am a yoga and dance instructor and enjoy spending time outdoors as a way of connecting myself with the natural world.

My research topics of foci are student wellbeing and holistic education in relation to environmental education through the use of mindfulness and yoga. I specifically focus on mindfulness and yoga practices in connection with the self and with the natural world. The framework that I will be using for my research centres child wellbeing as the priority, which is then followed by yoga and mindfulness practice as a way of executing self-care and wellness. The next level extends to connections from the self out into community and to place. The final level moves from place and wellbeing of self to a love and respect of the natural world through mindfulness and stewardship. I believe my research will demonstrate that using holistic education through mindfulness and yoga in order to encourage self-care and, in turn, Earth-care, will benefit children.

How can yoga and meditation in an outdoor setting assist children to connect with the natural world? In order to answer this research question, I am instructing the program run through the Canada Games Complex called Snowga. Though all children registered in the program will fully participate in all activities, I will gather data from only those children for whom informed consent to participate in the research has been provided. I will gather data by observing the participants while taking brief notes that focus on reading body

language, word choice, and facial expressions. After each session is complete, I will take time to review what was discussed and write more detailed notes of what I observed in journal form. I will be conducting group circle discussions with the children, asking questions pertaining to the topics that arise naturally in conversations. The children will have the opportunity to express their thoughts, opinions, and ideas through journaling, movement (yoga postures), pictures, poetry, dance, speech, or any other form of communication they choose. All forms of art and communication will be interpreted and recorded by the researcher. Photographs will be taken of any artwork, movement or poetry but the identities of the children and their faces will always be masked. All data will be interpreted and narrated by me.

There is no foreseeable harm associated with participation in my research. All data gathered through this research project plus my own qualitative data will be stored on a removable hard drive at a secure (locked) location in my supervisor's locked office at Lakehead University for 5 years, after which time, it will be destroyed. Only my supervisor and myself will have access to the raw data. Your child's anonymity and confidentiality as a participant in my research will be guaranteed, as far as possible, through the use of pseudonyms in the data analysis and reporting processes. In the case of children, both the child's and the parents/guardians' signed consent will be obtained.

Your child's participation in my research study is entirely voluntary. As a parent/legal guardian of a minor research participant, you and your child's rights include: the right to not participate; to withdraw at any time during the data collection phase without prejudice to pre-existing entitlements, and to continuing and meaningful opportunities for deciding whether or not to continue to participate; to opt out without penalty and to have any collected data withdrawn from the data base and not included in the study (until completion of the data collection phase of the study; if you choose to opt out, any data pertaining to your participation will be destroyed); to privacy, anonymity and confidentiality; to safeguards for security of data; to disclosure of the presence of any apparent or actual conflict of interest on the part of the researcher; and to a copy of the summary report. The results of this research will be used only for presentations, written articles and/or teaching lectures for other educators. A summary report will also be given to the Faculty of Education, Graduate Studies and Research Department.

If at any time, you have any concerns regarding the project, please feel free to contact me by email, lbazdari@lakeheadu.ca, or by telephone, (807) 472.5139 (cell); or contact my supervisor, Dr. Joan Chambers at joan.chambers@lakeheadu.ca or (807) 343-8935.

The plan for this study has been reviewed for its adherence to ethical guidelines and approved by the Research Ethics Board (REB) at Lakehead University. For questions regarding participant rights and ethical conduct of research, contact the REB at (807) 343.8283.

Your support as a parent/legal guardian and your child's participation will be a valued component to this proposed research. I would be grateful to have the opportunity to work

with your son or daughter in the “Snowga” program being offered through the Canada Games Complex. Thank you.

Sincerely,

Leanne M. Bazdarick
Master's of Education Student
Faculty of Education
Lakehead University



Faculty of Education

January 14, 2016

Leanne Bazdarick
955 Oliver Road.
Thunder Bay, Ontario
P7B 5E1

Lakehead University
Parent/Guardian Consent Form

Study title: Eco-Arts Learning: Integrating Arts, Mindfulness, and Yoga in Ecological Education.

I, _____, (parent/legal guardian name) have read and understood the accompanying information/cover letter, including the potential risks and benefits of the study. I hereby consent to the participation of my son/daughter in the research.

I understand that:

- My son/daughter may withdraw from the research at any point during the data collection period;
- My son/daughter may choose not to answer any questions;
- All information gathered will be treated confidentially;
- Following the completion of the project, all data will be securely stored for five years before being destroyed;
- A summary report will be made available to me by the researcher upon request; and,
- My son/daughter will not be identifiable in any publications or public presentations resulting from this research, unless I explicitly agree to have their identity revealed.

I also understand that the results of this research will be used only in the following:

Presentations, written articles and/or teaching lectures for other educators.
Summary report to the Faculty of Education, Graduate Studies and Research Department.

(Print Name)

(Signature)

(Date)

Please sign and return this form to the researcher. For further information concerning the completion of this form, please contact:

Leanne M. Bazdarick
Master's of Education Student
Lakehead University
Office: (807) 343.8935

Appendix G: Student Age Appropriate Consent Forms

Faculty of Education

January 14, 2016

Leanne Bazdarick
955 Oliver Road.
Thunder Bay, Ontario
P7B 5E1

Lakehead University
Student Consent Form

Study title: Eco-Arts Learning: Integrating Arts, Mindfulness, and Yoga in Ecological Education.

I, _____, have read and/or had explained to me by my parents the information about the research project. I have understood the information. I consent to participating in the research.

I understand that:

- I may withdraw from the research at any point during the data collection period;
- I may choose not to answer any questions;
- All information gathered will be treated confidentially;
- Following the completion of the project, all data will be securely stored for five years before being destroyed;
- A summary report or explanation of the research results will be made available to me by the researcher upon request; and,
- I will not be identifiable in any publications or public presentations resulting from this research, unless I explicitly agree to have my identity revealed.

I also understand that the results of this research will be used only in the following:

- Presentations, written articles and/or teaching lectures for other educators.
- Summary report to the Faculty of Education, Graduate Studies and Research Department.

(Print Name)

(Signature)

(Date)

Please sign and return this form to the researcher. For further information concerning the completion of this form, please contact:

Leanne M. Bazdarick
Master's of Education Student
Lakehead University
Office: (807) 343.8935



Faculty of Education

January 14, 2016

Leanne Bazdarick
 955 Oliver Road.
 Thunder Bay, Ontario
 P7B 5E1

Lakehead University
 Student Consent Form

Study: How doing yoga and mindfulness in the natural world (outside) helps me connect to the environment.

My parents/guardians have explained the research project to me. The researcher answered any questions I had. I _____ understand what it means to take part in the research and I choose to participate.

I understand that I may withdraw from the research any time I choose and I may choose not to answer any questions. I will talk to the researcher or my parents about withdrawing.

	(Print Name)	(Signature)
(Date)		

Please sign and return this form. This consent form will be given to the researcher. If you have any questions about completing this form please ask the researcher. You can contact her at:

Leanne M. Bazdarick
 Master's of Education Student

Lakehead University
Office: (807) 343.8935