Constructing Perspectives of Child-Nature Relationships in Early Learning Curriculum Frameworks

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Land Acknowledgement

This thesis was conducted at Mount Saint Vincent University (MSVU), which is located in Mi'kma'ki, the ancestral and unceded territory of the Mi'kmaq People. This territory is covered by the "Treaties of Peace and Friendship" which Mi'kmaq and Wolastoqiyik (Maliseet) People first signed with the British Crown in 1725. The treaties did not deal with surrender of lands and resources but in fact recognized Mi'kmaq and Wolastoqiyik (Maliseet) title and established the rules for what was to be an ongoing relationship between nations.

Most formal meetings on MSVU campus begin with a land acknowledgement of the unceded Mi'kmaq territory that we study, teach, and learn on together. Sections of my thesis looks at how colonized perspectives of the land separates children from nature. Not only is recognizing Indigenous territory a step in decolonizing our practices in education and research, but also participating in the active work of aiming to decolonize our own thought process is necessary. The process of my work on this thesis aims to decolonize the ways that I think about children's outdoor play and relationships with nature.

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Abstract

This research examines the perspectives of child-nature relationships in early learning curriculum frameworks across cultural contexts. Outdoor play is an increasingly important aspect of early childhood education for children's healthy development and learning opportunities, though children's engagement in nature play is less explored and nature is often artificially divided from children's lives by adults. Children's relationships with nature in the early learning and child care (ELCC) context in Nova Scotia is yet to be explored in-depth. The Nova Scotia early learning curriculum framework is compared to the Aotearoa New Zealand early childhood curriculum framework using reflexive thematic analysis to generate themes in understanding their constructions of child-nature relationships and their motivations for engagement with nature. The researcher's professional ELCC experience is used as an analytic research tool, which is informed by ecological systems theory and a common worlds lens which views humans and nature as inseparable from each other. From this analysis, the researcher learned that Nova Scotia and Aotearoa New Zealand demonstrate dichotomous motivations for environmental stewardship as a main approach to children's relationship with nature. Provocations and invitations are presented to ELCC stakeholders in Nova Scotia to reflect and shift their perspectives of child-nature relationships to move beyond stewardship practices and engage with more culturally responsive and inclusive approaches of engaging and belonging with nature in ELCC settings.

Keywords: child-nature relationships, environmental stewardship, common worlds, ecological systems theory, nature-culture separation, Nova Scotia, Aotearoa New Zealand, early learning curriculum frameworks

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Chapter 1: Introduction

On a warm, late spring day at a child care centre in Nova Scotia, a group of toddlers and preschoolers were gathered underneath the gazebo on their playground. Present with them were two early childhood educators. The children were gazing up at the nest that was nestled in the rafters with excited smiles on their faces, though some of the children were reminded by one of their educators to move away from the nest. “Look!”, one child exclaimed and pointed toward the fence, where an adult American robin was perched, chirping at the group of children. Suddenly, two juvenile robins jumped from the nest and hopped in an attempt to fly over the fence. Excited children who had not yet had many chances to see the birds lurched forward and were again reminded by their educator to give lots of space to wildlife. Some of the other children who had been viewing the birds in the nest regularly with gentle coaching from the other educator about space, did move forward but remembered to give the little robins their space to reach the fence.

Over the previous weeks, some of the children had been looking into the nest every few days, with the help of their educator picking them up to quietly peer inside. Their educator reminded them not to touch the nest and to give the birds space. These decisions were made so that the children had to opportunity to regularly observe wildlife, which was not always common on the pea-gravel covered playground. The children who regularly looked into the nest could tell you how much bigger the birds were now than when they first noticed the robin’s eggs in a nest settled above their play area. Other children on the playground mostly saw the adult robin birds flying to the nest with food in their mouths from a distance, as their educator decided that looking into the nest too often may disturb the robins. While each educators’ approaches were intended to be respectful to wildlife, their decisions impacted children’s opportunity to explore nature very differently. The separation between children and the natural world exists in our

social, emotional, and spiritual connections in the dominant Western society. My experience working as an early childhood educator (ECE) in Nova Scotia provided situations such as this that demonstrated a clearly human constructed divide between children and the natural world. Outdoor play is seen as an opportunity for children to connect with nature, though determining how this happens can be impacted through various decisions made by adults as is demonstrated by the two educators within this story.

Access to outdoor play is a fundamental contributor to the overall health and well-being of children's development (Outdoor Play Canada, n.d.), and in the context of Nova Scotia's regulated early learning and child care (ELCC) settings, access to outdoor play is regulated through provincial legislation. Ensuring that access to outdoor play spaces for a developmentally appropriate length of time is a requirement of the daily routine in regulated ELCC programs in the Nova Scotia Early Learning and Child Care Regulations (*Early Learning and Child Care Regulations*, 2020). Even though this is a legislated requirement, ECEs in the province still experience barriers in accessing outdoor play with children (Munroe & MacLellan-Mansell, 2013). The values associated with children's relationships with nature (child-nature relationships) in ELCC settings is an increasingly important area to explore to support solutions for barriers to outdoor play and the involvement of nature play.

Recently, nature-based play pedagogies have emerged as alternative approaches to mainstream ELCC practices in Canada. This emergence of nature-based programs reflects a perspective focused on raising the value of the outdoors and nature in learning spaces. Nature-based pedagogies take shape in several different forms, though the current dominant nature-based pedagogy in Canada stems from the Scandinavian concept of forest and nature schools, with the first of its kind in the country opening outside of Ottawa in 2007 (MacEachren, 2013).

The emergence of these programs reflects a perspective of nature that values the natural environment as a teacher, in the sense that the environment itself presents educational opportunities alongside the educator and the children, but these programs are often based in Euro-Western perspectives. This has been the dominant perspective in Canada, with nature-based programs only recently starting to acknowledge the cultural significance of Indigenous relations with their land on which these programs run (MacEachren, 2018; Child & Nature Alliance of Canada, n.d.). The connection between the natural world and humans, both adults and children, is of significant value within Indigenous cultures and a need for the recognition and inclusion of Indigenous land-based practices in Canadian nature-based programs has been identified as a way to begin decolonizing nature-based learning (MacEachren, 2018; Child & Nature Alliance of Canada, n.d.).

From this, an indication that a shift in perspectives of child-nature relationships is emerging in nature-based programs in the Canadian context (MacEachren, 2018; Lawson Foundation, 2019). However, the perspective that the ELCC sector in Nova Scotia has on the value of nature-based experiences and children's relationships with nature is still relatively unknown, despite the province's early learning curriculum framework encouraging educators to ensure that children have access to developmentally appropriate outdoor play spaces and natural materials (DEECD, 2018).

There is often no differentiation between what defines outdoor play and nature play, as these terms have been used interchangeably in the literature and provincial documents, with nature play used less frequently. To this end, it is important to examine the differences between them, as they are subjective, depending on one's perspective.

Outdoor play is a common term used to describe the play that takes place in broadly defined outdoor environments such as playgrounds or natural environments, from urban to rural settings, and involves the aspects of risk, challenges, and nature play (Outdoor Play Canada, 2022). On the other hand, nature play refers to the play that occurs within natural environments such as forests, nature trails, or green spaces like urban parks where children engage with items found in nature (Outdoor Play Canada, 2022). Based on these definitions, it can be argued that nature play cannot occur without children being involved in outdoor play or outdoor settings., however, outdoor play can occur without children being in natural environments (e.g., playing in fenced paved lots, pea gravel covered play areas, sports fields, and other spaces lacking natural elements). The inclusion of nature play within outdoor play's definition signifies it as a subcategory of outdoor play. MacQuarrie et al. (2015) argue that while there is a substantial amount of literature focused broadly on outdoor learning, there needs to be the same for nature-based learning. The terms 'outdoor play' and 'nature play' will be used interchangeably with 'outdoor learning' and 'nature-based learning' throughout this thesis. In this thesis I intend to explore the various perspectives of child-nature relationships within ELCC settings and how they are constructed in different cultural contexts to better understand how they impact children's engagement with nature.

Aim of Research

The aim of this research is to explore the perspectives held on child-nature relationships within ELCC settings and how these perspectives may vary across different cultural contexts. I aim to explore one overarching question, with two sub questions that will deepen the research. My overarching question is:

- How are child-nature relationships constructed in early learning curriculum frameworks across different cultural contexts?

My two sub-questions explore:

- What are the frameworks' motivations for children's engagement with nature?
- Is there or is there not a perspective of inseparability and relationality between children and nature in early learning curriculum frameworks?

For the purpose of this thesis, the perspectives that are based on children's relationships with nature will guide the discussion of various forms of nature-based experiences in learning, play, and nature pedagogies. Nature play is typically experienced in the outdoor setting therefore, researchers have occasionally grouped the two experiences of nature play and outdoor play together, making it challenging to understand if they're referring to outdoor spaces in natural environments or on manufactured playgrounds with minimal natural materials unless stated. From my personal and work experience, I am aware that some of the outdoor play settings (i.e., traditional playgrounds built mainly with steel or plastic) have not supported or encouraged children to connect with or take notice of nature in their surroundings. At the same time, I have observed children in these spaces seeking out opportunities to include the natural elements in their play through engaging with bugs, rocks, weeds, and birds. Their actions of reaching out to pull nature into their space indicated a greater need for the inclusion of nature in their daily lives.

Defining Nature & Impacting Variables

Defining nature is a challenging task, one filled with complexity and intersections of different perspectives. Nature is not only a physical place but also a greater phenomenon or concept (Warden, 2019) which is why it is essential that nature is first defined as to how it will be conceptualized in this work. Exploring different perspectives of nature as it relates to children

in ELCC settings is at the heart of this thesis. The idea of the natural environment as purely 'natural' may be a flawed perspective, as nature is affected in almost every way by humankind either directly or indirectly (Willis, 2011; Warden, 2019). The nature spaces that are described in this thesis includes a range of natural spaces from urban parks to rural trail settings and built environments such as playgrounds with natural materials. Sauvé & Orellana (2004) describe the environment as a social construct that emerges at the meeting of nature and culture, indicating that human relationships with the environment are defined through our social experiences and are culturally determined. This reflects Taylor's (2011) assertion that nature and culture are an inseparable entity that make up our common worlds of living in relation with each other; humans, the environment, and the living and non-living things in it. Based on these theoretical assumptions, nature will be defined in this thesis as an inseparable system of relationality between culture, society and the individuals in it, and the natural environment (Sauvé & Orellana, 2004; Taylor, 2011). This means that the relations between children, nature, and the culture in which they intersect cannot be viewed as separate from each other. Therefore, this thesis positions nature as both a physical environment and an intangible phenomenon (Warden, 2019).

Personal Connection & Research Positionality

To situate myself within the field of ELCC and my connection with nature-based experiences in play, I will describe my experience in engaging children with nature while discussing how my own perspective of nature has influenced my perspective on child-nature relationships. I have over three years of experience as an ECE and a program coordinator in a rural community in Nova Scotia. My perspective of nature-based play is that it is an important aspect of early learning because of the need for children to learn sustainable practices for our collective futures, as well as the studied benefits that nature connection provides for children's

health, well-being and learning opportunities. There is potential for ELCC programs to further embrace nature play in their outdoor settings because the NS (revised) Early Learning & Child Care Regulations (2020) requires that children have access to outdoor play for a developmentally appropriate amount of time. These outdoor spaces should be of high quality and include natural items and landscapes. Within the NS ELCF, high quality in ELCC environments involves the intentional planning of spaces and actions to reflect children's interests, needs, families, cultures, and communities (DEECD, 2018a).

Ensuring that children are engaging in outdoor play is a routine aspect of the daily program in a regulated child care centre (*Early Learning and Child Care Regulations*, 2020). Providing outdoor play opportunities for children is generally not a difficult thing to do, however my colleagues and I, along with other ECEs in Nova Scotia (Munroe & McLellan-Mansell, 2013) have experienced barriers to incorporating nature play into our programs. Specific to the centre where I worked, accessing opportunities for engaging with the natural world in play has been a significant barrier. Though the centre's community is relatively rural and near natural spaces that society dominantly perceives as 'wilderness' (Willis, 2011), the outdoor play space adjacent to the centre, which is where most of the outdoor play occurs, is primarily covered with pea-gravel and pavement. There are no trees or vegetation inside the fenced area, though there were several loose parts (open-ended) play materials such as manufactured boards and tires along with plastic materials such as toy cars, plastic animals, and three-wheeled trikes. The land surrounding the centre's outdoor play space was partially small, wooded areas and bogland. The children, therefore, were technically playing outside *in* or *close to* nature, but they were often not playing or interacting *with* nature, other than our ability to see, smell, and hear nature at a distance.

Changes to the centre's outdoor space were set to take place around the same time I was leaving my position, with the process of reinventing the playground in hopes of achieving a natural and sensory rich environment with unique opportunities for physical and risky play. Physical activity and risky play are natural aspects of the outdoor and natural environment. Risky play is a type of play that commonly takes place in outdoor settings and involves thrilling physical activity with the chance of becoming injured during the activity (Sandseter, 2009; Sandseter, 2010). Nature's relation with risky play is primarily seen as a setting for children to engage in risks during their play, as Sandseter et al.'s (2021) study revealed that children spending time in nature was positively associated with the amount of risky play they engaged in. My experience with children's risky play in an outdoor play space that is lacking natural landscapes and elements that can entice and challenge children has allowed me to observe how children seek opportunities for risk-taking when manageable opportunities are not presented. Without trees to climb, vegetation to hide in, or challenging tools and materials present, the children must try to find excitement by testing their limits on a smooth metal and plastic climber or attempting to climb and hang from the rafters of the gazebos which may result in injury. In fact, many injuries take place on manufactured playgrounds, with the majority of them being falls from equipment (Brussoni et al., 2015). The link between natural spaces and risk has been identified (Sandseter et al., 2021), and there are barriers to engaging this type of play in natural environments in terms of accessing nature.

In the first year of my career in the ELCC sector in Nova Scotia, I recognized that there was a need to extend children's learning and play with nature, so I looked for ways to incorporate nature into my pedagogical practice. I connected my observations of children trying to pull the grass, dandelions, and other plants from outside the fence into their play as a visual

representation of reaching out to nature because there were minimal opportunities to connect with it inside the fence. I aimed to take children on walks to a nearby forested path, hoping children would become interested in items found naturally in the environment that they could examine and play with, eventually igniting their thoughts and conversations about the greater environment and its well-being. I had hopes of the children collecting leaves, flowers, and pine or fir cones to bring back and add as materials to our classroom. My expanding knowledge on loose parts play inspired me to include natural items inside the classroom as they can be considered open-ended items with various uses.

Going on walks with children to natural areas did not occur frequently due to tight time scheduling, as the daily schedule revolved around the clock for the same snack, lunch, break, free play times each day that left short amounts of time to get out for a walk. When we were able to go for a longer walk, children collected natural items to bring back to the classroom. A significant difference between educators' perspectives of the use of natural items was demonstrated when children were back inside the classroom. I intended for the children to bring the items back into the class, discuss where their storage or display in our classroom would be (e.g., a basket on the shelf, on display on the windowsill, etc.), and for children to use them in their self-directed play. My colleague thought that it would be best to encourage the children to stick all their natural items on sticky, clear con-tact sheets for display to create an art piece to remember the walk with. Both ideas had an intentional purpose, but the length and depth of children's engagement with the event of the walk and the natural items were different. The natural items stuck to the con-tact sheets were displayed outside the classroom or too high inside the classroom for the children to have further engagement with that activity and the natural materials. The items that I insisted remain as loose parts play materials in the classroom were

used continuously as part of their imaginative play for the following couple of weeks. Pine cones and rocks were used in their dramatic play as pretend food in the kitchen, while other natural materials such as flowers, acorns, and twigs were involved in the children's art explorations and used as paintbrushes.

This example demonstrates the differences between what an educator may perceive as an authentic use of natural materials. When displaying the natural items on the wall as part of an art piece, children are then only able to experience nature by looking at it as an aesthetically pleasing addition to the physical space. When children can continuously interact with the natural items during their play through their senses and imagination, they can connect more deeply with nature because they have the opportunity to explore it up close, connecting through smelling, touching, hearing, and seeing the natural items that they would not have otherwise done with the items hanging high on the wall.

My approach of introducing nature play with children originates from my own childhood memories. The value of being outdoors has strongly impacted my lifestyle since my own childhood and has greatly influenced the decisions I make within my work in ELCC programs. My family often spent our weekends outdoors, either doing practical chores or recreational activities. We helped my father cut and pile wood to heat our home, tended to our vegetable garden, and camped across the Maritimes in the summers. My father's work as a forestry technician provided opportunities for me to join him at various parks, witness the building of trails in provincial parks, and see conservation practices up close. My family's value of the natural environment as a resource, a respected and living entity, and as a fundamental setting for life from childhood to old age, has significantly impacted the way in which I understand how humans are constantly in a reciprocal connection with nature.

As an adult, I value my connection with nature to calm my mind through hiking, camping, and learning how to grow my own food, herbs, and flowers. The personal connection to nature that my family and I have built can be further explained through Bronfenbrenner's (1979) ecological systems theory based on the relationships that interact with one another to impact the child's development. Though this theory is further discussed within the literature review, it is important to note that my parents' value of ensuring that their children regularly played outside during childhood reflects the impact of the cultural ideologies of their rural community. The interactions between actors of the microsystem are labelled as the mesosystem which supports the explanation of the connection between the impact of cultural attitudes of nature on my parent's high value of outdoor engagement for their family, and my strong value of aiming to connect children with nature in the classroom. As an ECE, I had attempted to understand how to utilize nature and my relationship to it as an element of play in extending children's thinking about their community, but the process of implementing access to nature play experiences was slow and I experienced a few barriers.

As previously stated, I experienced and perceived several barriers while attempting to engage children in nature-based experiences. The barriers consisted of my own personal feelings and those of other colleagues, such as the apprehension to go to wooded areas because of the perceived risks for safety when taking children off-site from the centre. Barriers exist in the sense of accessing natural places, but they are also created by social barriers set up by educators, even though their intentions may be out of respect for the natural environment. I want to come back to the story of children's separation from nature that I began this thesis with to highlight the differences between educators' perspectives of child-nature relationships and how their perspectives can impact children's engagement with nature.

One spring season, my colleagues and I considered ourselves lucky as an American robin bird had chosen the rafter in our playground's gazebo to build a nest and hatch her young birds. Initially overjoyed by this example of wildlife living closely to our centre, we helped the children see inside the nest, watched for changes, and engaged them in conversations about homes, beds, babies, and birds. A disruption to this pedagogical encounter started when the eggs hatched, and a colleague suggested that having the children close to the nest would be harmful for the birds, while other colleagues thought this would be an opportunity for the children to learn more about respecting animals' space while still viewing the life cycle closely. While both perspectives were valid, they differed from each other and ultimately caused division in how the educators would go forward in the shared play space. When the young robins eventually left their nest all the children were able to watch them attempt to fly over the fence, but their educators' perspective changed the depth of information some of the children had in accessing first-hand experiences and learning about the life of the robins. This is a realistic image of our separation from nature, that can incidentally be created by ourselves as a human construction and unnatural division with the rest of our shared world. The difference between educators' perspectives on children's connection to nature also contributed to how nature should be engaged with in their pedagogy. In this situation, the children's full engagement of learning with the robins was changed, as some were able to continue watching the birds hatch over the weeks, while some children did not. Their access to a particular nature experience depended on the educators' decision of how child-nature relationships should present in their pedagogy.

While educators' perspectives of children's relationships with nature in their practice may vary, there are some situations that are out of our control as educators. Weather-appropriate clothing for the outdoors became a barrier if children arrived unprepared, making any duration of

time outside uncomfortable. Sometimes even children's unfamiliarity with wearing proper outdoor clothing or being outdoors for longer lengths of time became an obstacle. In addition, Nova Scotia's weather is everchanging and unpredictable, so ensuring that all children were prepared for different types of weather could be challenging. The daily schedule was a significant barrier as well, as the requirements of snacks, lunch, rest time, and educators' breaks were to be respected, often making it difficult to leave the centre or get out to the playground for longer lengths of time. Barriers to connecting with nature through outdoor play has been experienced through scheduling and other structural barriers such as low numbers of staff or process barriers like educators' attitudes regarding going outdoors.

Munroe & McLellan-Mansell (2013) found that First Nations educators in Nova Scotia experienced similar barriers to engaging children in outdoor play, reflecting the issues in accessing the time outdoors needed to engage in nature play. Their reports of barriers regarding unexpected weather or safety concerns because of being short-staffed (Munroe & McLellan-Mansell, 2013) were quite similar to my own experience in a child care centre. The barriers experienced by ECEs to engaging in outdoor and nature play are likely still occurring in some capacity, but there is support in the form of processes and encouragements within the literature and the resulting recommendations (Munroe & McLellan-Mansell, 2013; Coe, 2016). ECEs described barriers they *experienced*, but the researchers' suggestion to look at the situation of these experiences as *perceived* barriers supports a potential shift in thinking towards solutions (Munroe & McLellan-Mansell, 2013). When barriers are looked at through a problem-solving process, they can transform to *perceived* barriers and may be better able to overcome (Munroe & McLellan-Mansell, 2013). Each educators' perspective of child-nature relationships may contribute to how they view the value of getting outdoors and finding solutions to their obstacles

in connecting children with nature on a regular basis. More knowledge is still needed within the context of ELCC programs in Nova Scotia on the general perspective of child-nature relationships, and how this influences the approaches used to gain access to nature play in ELCC programs throughout the province.

Nova Scotia's Early Learning Curriculum Framework

The Nova Scotia early learning curriculum framework (NS ELCF), *Capable, Confident, and Curious* was officially introduced in 2018. (Nova Scotia's Department of Education and Early Childhood Development [DEECD], 2018a). Since its introduction, ECEs have been participating in module workshops to learn about the curriculum, with one of the first modules focusing on their image of the child. The image of the child refers to an educator's image of children as influenced by their unique background of knowledge and personal experiences (DEECD, 2018a). Based on my own participation in the module workshops, my team and I were encouraged to share descriptive words of how we perceive children as they are, then decide together what our shared image of the child will be to guide us in our pedagogical practice. This process of sharing our images of children guides our practice because as we think, so do we act, and a shared image of children supports a collective practice. Thus, meaning we will care for children based on how we perceive them, which has the potential to be a widely interpreted concept. Even so, the NS ELCF encourages educators to view children as "curious, creative, full of potential, capable and confident" (DEECD, p. 3, 2018a). This process of creating a personal and shared image of the child and implementing its actions of caring for children into practice is rooted in individual and group perspectives guided by a document produced by a provincial government department.

To this extent, the NS ELCF has a considerable amount of influence on how an educator's pedagogical practice takes shape while they are guided by the principles within the document, such as the image of the child. The values presented in the NS ELCF concerning children's relationships with nature would then be interpreted by educators in much the same way; based on their experiences and prior knowledge. As Sauvé & Orellana (2004) state, "the values that govern our relations with the environment are the same that govern our relations with each other" (p. 5). Related to the NS ELCF, what is presented in terms of a child-nature relationship within the document may also govern our actions with each other and the living and non-living things we share the natural environment with. Exploring how framework documents construct child-nature relationships and how they should be supported is an important foundational aspect in understanding the perspectives of child-nature relationships in ELCC programs in Nova Scotia.

Ecological systems theory (Bronfenbrenner, 1979) supports the explanation of how my image of the child is influenced by the interactions between the systems of my immediate community and the greater society. My image of the child was heavily influenced by my previous experiences of nature play as a humbling and joy-filled experience from my childhood, but also by the positive descriptions of children within the NS ELCF. Therefore, my image of the child is grounded in the perspective of children's relationships with nature as a necessary component to their well-being throughout life, but also a relationship that acknowledges how children's lives are interrelated with nature in complex ways. Microsystemic relations between my family's values combined with the greater impact from socio-cultural values in the NS ELCF reflect the impact that the top-down process of the macrosystem's cultural ideologies and microsystemic relations have made in forming my personal image of children and their

relationship to nature (Bronfenbrenner, 1979). My image of the child views children as playful, capable, investigative, and relational beings, whose well-being is interdependent with their community of life, consisting of humans, non-humans, and the environment. My image of children will be reflected in this thesis and ground my understanding of their relationships with nature.

This thesis will reflect a perspective that values play with nature as an important core component in early learning as I describe the known benefits of nature-based experiences for children's health, well-being, and learning. I will explore how child-nature relationships are constructed in early learning curriculum frameworks and ask further about what frameworks' motivations are for children's engagement with nature and if these perspectives have a sense of inseparability or relationality between children and nature.

To begin, I will elaborate on the theoretical assumptions contributing to the definition of nature in this thesis, and how they act as a guiding lens for the research. The long-standing focus of the literature concerning children's connection with nature will be briefly discussed. Various perspectives on human-nature relationships will be articulated as to how they contribute to the construction of child-nature relationships in early childhood education programs. Post-humanist perspectives on nature stewardship within pedagogies will be explained, as they challenge the dominant approaches to early learning involving nature-based learning. More specific examples of global and Canadian perspectives of child-nature relationships in various programs will be explored to illustrate the current dominant approaches of nature play for young children and the contextual perspectives that guide them. The context of the ELCC sector in Nova Scotia and what is known about their perspective on child-nature relationships will be examined and gaps in the literature will be identified and connected to my research questions that guide this thesis. The

methods take a case study approach with two early learning frameworks to be compared on their constructions of child-nature relationships: the NS ELCF and the Aotearoa New Zealand Early Childhood Curriculum (ANZ ECC) framework. The frameworks are examined using a reflexive thematic analysis and themes are generated from the data to support the exploration of child-nature relationships in both frameworks and provide recommendations for the ELCC sector in Nova Scotia.

Chapter 2: Literature Review

Much of the literature on children, nature, and the programs that connect them has focused on children at the school age level (Bentsen & Jensen, 2012; Coe, 2016; Andkjaer, 2012; Asfeldt et al., 2020), though, in the past several years, research focusing on nature-based experiences in early childhood settings from various perspectives have emerged (Taylor & Guigni, 2012; MacQuarrie et al., 2015; Ernst & Burcak, 2019, Weldemariam et al., 2017; Coe, 2016). Louv's (2005) novel, *Last Child in the Woods,* inspired a movement to reconnect children with nature that further provoked research in better understanding how children's connection with nature is beneficial to children's lives (Coe, 2016). Research regarding the movement of forest schools across Scandinavian countries, the U.K., Canada, the USA, and other dominantly Western countries have engaged with the idea of outdoor and nature schools as an alternative to mainstream forms of early learning and education (Bentsen & Søndergaard Jensen, 2012; MacQuarrie, 2015; MacEachren, 2018; Ernst & Burcak, 2019; Harper & Obee, 2021). Forest schools spend significant amounts of time engaged in outdoor play, which involves a considerable amount of risk in children's play.

Literature regarding risky play identifies different categories and characterizations of children's risky play which commonly takes place in outdoor settings, especially in the natural world (Sandseter, 2007; Sanseter, 2009; Brussoni et al., 2017; Harper & Obee, 2021; Sandseter et al., 2021). The topic of risky play has been a significant area of the literature on outdoor play which has focused on encouraging educators and policy to outweigh the need to prevent injury in favour of the benefits gained for children's healthy development (Sandseter et al., 2017). Risky play is a significant component of children's relationship with outdoor play and nature, but historical, social, and cultural connections are also involved. Another perspective that will be discussed is the view that children's relationships with nature should not necessarily be viewed

as reconnection because they already live in worlds where they are constantly interrelated with the natural environment (Taylor, 2017). However, society has distanced ELCC from nature through the colonialization of our approaches to child-nature relationships in ELCC settings over time. Nature is closer than we take notice of, but this requires a shift in human narratives (Willis, 2011) and attention towards incorporating more time outdoors in any capacity.

In October of 2018, the Lawson Foundation in Canada held a symposium on advancing outdoor play that presented the need for a shift in thinking for ELCC programs to include longer, repeated, and engaging time spent in outdoor play (Lawson Foundation, 2019). The need for this paradigm shift is reflective of both the knowledge that children have been separated from nature by society (Louv, 2005) and that there are strong leaders encouraging others to create accessible opportunities for children to access quality outdoor and nature play experiences. These perspectives have drawn attention to the beneficial aspects that nature can support in children's learning and development, environmental stewardship as a dominant approach in pedagogy with nature, and the further understanding of child-nature relations beyond the notion of stewardship and settler-colonial practices. This call for a shift in thinking to enhance outdoor play emphasizes the goal of this thesis because understanding the contextual perspectives on child-nature relationships is needed to advocate for perspectives of child-nature relationships that seek to resist colonized engagements with nature and ourselves.

Theoretical Assumptions

The lens through which this literature review is written is a combination of Bronfenbrenner's ecological systems theory (1979), a common worlds approach (Taylor & Giugni, 2012; Taylor, 2017; Nelson et al., 2018; Taylor et al., 2021), and Sauvé & Orellana's (2004) interrelated spheres of social and personal development. Bronfenbrenner's (1979)

ecological systems theory is applied throughout the literature review to better understand how the complex relationships between greater cultural attitudes of nature within a particular cultural context can contribute to educators' images of child-nature relationships. Common worlds approach (Taylor & Giugni, 2012) is utilized to better understand the approaches to child-nature relationships and the relationality between humans, culture, and nature. Sauvé & Orellana's (2004) interrelated spheres of social and personal development are framed throughout this literature review. The spheres consist of the environment, the others in society, and the self that realize the environment is an essential component of life for social and personal development (Sauvé & Orellana, 2004) and are utilized here to support the explanation of child-nature relationships constructed as fundamental aspects of early childhood education.

There are differences between the binary aspects of stewardship pedagogies for nature play that encourage children to care about the environment as a separate part of the world in need of help, and a common worlds pedagogy that includes cultural and historical aspects of nature in children's learning (Nelson et al., 2018). This may be due to an artificial divide placed between children and nature when we learn to take care of nature, without understanding how humans can be connected to it through more than just our dependency to live off nature's resources. Willis (2011) argues for alternative narratives to the dominant discourse of nature as an untouched wilderness, since there is no pure nature within the Anthropocene (Taylor in Kummen et al., 2020) under human superiority and exceptionalism. Determining the difference of perspectives between contexts could provide insight into how child-nature relationships are constructed in different cultural contexts. Understanding the differences or similarities could help to inform the ELCC sector in Nova Scotia in rethinking their construction of child-nature relationships. This potentially ensures that the more-than-human world and the complex and inseparable social,

cultural, and historical relations between them are fundamental aspects of the curriculum. Through the lens of Bronfenbrenner's (1979) ecological systems theory, we can understand how these foundational relations work to directly impact children.

Ecological Systems Theory

According to Bronfenbrenner's (1979) view of child development, the ecological systems theory explains that our cultural attitudes or ideologies within the macrosystem are involved in a complex web of interactions that impact the child's experiences. Greater structures of the child's environment are in the exosystem; the governing educational bodies, family economic status, and health services that directly relate to cultural attitudes. The microsystem is impacted by these ideologies, and involves the child's family, peers, school and care settings, while the mesosystem is the interactions that occur between those in the microsystem. Each aspect of the environment within this theory impacts the child's experiences through the complex web of impacting interactions, depending on where the child lives. Global perspectives of child-nature relationships would therefore be different depending on where a child's family is located or could become more complex if they move to new locations with differing cultural attitudes on the value of nature. Common worlds may extend these relationships further through focusing on the interactions between more than just human actors within these worlds or systems impacting the child's progression through learning.

Common Worlds

In recent years, humanity has theoretically entered a new geological age referred to as the Anthropocene, where humans are considered to have the biggest impact on the earth (Taylor, 2017). Post-humanist literature regarding ELCC has engaged in rethinking how children experience their relationship with nature, especially through the frame of common worlds approaches (Haro Woods et al., 2018; Nelson et al., 2018; Taylor, 2017; Taylor et al., 2021).

Common worlds resists the separation between nature and culture by focusing on learning *in* and *with* the environment, remaining collectively oriented, focusing on the relations between humans and all living and non-living thing in the world (known as the more-than-human world), and seeks to break down colonial barriers through collaboration with Indigenous peoples (Taylor et al., 2021). Taylor (2017) argues that there is an urgent need for educational practices that resist humanist perceptions of our relationships with the natural environment as separate and should instead be viewed as an entangled web of interdependent relations between humans and more-than-human others. The concept of common worlds stems from Latour's (2004) common worlds schema that resists the division of nature and culture. Taylor and Giugni (2012) draw from Deleuze and Guittari's (1987) work, when describing that common worlds act as assemblages where complex interactions between human and more-than-human actors actively and collectively engage together. Common worlds contributes to disrupting colonial practices by drawing on feminist scholars of both Indigenous and non-Indigenous cultures in considering alternative notions of ELCC spaces and caring with the land (Haro Woods et al., 2018).

Common worlds is then a supportive concept to utilize because of its post humanist lens in de-centering the child from the main focus (Taylor, 2017) as it urges us to step back from focusing on the well-being of one part of an interdependent system to better engage with the whole. When nature is perceived to be part of culture in ELCC settings, our interaction with nature becomes reciprocal and focused on place-based learning with nature (Lawson Foundation, 2019).

Interrelated Spheres with More-Than-Human World

The interrelated spheres of social and personal development (Sauvé & Orellana, 2004) finalize this theoretical lens with a clear point to the importance of our relations with the greater environment as an essential component in our reciprocal well-being. The spheres are similar to

the ecological systems model in that they are also represented as concentric circles. These concentric circles hold the sphere of the self at the center where one's identity is constructed. The sphere of others, which is our relations with others in society, wraps around it. The outer most circle represents the sphere of the environment, which is our relations with all other things in the shared world we inhabit (Sauvé & Orellana, 2004). When one component of the interrelation changes the rest may change as well (Sauvé & Orellana, 2004). The interrelated spheres of social and personal development support further engagement with child-nature relationships through viewing the interrelated environmental and social components in our lives as essential in constructing our identity and therefore our perspectives (Sauvé & Orellana, 2004).

In aligning the ecological systems model (Bronfenbrenner, 1979), common worlds' values (Taylor & Giugni, 2012), and the interrelated spheres (Sauvé & Orellana, 2004) there is an indication that relationality between humans, culture, and nature are core concepts. These three concepts combined highlights the importance of relations between humas and the more-than-human world in our shared world and how macrosystemic processes impact our perspectives on these relationships.

Benefits of Nature for Risky Play and Developing Skills

Various studies identifying the benefits for children's health, well-being, and learning when connecting with nature describe the role that nature has in supporting children's process of growth (Ernst & Burcak, 2019), as well as their potential for pro-environmental attitudes in the future (Cheng & Monroe, 2012). While nature-based play has appeared as a new focus in ECE settings, unstructured play within natural outdoor spaces in childhood is not a new phenomenon and has likely always occurred. What has made nature-based play and approaches to pedagogy appear novel is that children have had less opportunity to engage with nature at home or in early

childhood settings in recent decades because of modern changes in society (Louv, 2005). The reasons for children's lack of engagement with nature may be due to barriers in getting outside or possible societal values and perspectives of nature that continue a narration of separation between children and the natural world (Munroe & McLellan-Mansell, 2013; Louv, 2005; Willis, 2011). Within the literature regarding nature play, outdoor education, and nature pedagogies, nature is often perceived or described as a resourceful tool and setting to use in learning and benefitting the child's overall development.

Using nature as a resource has been perceived as 'good practice' as it allows for a variety of risky play opportunities and the nature setting can take on the role of the educator, through the flow of the changing seasons and natural materials available (MacQuarrie et al. 2015). Thus, meaning that nature can be viewed as a valuable component to children's learning and development. For example, Ernst & Burcak (2019) found that when children enrolled in nature-preschools were engaged in nature play, it supported a deeper sense of curiosity in learning, creative thinking that is fluent and articulate, the self-regulation that is needed to foster resilience, and the overall development of executive functioning skills. Their findings provide positive examples of the benefits to children's learning when participating in nature-based programs and utilizing nature as a setting and educational resource in comparison to children enrolled in mainstream or traditional forms of ELCC (Ernst & Burcak, 2019). In societies where traditional methods of education prepare children and youth for the workforce, it may seem unnecessary for children to learn in the natural setting where their future careers may never take them. However, the findings in Ernst & Burcak's (2019) study may suggest that nature play supports children's learning and skill development in other areas of their life.

Ernst & Burcak's (2019) study suggests that learning in and with nature may support children outside of the natural environment. The methods employed to explore the influence that nature play has on resilience, creative thinking, curiosity, and executive functioning skills used materials that were not typically found in nature settings, such as manufactured toys or technology-based activities (Ernst & Burcak, 2019). The suggestion that the skills learned in nature-based programs can be utilized elsewhere may be appealing to parents searching for a particular ELCC program, but it is important to question why this notion of skill transference is seen as a valuable feature of nature play. The importance of ensuring the transference of skills learned in nature-based programs to 'regular' life or away from natural settings reflects an understanding of human life and society as separated from nature. However, it can be argued that the ability to transfer these skills learned in a nature-based program to other structured areas of life would not provide higher value to children's participation in nature play if the perspective of human's relationship with nature is viewed as inseparable from the natural environment (Taylor, 2017).

Risky play was previously mentioned as being one of the beneficial opportunities that nature settings can provide for children. Defined as exciting physical activity with the potential for injury that commonly takes place in outdoor settings, risky play has been categorized and characterized within the literature (Sandseter, 2007; Sandseter, 2009). Sandseter (2007) identified six categories of risky play: 1) play with great heights, 2) play with high speed, 3) play with dangerous tools, 4) play near dangerous elements, 5) rough-and-tumble play, and 6) play where children can get lost. Sandseter (2009) later identified two characteristics that applied to each form of risky play which are the environmental characteristics of the play space, including the educators, and the individual characteristics or how the child carries out their play. Much of

the previous literature described risky play with children aged four and up. To extend the knowledge on young children's risky play, Kleppe et al. (2017) aimed to characterize one-to-three-year-old children's risky play. Their results suggested that there are two more categories of risky play identified with this age group. They are: 7) play with impact, where children repeatedly crashing into another surface or object for enjoyment, and 8) vicarious play, where children in this younger age group watch others engage in different forms of risky play and express enjoyment.

The literature on risky play and outdoor spaces often describes nature as a diverse and supportive setting for risky play to occur within the landscape and natural elements (Sandseter et al., 2021; Brusson et al., 2017). Brussoni et al.'s (2017) study revealed that when the ELCC outdoor play space was modified with more natural elements and strategically planted vegetation, the quality of the space increased with significantly positive effects on children's, play, social behaviour, and mental health, though there was a decrease in their physical activity. A decrease in physical activity does not mean that children are not engaging in risky play, as Sandseter (2007) and Kleppe et al. (2017) identified that play with dangerous tools, play near dangerous elements, and vicarious play are forms of risky play which do not necessarily involve a significant amount of physical activity. Nature as a setting for play includes risky play but this does not indicate that nature should only be considered as the backdrop for children's activities.

Brussoni et al. (2017) did not find a change within children's risky play before and after their addition of natural elements to the child care centres' outdoor play spaces and suggest that their findings are more closely related to nature play rather than risky play. Sandseter et al.'s (2021) study revealed that children spending time in nature was positively associated with the amount of risky play they were engaged in, which slightly contrasts Brussoni et al.'s (2017)

results. However, Sandseter et al.'s (2021) study included a diverse range of ELCC centres' outdoor play spaces in Norway, with some spaces having forested and natural terrain, and Brussoni et al.'s (2017) research was conducted with two ELCC centres in Vancouver, British Columbia with added natural features. This difference between risky play and nature in ELCC contexts indicates that while risky play is a significant and beneficial component to children's outdoor play, children's engagement with nature is more diverse than participating in only risky activities and there may be cultural differences associated with it.

The outdoor space, specifically spaces with natural elements have been demonstrated as settings for risky play. ELCC programs that take place primarily in outdoor settings, such as forest and nature schools would then provide significant opportunities for risky play. Harper and & Obee (2021) identified in their research on how risky play is defined by forest school practitioners in that children were viewed by their practitioners as competent in risky play because they were trusted to be aware of their body and the potential harm that could result from their actions, even though they were adequately supervised. Practitioners trusting children to be capable to engage in manageable risk reflects a perspective of child-nature relationships that views children as competent to navigate the natural world independently. The studied benefits of engaging in outdoor and nature play such as risky play opportunities and cognitive skill-building demonstrates a perspective that focuses on the well-being of the child and their healthy development, though this perspective of nature in the context of early learning may reflect a one-sided view that centres on the benefit for the child, rather than their greater connections to community, environment, and relationships.

Perspectives of Human-Nature Relationships

Nature can be perceived differently depending on the context (Andkjaer, 2012) and human-nature relationships are culturally determined through social experience (Sauvé & Orellana, 2004). Generally, in North America the perspective of nature is dominantly rooted in Euro-Western outlooks that highlight the adventurous aspects of wilderness, viewing it as a challenge to be overcome and conquered by humans (Willis, 2011). Before this settler-colonial view was a dominant perspective, Indigenous groups have been raising their children with spiritual and cultural connections with land for millennia. Indigenous people historically hold long-standing spiritual and cultural ties to their land. The United Nations (n.d.) defines Indigenous peoples as "inheritors and practitioners of unique cultures and ways of relating to people and the environment" who have "retained social, cultural, economic and political characteristics that are distinct from those of the dominant societies in which they live". A pattern of dualistic thinking takes shape in the North American perspective of human-environment relationships in the sense that nature, specifically the untouched and pristine wilderness, is thought of as either to be conquered or as a relaxing escape from the rest of society (Willis, 2011). Both perspectives keep humans separated from the natural world because they suggest that humans retreat to nature or journey to nature, ignoring the constant presence that it has in our daily lives.

Nature-Culture Divide

The perspective of humans and the natural environment being separated entities drives Louv's (2005) description of his term 'nature-deficit disorder' that positions children in modern society as becoming less connected to nature and experiencing more behavioural problems. While Louv's (2005) term is not a formal diagnosis nor does it fully cover the issues concerning environmental sustainability in education, it calls to attention a significant need for motivating children, families, education, and early learning practitioners to move towards a lifestyle that is

much more deeply immersed with nature. Relative to Louv's (2005) concept of re-connecting with nature, Willis (2011) argues for the need of re-storying our construction of nature. Using the concept of the narrative self, Willis (2011) articulates that along with the degree of agency involved, individuals use stories to

> '…understand their experiences, give meaning to their lives, make decisions about what to do and come to identify their very selves with the stories that they and others tell about who they are' (p. 93).

Willis (2011) discusses that re-storying our connection to wilderness and how it is perceived opens multiple avenues for new discourses and ways of being that place value on our connections to wilderness and the appropriate practices needed to sustain it. A re-storying of human's narratives on their relationship with nature is an urgent obligation in ELCC. Ritchie (2020) argues that as our world changes, our educational values must change along with it. Child-nature relationships have long been viewed through separation to reconnection stories such as Louv's (2005) push for gaining back what has been lost for children's childhoods, except that we were never truly separated, as our actions still impact the environment through our interrelated systems of being.

Reconnecting children to nature has become a popular concept in delivery models of nature-based learning or ELCC, but proposing a reconnection implies that humans can be viewed separately from nature. Other perspectives such as the common worlds approach on human-nature relationships aim to further the notion of reconnecting children with nature, and describe children's relations with nature as collective, inseparable, and intertwined (Taylor & Giugni, 2012). This meaning that children were never disconnected from nature because our world and the more-than-human world are intertwined, and it is the complexity in our relationship with

nature and the demands of the greater society that evades us from engaging with each other (Taylor & Giugni, 2012). This divide is artificial, as macrosystemic values have shifted away from valuing childhoods that are inclusive of large amounts of time spent outdoors in natural areas. Disrupting the divide that is commonly set between humans and the more-than-human world could support a further understanding of how child-nature relationships could be better perceived in ELCC settings. Louv's (2005) push for reconnecting children with nature is no longer the perspective needed to guide children's relationships with nature because they are already complexly entangled, and our collective relations, instead, need to be acknowledged to be better understood (Kraftl et al., 2020). The perception that we have of our lives in relation with nature may have ties to the context we live in (Andkjaer, 2012), as different cultures and individuals hold nature in different forms of value through their social experience (Sauvé & Orellana, 2004).

Parents' values of nature can determine their child's access to nature connection. Cheng and Munroe (2012) found that children's connection to nature was comprised of several factors of enjoying experiences in nature, having empathy for living creatures, and experiencing a sense of oneness and responsibility towards nature. Their study also revealed that the closer a family lives to nature, the more access is available for play in natural settings which predicts a stronger connection to nature (Cheng & Munroe, 2012). This was also surmised to be in congruence with families' values on nature, as parents decide on the location of their home (Cheng & Munroe, 2012). The decision of a where a family resides directly impacts the construction of the child's microsystem, which also may be impacted by macrosystemic mechanisms of cultural attitudes influencing the parent's decision to live close to nature (Bronfenbrenner, 1979). Though this situation is more complex than a direct influence between the cultural values and the families'

decided home location, as other impacting factors such as economic income, housing development and availability, or the location and terms of parents' employment may impact where a family lives. Cheng & Munroe's (2012) study portrays the insight of how child-nature relationships may be impacted by availability of natural spaces and the contextual perspectives that support or hinder its availability. Parental influence within the child's microsystem interacts with other components, such as the school setting.

Parents will ultimately determine for young children what activities are acceptable and safe for them to participate in. The type of acceptable activities determined by parents could vary across cultures which is evident in the next example. In a book written by Linda Akeson McGurk entitled, *There's No Such Thing as Bad Weather: A Scandinavian Mom's Secret for Raising Healthy, Resilient, and Confident Kids* (2017), she recounts the cultural differences between her hometown in Sweden and her new home in rural midwestern USA, regarding raising children in the outdoors. She describes the difference between safety in both cultures. Upon moving back to Sweden with her two young daughters, her eldest daughter's school stays open during a snowfall and the teachers take their afternoon classes outside to sled down the hill. McGurk recalls the school in the USA as much less apt to play outdoors in cold weather. McGurk (2017) writes:

> "Had we been in Indiana on a day like this, it's a stretch to think that Maya's school would have even been open. It's even less likely that the kids would have been outside for recess, since that might have caused them to get wet or cold, or to slip on the black top" (p. 64).

This simple example of the difference in weather safety precautions for children highlights that educators, school boards, and other governing bodies across cultures may have different ideas about what safety looks like for children. It also reveals a glimpse of the differences in how

nature is valued in the educational settings in different contexts. The literature suggests that there is a contextual difference in the cultural values of nature from the macrosystem that impacts the microsystem's interactions between educators' value of engaging children with nature and parents' decisions on where they live and where their children attend school or receive care (Cheng & Munroe, 2012). These contextual factors within either the exosystem, such as the Indiana school board's image of safety during snowfalls, and the microsystem, like teachers and parents differing opinions on children playing in snow or needing to complete the required schoolwork inside, may be influenced by greater mechanisms such as the cultural attitudes on the importance of outdoor play (Bronfenbrenner, 1979). I am in agreement with Willis's (2011) push for re-storying our narratives with nature and will discuss alternative discourses on child-nature relationships to explore how they are perceived in different contexts and how they represent their approach to connecting children with nature in either ELCC or school settings. It should be noted that there is variance in the settings that are discussed with nature-based programs, ELCC programs, and school-based programs being explored throughout the literature.

Expanding Nature Stewardship Perspectives

One such discourse that is an alternative, though not a novel perspective of human-nature relationships, is the common worlds approach to early childhood education which was previously discussed as part of the lens that guides this thesis. Initially, this approach was conceptualized as a framework to think about how inclusion in early childhood education could be expanded and improved to involve the relations of children and the more-than-human world together (Taylor & Giugni, 2012). Essentially, a child's common world is described as the interacting actors and materials in their immediate environment involved in complex relations with each other (Taylor & Guigni, 2012). Aligning with Willis' (2011) urge for humans to re-story their narrative with wilderness, common worlds approach aims to challenge the dominant

Western view of nature as a separate entity and think of humans and nature as inseparable through acknowledging their relations and the power dynamics between them. This approach supports the process of decolonizing our relationships with nature because it aims to break down settler-colonial practices that dilute our relations with the land and ways in which we learn about it (Taylor et al., 2021). Understanding the power dynamics in relational common worlds is useful as it supports the early childhood environment to play and learn with nature while remaining based in reality (Taylor & Guigni, 2012), and avoid entering into pedagogies that unnecessarily shield children from realistic aspects of the world like human impacts on our environment.

Stewardship practices in ELCC are vitally important during the Anthropocene to support children's understanding of human impacts on the environment and how to protect it. Nonetheless, nature stewardship in ELCC may lack the necessary components of recognizing the collective relationships between cultures and nature because of their theoretical influences rooted in humanism (Taylor, 2017). Humanist approaches in nature stewardship position the environment as a separated entity to be learned *about*, rather than *with* (Taylor, 2017), which would only afford the child and educators as having the agency to attempt to change ecological issues for the purpose of their own benefit rather than for the collective system of the whole environment. That is a heavy concept to be placed on children who are beginning to observe and make sense of their immediate environments. Common worlds presents the opportunity for educators and children to be collectively oriented in thinking and learning along with the environment, both natural and not, to disrupt the separative barrier society has placed between us (Taylor et al., 2021). Approaching sustainability issues with children does not need to be placed as a fault or burden-filled process but thinking with common worlds can support the collective process of learning about our interdependent relations to each other and the more-than-human

world (Taylor & Giugni, 2012). This ontology also encourages educators and children to understand the reality of learning with the cultural, political, and historical ties to the land, reflecting Gruenewald's (2003) critical pedagogy of place, where the process of decolonization is needed to live well with our environments and each other.

In the process of this thesis, the image of nature as an untouched space is disregarded because as Willis (2011) describes it, it is unrealistic. As humans connect with nature, we leave an impact through our interactions with the environment and all its living parts, regardless of the amount of ethical thought we put into our actions. While being unrealistic at its core, the image of nature as untouched lies in a colonized perspective where land is always available to take (Taylor, 2011). Taylor (2011) described the irony of humanist stewardship practices undertaken by Westernized environmentalists wanting to protect nature as pristine and untouched, while failing to recognize the reciprocal relationship in sustaining nature that is historically valued in Indigenous cultures of North America. Humans have historically lived with the land, and Indigenous groups have always respected and protected it, but our denial of belonging to the web of life within nature is what creates failures in our ways of being with our more-than-human others, as Sauvé and Orellana (2004) describe.

Paying attention to the power dynamics of the relations between humans and the more-than-human world within ELCC is an important venture, but as Nelson et al. (2018) stress, this method of thinking in common worlds is not a new approach. Already mentioned several times in this literature review, Indigenous peoples around the world have held this knowledge in their land-based cultures for millennia, where humans are already an embedded part of the land (Taylor, 2021). Moreover, applying common worlds to ELCC settings heavily based in Euro-

Western thought may work to break down settler-colonial barriers and move into acknowledging and respecting the complexity of our relations with the natural world (Nelson et al., 2018).

In Nova Scotia, ELCC programs are guided by the principles of the provincial early learning curriculum framework which has been majorly influenced by Euro-Western thought in its child-led environments, which are organized based on children's needs and interests (DEECD, 2018a). While this social pedagogical approach to ELCC is focused on ensuring that children's environments match their interests and needs, the NS ELCF also situates children's relationships with their educators and community as important to their healthy development. This aspect of the NS ELCF may provide an opportunity to rethink and extend our Euro-Western practices to include Indigenous knowledge through focusing on relationships with human and more-than-human others in the environment. More research on the curriculum framework's value of Indigenous knowledge as a core component to children's relationship with nature is essential in breaking down structural colonial barriers still embedded in ELCC settings. An authentic process of decolonizing ourselves as people as well as the spaces we inhabit is an important step in living well with the environment.

In the current political climate, perspectives surrounding nature are commonly debated as to who is deemed as 'right', or who has more power to control the decisions made about natural environments. For example, in 2017, the Supreme Court of Canada made a decision that values the Euro-Western perspective of nature over the Indigenous perspective of the Ktunaxa First Nation, by allowing plans for a ski resort to be built on Qat'muk, a region of British Columbia known to be the home of the Grizzly Bear Spirit (BBC News, 2017). This reflects Willis' (2011) discussion of Euro-Western perspectives of nature that positions humans as conquering wilderness, and in this case developing on it. The Ktunaxa First Nation holds sacred cultural

connections to the Qat'muk region (BBC New, 2017), and thinking through a common worlds approach would understand their cultural connections as relations between the people and the land. Through a Western perspective, nature needs to be conquered or utilized as a resource (Willis, 2011) to be valuable, hence the building of a ski resort deemed as the best use of the land by the Supreme Court was based on the history of Euro-Western ways of knowing and acting. However, ecological systems theory (Bronfenbrenner, 1979) demonstrates that this example portrays a complex interaction between the greater cultural attitudes of Indigenous and non-Indigenous people in Canada's macrosystem that conflict, resulting in damaging effects to the spiritual connections between Indigenous groups and access to their land and the cultural spaces of nature that are available to children. Extending the premise of this example in relation to ELCC settings, the human-nature divide of the dominant Western perspective reflects another significant issue of children living in the current age of the Anthropocene.

The protection of natural environments and more-than-human others is framed as an appropriate and respected venture in ELCC settings through the common worlds lens, but Nelson et al. (2018) argue that stewardship practices in learning are not a sustainable form of pedagogy as they do not typically acknowledge how complexly embedded children's lives and our actions are with natural world. Importantly, the deepening of environmental stewardship practices is needed to rethink how protection without the involvement and respect of Indigenous groups does not truly help protect the inseparable environment from the cultures so deeply related to it.

Engaging in separative stewardship narratives in nature-based approaches are argued to be acts of colonialism, as Indigenous cultures and their knowledge of their land is ignored through a romanticized Euro-Western saviour narrative (Nelson et al. 2018). Saving the environment because of the Euro-Western perspective understanding that humans rely on it to

support their lives is co-opting or taking over an Indigenous relation to the land. This co-option of Indigenous thought warps relationality with nature into serving the Euro-Western perspective which continues to divide humans and nature. Haro Woods et al. (2018) describes using a common worlds approach to rethink the colonial relations that early childhood education currently has in their British Colombian centre for children's relations with plants, animals, and the land. They argue that the entangled relations between nature-based programs and the settler-colonial relations of the land on which they are situated need to be addressed beyond the dominant nature stewardship and protection narrative (Woods et al., 2018). To represent their argument, Woods et al. (2018) boldly listed the name of the forest they learn in, with, and from, Haro Woods, as their lead author, signifying the importance of the natural spaces we learn with as living entities interconnected with us. Listing the place of Haro Woods as their first contributing author represents a perspective of nature as an active part of the learning and research process.

The intention of common worlds approach is not to fix the ecological challenges humans face, but rather to focus on the relations humans have with more-than-human others as situational and should respect the complex histories of our social, cultural, and environmental relations (Haro Woods et al., 2018; Nelson et al., 2018; Taylor & Guigni, 2012). We live together in what Sauvé & Orellana (2004) describe in their explanation of interrelated spheres as our 'home of life', where we live with our relations to each other and the environment and construct our identities through these relations. Many approaches to nature play and pedagogy focus on nature stewardship and how learning with nature benefits the child's development and the environment for human's interdependence on nature's resources, therefore focusing on the human side of the human/nature divide. Several cultural contexts throughout the world are

recognized for their unique and alternative methods of engaging with nature pedagogy in their delivery of early learning. 'Alternative' simply refers to the fact that nature pedagogy in general is a component of early learning and education that has long been not considered a mainstream approach. These various approaches are discussed in terms of their cultural context, the approaches taken in forms of nature pedagogy, and their perspective of the relationships between children and nature.

Global Contexts of Human-Nature Relationships

Nature-based experiences and human-nature relationships in early learning and education have been viewed from various perspectives in different cultural contexts. In this section, global, Canadian, and local contexts and their approaches taken in nature pedagogies and forms of nature-based programs will be explored to support an understanding of how human-nature relationships are presented in various forms of delivery models.

Scandinavian Culture, Open-Air Lifestyles, and Forest School Influence

A comparative study of perspectives on outdoor education in New Zealand, and the *frilufstliv* lifestyle from Denmark found that New Zealand's perspective is focused on risks and challenges during adventurous activities in teacher-centred outdoor education settings as a method of personal development and skills (Andkjaer, 2012). *Friluftsliv*, is a term for a lifestyle based on a connectedness to nature that originated in Scandinavian countries, specifically Norway and Sweden, through a cultural identity of love and high value for nature within everyday life (Gelter, 2000). Translated to the English language, *friluftliv* means open-air life (Beery, 2013). The outdoors as a place for their educational experiences was viewed as part of the identity in being a New Zealander, which differs slightly from Denmark in that Nordic countries are known for living lives that are very closely connected to nature through *friluftsliv*

(Andkjaer, 2012). Denmark appeared to establish a closeness to nature as part of all aspects of everyday life, not only adventurous and educational experiences (Andkjaer, 2012). Both contexts relate enjoying nature as part of their greater cultural identity which reflects the ecological systems theory's notion of the macrosystem as representing the greater cultural attitudes and ideologies (Bronfenbrenner, 1979). Where New Zealand was teacher-centred in their outdoor education, Denmark remained democratic with group practices focused on creating opportunities for fostering confidence and positivity while learning outdoors (Andkjaer, 2012). Denmark's focus on living closely with nature resonates with their greater cultural region shared with Norway and Sweden, and their culturally significant lifestyle, *frilufstliv*.

The premise of *friluftsliv* is that one is constantly close to nature, meaning they are engaging themselves in any type of natural space, or incorporating being outside as an essential part of a daily routine (Gelter, 2000). More specifically, Gelter (2000) defines the true meaning of *friluftsliv* as being exposed to the open-air, and immersing oneself within a natural area, which is any place that one can listen, look, and feel nature around them. This concept creates an image of nature connection that is accessible to more people than labelling life outdoors as an 'adventure' or something to be conquered. Gelter (2000) also makes a profound point in stating that someone who is practicing *friluftsliv* is willing to accept and participate in all that the natural space has to offer, which implies that being open and prepared to learn is a key component in Scandinavian connections to outdoor lifestyles.

Based on ecological systems theory (Bronfenbrenner, 1979), *friluftsliv* is a macrosystemic mechanism of a Scandinavian cultural attitude that impacts the microsystems of the child's community and family as positively regarding nature and our relationships to it. In this cultural perspective, human-nature relationships are closely connected with nature on a

constant basis and reflect a high value for nature. Beery (2013) questioned *friluftsliv*'s ability to engage people in environmental connectedness, stating that an emphasis on *allemansrätt*, or the right to access nature, should be included in the concept of *friluftsliv*. Nature-based recreation programs support humans' connection with the environment (Beery, 2013), and may support a stronger understanding of humans' relations with nature. This is a promising finding, especially if practices that engage environmental connectedness in these programs can be adapted to ELCC programs. ELCC or school-based programs utilizing nature pedagogy and the natural environment as a classroom within Scandinavian culture have been the global inspiration for many forest and nature school programs.

Stemming from their cultural attitudes of lives lived closely with nature, the Scandinavian countries of Denmark and Sweden are known to be the first leaders in the unique nature-based play pedagogy of forest schools (Forest School Foundation, 2020). Many of the practices of nature-based pedagogy are engaged in child-led play (Forest School Association, n.d.), meaning that children can make the decisions about how they play and learn as it follows their interests in the natural environment. These programs are emergent in their delivery, allowing learning to come naturally and educators to support children's continued learning through scaffolding their ideas. Nature-based pedagogies as delivery models of early learning, care, and education have various names such as forest schools, open-air nurseries, nature kindergartens or nature preschools. Regardless of the label they all have the same general concept; to allow children to lead their play in the natural environment so that they may take risks, explore, and connect with their surroundings, engaging with the benefits that immersion in nature offers. Labels of programs in nature-based learning such as 'nature kindergarten' are viewed as buzzwords in ELCC and should be clearly defined as these labels are often used

without the understanding of the connection nature play has with its contextual influences of the culture, history, and society (MacQuarrie et al., 2015). Furthermore, defining forest and nature schools in relation to the land they practice on and recognizing the Indigenous histories has been a recent focus in Canadian adaptations of forest school (Child & Nature Alliance of Canada, n.d.; MacEachren, 2018), which will be further elaborated on when discussing Canadian perspectives of child-nature relationships.

In the Scandinavian context, forest and nature schools have become popular since their beginnings in the 1950s and have been adopted in other counties such as England, Scotland, USA and Canada (Forest School Association, n.d.). In Norway, some nature preschools have been compared to typical preschools on their practice and organization, revealing that nature preschools obviously spend more time outside reflecting a high value for being outdoors, however typical preschools spent less time outside though still demonstrating a high value for nature (Lysklett & Berger, 2017). 'Typical' or mainstream forms of ELCC may not have the same access to nature and the outdoors like nature-based programs do, though this does not mean that they value spending time in nature any less, they may just encounter actual or perceived barriers to getting outside. Norwegian preschools representing a high value for nature reflects the understanding of ecological systems theory (Bronfenbrenner, 1979) in demonstrating that they may attribute enjoying nature as part of their cultural identity, as shown in Andkjaer's (2012) research. Andkjaer (2012) also found that New Zealanders connected outdoor spaces and education to their cultural identities, indicating that their macrosystemic cultural attitudes may impact microsystemic communities of education and care.

Aotearoa New Zealand and Māori Relatedness to Nature

The process of understanding child-nature relationships cannot authentically progress without encountering the link between social, cultural, and ecological justice in relation to ELCC

that has been demonstrated complexly in Aotearoa New Zealand's ELCC setting. Historically, colonization influences the perception that one is allowed to damage the natural environment (Ritchie, 2012), which is why the focus of Indigenous knowledge of relatedness to nature needs to be an essential focus in ELCC concerned with nature and sustainability (Prince, 2010). Aotearoa New Zealand's national early childhood curriculum framework (ANZ ECC), *Te Whariki* (Ministry of Education, 2017), was first introduced in 1996 and revised in 2017. The bicultural curriculum framework portrays a leading example of partnership between the Indigenous Māori people of Aotearoa and settlers through its strong use of te reo Māori (the Māori language) and knowledge (Ritchie, 2015). Several studies concerning the curriculum framework before its revision articulated the need for further inclusion of Māori values past tokenistic mechanisms and further inclusion of sustainability education. Prince (2010) implemented a sustainability-focused integrated curriculum through a research action project in two New Zealand ELCC centres to illustrate their argument for sustainability to be a core value in *Te Whariki* (1996) when revised. Their findings revealed that, during the project, learning experiences in the ELCC setting supported children's knowledge of sustainability, educators initiated more responsibility in gathering information to be aware of sustainability issues, and parents were more aware of the need to live sustainably than before the project (Prince, 2010). These findings reveal positive outcomes of including education regarding sustainability with *Te Whariki* but ignores the need for the cultural ties of Māori values to the environment as a focus to deepen knowledge and awareness of our relatedness to the earth.

Ritchie (2015) explained that *Te Whariki* (1996) demonstrated underlying values of social, cultural, and ecological justice but the delivery of te reo Māori and values were inhibited due to the workforce being primarily settler or of European decent. It was argued that since

words in te reo Māori are untranslated many of the kaiako (educators) do not understand the language and do not research further, even though the curriculum asks this of them (Ritchie, 2015). Based on this example, the edition of *Te Whariki* from 1996 included Māori values mainly through recognition and promotion (Ritchie, 2020). However, since its update, it has been stated by the Ministry of Education (n.d.) that the biculturalism within the curriculum has been "strengthened" by bringing culture, identity, and language into the forefront. The importance of framing the biculturalism and inclusion of Māori values within Aotearoa New Zealand's curriculum framework is because the relatedness within their Indigenous culture is deeply connected and knowledgeable about their land, providing opportunities for education through the natural environment (Ritchie, 2015). The more-than-human world then has a degree of agency in the method of collectively learning with nature, not about it as a separate dimension (Taylor et al., 2021).

The Māori cultural creation story of how all living things are related to each other through the original ancestors, Papatūānuku (Earth Mother) and Ranginui (Sky Father) is a form of respect for nature that is expressed through *Te Whariki* (Ministry of Education, 2017). Through a research project that involved kaiako connecting with a Māori elder to share the creation story, Ritchie (2012) demonstrated that children were able to empathize with the earth when the natural environment was personalized through this cultural story, as shown in their artwork and actions. Papatūānuku and Ranginui are spiritual beings that *Te Whariki* outlines as mediums of learning respect for nature through (Ministry of Education, 2017). The perspective of child-nature relationships in Aotearoa New Zealand's ELCC is representative of education changing along with the world (Ritchie, 2020) because a collaboration between settlers and Indigenous cultures is demonstrated in their bicultural curriculum, but further research and

exploration is needed to better understand how these perspectives of child-nature relationships in the sense of inclusion are constructed. This same type of exploration would be useful in Canadian contexts as well.

Approaches to Nature-Based Learning and Play in Canada

Mainstream early childhood education programs in Canada typically take place indoors for most of the day, with requirements for ensuring children spend an appropriate length of time outside, as is demonstrated in the Nova Scotia Early Learning and Child Care Regulations (*Early Learning and Child Care Regulations*, 2020). However, the process of how an appropriate length of time outdoors is determined does not appear to be clearly defined. In the Canadian context there is diversity in the types of nature-based programs offered. Asfeldt et al. (2020) aimed to discover what the broad range of outdoor education programs in Canada had in common in terms of activities, learning goals, and philosophical underpinnings. They hypothesized that since Canada is geographically large and diverse in its cultures, these factors may individually influence the programs depending on their region. Their findings revealed that the themes of philosophical underpinnings fell under hands-on experiential learning, holistic and integrated learning, journey through the land, and religion and spirituality (Asfeldt et al., 2020). Canadian outdoor programs then reflect various approaches to connecting children with nature. However, the authors stated that their study did not include Atlantic Canadian programs because there were no responses from the program directors contacted. Consequently, the exclusion of the Atlantic region of the country in this study contributes to the lack of information on the perspectives of nature and the value of nature play in these provinces. Asfeldt et al.'s (2020) study was focused on K-12 programs and did not acknowledge nature-based or outdoor programs for children in the early years, which leaves a significant gap open on this age level in knowledge on the types of nature-based programs currently in the country. Asfeldt et al. (2020) did not focus on nature-

based pedagogy occurring within traditional ELCC or school programs which leaves another significant gap in the knowledge of nature-based pedagogy within the ELCC sector in Nova Scotia and Canada. More research is needed on contextual perspectives of nature, the value of nature play, and children's relation with nature in ELCC settings within the Atlantic provinces.

As previously stated, a paradigm shift has been called for in ELCC settings in Canada regarding children's access to engaging and high-quality outdoor play (Lawson Foundation, 2019). During a symposium regarding how outdoor play can be advanced in ELCC programs, the Lawson Foundation (2019) presented an ecosystem lens to look at the stakeholders who have power in creating high quality outdoor play experiences and how they can better collaborate. It is identified that the provincial and territorial policies followed by regulated in ELCC settings in Canada are unsupportive of high quality and engaging outdoor play in terms of understanding risk opportunities (Lawson Foundation, 2019). As well, post-secondary training for ECEs is not placing value on outdoor pedagogies in their curricula (Lawson Foundation, 2019), where "outdoor" pedagogies loosely refer to engagement with the natural world. Part of their ecosystem lens (Lawson Foundation, 2019) labels societal attitudes on play and risk as an influencing factor towards engaging in outdoor play. While ensuring that stakeholders and regulations understand risky play's opportunities in children's learning is essential for achieving high quality outdoor play, the understanding of the contextual perspectives of child-nature relationships and its value in ELCC should also be included. The need for this paradigm shift is reflective of both the knowledge that children have been separated from nature by society (Louv, 2005) and that there are strong leaders in outdoor play, such as the Lawson Foundation and Outdoor Play Canada, encouraging others to create accessible opportunities for children to access quality outdoor play experiences. In stating this, it should be noted that nature play is often not a term used within

their narrative. However, this may be an oversight on the Lawson Foundation's and others' research or imply a greater need to define nature play in contrast to outdoor play such as I have within this thesis, as being play that intersects the child with the natural world through social, emotional, cultural dimensions.

Shifting the narrative on risky play to be better accepted is crucial in supporting high quality outdoor play, but it may prove to be lacking in meaningful connection without the understanding of nature as an inseparable aspect of our lives. As Nelson et al. (2018) describe children's connections to the more-than-human world need to reflect the inseparable cultural, political, historical, and social ties that we have with the environment. More information on how nature is perceived by those stakeholders in outdoor play is needed to build on the solid foundation already present in the literature on children's connection with nature through risky play, the developmental and learning benefits, and the importance of connection to foster children's attitudes in nature stewardship perspectives. Further research could support educators in providing inclusive, meaningful, and culturally responsive outdoor play.

Canadian forest schools were mentioned briefly before in this literature review section when discussing the Scandinavian origins of forest school approaches to early learning and education. The Child and Nature Alliance of Canada is a leading organization in the country for connecting children to outdoor play in natural spaces and provides training for forest and nature school practitioners. They describe forest and nature schools as programs that offer regularly repeated visits in various outdoor landscapes to support reciprocal relationships with the land, with educators and children, involving risky play and free play with natural, loose materials, and focusing on the journey of learning instead of the end product (Child & Nature Alliance of Canada, n.d.). Another principle which has recently been brought to attention is reflective of

common worlds approach in that forest and nature school seeks to reciprocally hold relations with First Nations, Inuit, and Metis people (Child & Nature Alliance of Canada, n.d.). However, this has been a recent adjustment of the Alliance, as forest school pedagogies were imported from Scandinavian concepts and would have perpetuated practices with Indigenous land in Canada in this perspective.

MacEachren (2018) identified that forest schools in Canada have been making efforts to decolonize their practice from their Euro-Western practices with nature to authentically connect and learn with the land. This perspective of decolonizing forest schools values reciprocal relations with the land and the Indigenous groups it belongs to. For this to happen, MacEachren (2018) argues that children need to witness skilled educators performing traditional tasks and educators need to the rethink child-centred pedagogies that are present in forest schools under Euro-Western frameworks. First Nations are historically skilled in the process of using their natural materials to make tools and other items by hand, and the opportunity to watch that process could influence how children interact with the land (MacEachren, 2018). Therefore, MacEachren (2018) suggests that forest school educators need to learn more outdoor skills and collaborate with Indigenous peoples so that children's play choices can be influenced by both the environment, their educators, and community members. Holding the observation and imitation process of influencing play in forest schools as an important factor toward reconciliation reflects a perspective of child-nature relationships that is rooted in respect for the land and the cultural components that are deeply embedded with it.

MacEachren's (2018) suggestion is not the only method in which forest and nature schools can continue to decolonize their practice, but it is an example of how to incorporate Indigenous people and practices into the program. Educators working in settler rooted

programming should take care that co-option, taking over another cultures practice with the land, is not a method of decolonizing practice, and only perpetuates this further. In Canada there is still a long way to go in decolonizing society. The Child & Nature Alliance of Canada and other forest and nature school programs are beginning with important steps in understanding that learning does not need to take place inside, seated at a desk to be of high quality. Nova Scotia has several forest schools, however the dominant form of ELCC programs reside in early learning and child care centres and school-based pre-primary programs. These programs engage in outdoor play, however, there have been recorded challenges to ensuring that there is enough time spent outside in high quality outdoor play.

Perspectives on 'Barriers' to Outdoor Play in Nova Scotia

As previously mentioned, Munroe and MacLellan-Mansell (2013) had found that First Nation educators in Nova Scotia experienced barriers in providing outdoor play for children in their care. Identified barriers were the unexpected weather, expectations for indoor learning time, unpreparedness of appropriate clothing, general allergies, animals considered a threat to safety, overall safety of children compromised due to short-staffing, and the general dangers of outdoor environments (Munroe & MacLellan-Mansell, 2013). Based on these identified barriers, the authors proposed four processes to encourage and support change for educators in providing children with outdoor play opportunities. These processes aimed to encourage the awareness and education of natural spaces and outdoor play through professional development for educators, encourage educators to reflect on personal experiences outdoors, and examine their values, beliefs, and then their own goals regarding outdoor play as a shared goal. They would then use this goal to reframe their perceived barriers into an action plan. Munroe and MacLellan-Mansell's (2013) study contributes to the process of identifying barriers in the First Nations early childhood context within Nova Scotia, though they state that since their perceived barriers were

likely common for many educators within the province. My own experience of challenges to engaging in outdoor play described in the introduction is a direct example of the same perceived barriers occurring. Their study was based on the general access to outdoor play and did not further examine the values of nature play specifically in ELCC. Though their initial aim to work past barriers in getting outside has led the way for potential further research on barriers to outdoor play in the context of ELCC in Nova Scotia and others areas of Canada. Coe (2016) was influenced by Munroe & McLellan-Mansell's (2013) findings and processes of encouragement and further detailed new models of encouragements to help educators move past their barriers.

Coe's (2016) article supplies the literature on nature-based learning with encouragements to motivate Canadian schoolteachers to become more comfortable in venturing outside with children. The barriers are described as excuses to avoid taking children outside. Coe's first encouragement is an echo of Willis' (2011) argument that nature should not always be perceived as untouched and pristine wilderness, as Coe states that we don't necessarily need to be completely immersed in a natural forest area to learn about and with nature, because nature can be experienced in a variety of forms. This means that nature comes to us as small as the slugs children find on the playground or the spider in the classroom, or as large as the field trip to the local park's forested pathways. Through this first encouragement, Coe (2016) emphasizes that place-based education (Gruendewald, 2003) promotes the opportunity for children to learn based on their hands-on and lived experiences in their own community. Ecological system's theory (Bronfenbrenner, 1979) supports her encouragement as the opportunity to get outside to engage with hands-on learning with nature requires the child's microsystem to have educators willing to engage with nature in school. Coe's (2016) second encouragement is that to support learning in the outdoor environment, it is not essential that an educator be an expert naturalist or

environmentalist. Though this is something that most educators in Canada may be uncomfortable with, as Coe (2016) explains, as it is likely an expectation that teachers should be considerably knowledgeable in most areas of their teaching. This may conflict with MacEachren's (2018) suggestion that educators learn more hands-on skills. The context of ELCC in Nova Scotia and the corresponding NS ELCF may provide support for these concerns. During a hands-on learning experience or even the values within the NS ELCF, the children are seen as actors who ultimately guide where the learning will take them, and the educator will scaffold their learning through support, prompts, questions, materials, and experiences (DEECD, 2018a). MacEachren's (2018) push for more skilled educators could enhance their ability to scaffold children's learning when they have more background knowledge.

As for natured-based learning, Coe (2016) says that the relationship between the students, the environment and their teachers is collaborative and reciprocal, therefore requiring teachers to be experts on various species of wildlife and the natural world is unnecessary when the process is child-directed, reflective, and community relationship-based. This perspective on engaging with nature highlights the relations between children and the more-than-human world (Taylor & Guigni, 2012), though it does not specify if the relationships reflect the social, cultural, and historical ties with the land. Coe's third encouragement is the most relevant in shifting perspectives towards valuing nature play, as it is centred on the fact that while outdoor education is not a focus, this does not mean that learning through a curriculum plan is required to take place inside. Coe (2016) described situations where children's interests are piqued upon hearing new sounds of birds in the natural spaces, then their educators scaffold the learning by providing opportunities for further discussion with a box presented as a bird's nest. As Coe (2016) states, children must be provided with meaningful experiences with nature, no matter how insignificant

the connection to nature may be. This is especially important for children in acknowledging their relations with the environment as the start of understanding the socio-cultural and political histories of the land their community is on. From the insights gained from Munroe & McLellan-Mansell (2013) and Coe's (2016) further encouragements, it is surmised that the bulk of research in relation to nature play or children's relations with nature in Nova Scotia has been focused on shifting perspectives away from the excuses to avoid the outdoors as a learning setting.

Coe's (2016) research is motivated by the fact that forest and nature schools are not accessible to all families as a form of education or care, so her model of encouragement aims to break down barriers that educators within mainstream forms, such as public-school systems, experience in engaging children with nature play. Both Coe's (2016) and Munroe and McLellan-Mansell's (2013) motivation for research reflects the need for ensuring that nature is valued in school and ELCC settings so that all children have more access to outdoor experiences. Educators' barriers to nature play such as lack of time or "bad" weather conditions to may reflect an interaction between the children and their educators in the microsystem (Bronfenbrenner, 1979) that engages the child with a discourse of nature play as a lesser valued aspect of their learning. Should educators reflect on these barriers as "excuses", similar to how Coe (2016) perceives them, and work toward dismantling barriers by understanding nature-based play for the unique learning opportunities it provides, then the microsystem of educators has potential to shift towards engaging the child with nature play and the relationships within it may continue to grow deeper.

The versatility in the location of where school curricula can be utilized (i.e., inside or outside) (Coe, 2016) could encourage future revisions of curriculum frameworks in both school and ELCC settings to include the value of children's access and connection with nature play.

Weldemariam et al. (2017) state that early learning curriculum frameworks guide ECEs in their practice with sustainability by providing the knowledge and basis of theories to follow. Their study examines how ideas about sustainability are conceptualized within curriculum frameworks for early childhood education across the United States of America (USA), Sweden, Norway, England, and Australia. The Australian early learning curriculum framework has been cited a major influence on the NS ECLF (DEECD, 2018a). They focused on each curriculum framework's presence of sustainability, view of the child, approach to human-environment relationships, and their theoretical and philosophical influences that determine the outlined perspective and values. Like the NS ELCF, Australia, Sweden, Norway, and USA's frameworks were rooted in socio-cultural perspectives, but out of the five countries, Australia was dominant in viewing human-environment relationships as inseparable and reciprocal through its inclusion of Indigenous knowledge (Weldemariam et al. 2017). Because the NS ELCF was heavily influenced by the Australian early years learning framework (DEECD, 2018a), this finding ignites the purpose of questioning the perspective that the NS ELCF has on child-nature relationships, and if they do or do not view children and nature as inseparable and reciprocal like their influencing framework does.

Early learning curriculum frameworks are intended to be guiding principles for educators but are not considered to be a prescribed agenda of specific activities to be completed (DEECD, 2018b). These curriculum frameworks should be based in shared values, beliefs, and principles but also have a certain amount of flexibility for educators to utilize the curriculum framework and fit it into their own practice with children (Langford, 2012). Educators following the NS ELCF have room for interpretation and freedom to pair the curriculum with the children's needs and interests. There are currently no studies that have examined the general perspective on child-

nature relations in the Nova Scotian ELCF and how it influences the type of engagement children experience with nature in their outdoor play.

Much of the research conducted in Nova Scotia on ELCC and outdoor play is focused on the elements of risky play opportunities, loose-parts play, physical activity or physical literacy, and benefits for children's health and well-being (Spencer et al., 2019; Houser et al., 2019; Branje et al., 2021). Beyond these important topics, research has not been focused on how children's relationship with nature is constructed and perceived by either curriculum frameworks, ECEs, other ECE professionals, or children in the Nova Scotian ELCC sector. Nature-based learning is culturally, socially, politically, and historically influenced and constructed by the context of the ELCC settings and the customs within them, which are inseparable from the learning experience (MacQuarrie et al., 2015). The evidence presented in this literature review suggests that the contextual perspective of nature, and the view of child-nature relationships is influential in the pedagogical approach with nature in ELCC settings.

Relevancy of the Study to ELCC in Nova Scotia

Missing from the literature on child-nature relations and outdoor play is the connection between a cultural context's perspective of nature and how this influences the construction of children's relationships with nature in ELCC settings. Weldemariam et al.'s (2017) study revealing that Australia's early learning curriculum framework demonstrated a perspective of human-environment relationships as reciprocal indicates that the NS ELCF may view child-nature relationships similarly. This is due to the NS ELCF crediting Australia's framework as a significant influence (DEECD, 2018b). However, further research on this topic is required before stating complete similarities between their perspectives on child-nature relationships.

My own personal and work experiences drive the desire to explore perspectives of child-nature relationships constructed in different formats; the physical setting, educator perspectives, and guiding values and beliefs in curriculum frameworks so that it can be better known how child-nature relationships are valued in ELCC spaces. Obtaining this knowledge can provide the Nova Scotian ELCC context further information on how outdoor play can be extended and enhanced with nature-based play practices, along with the known advantages of loose-parts play and physically active risky play. Much of the literature in Canada regarding nature-based play and outdoor learning has been studied with groups of children in the school age level. It would be beneficial to gain more insight on perspectives of child-nature relations in the early years to discover how this can impact children in ELCC settings and their entangled relations with the more-than-human world. From my experiences as an ECE and program coordinator in the ELCC sector, it is clear how important engaging with and understanding various perspectives is, so that the delivery of early learning is beneficial to the current needs of children in the community.

Global perspectives on child-nature relationships could potentially inform Nova Scotian ECEs discourse in terms of shifting perceived barriers, and act as inspiration for best practice when engaging in nature-based play with young children while guided by a jurisdictional framework. This research emerges during a transitional time for ELCC within Nova Scotia, as the province has signed on to an agreement for a Canada Wide Early Learning and Child Care (CWELCC) system promising an increase in the compensation framework and improvement of educators working conditions, while lowering daily fees to ten dollars a day by 2026 (Child Care Now, 2021). As well, access to child care will be increased with the addition of 9500 new child care spaces over the next four years (Child Care Now, 2022). ELCC in the province is mostly delivered under a private sector, whether the child care centre is commercial or non-profit (Child

Care Now, 2022), and as of writing this paper, the sector currently sits at the start of implementing complex changes to transition to a publicly funded system. We are currently living through the COVID-19 pandemic and a common experience for ECEs is that more attention has been placed on children's outdoor play as a method of relieving intense cleaning routines and creating social distance between people. ELCC settings have been urged to spend more time outside as there is more space to physically distance and minimize the spread of infection. However, the pandemic is not a motivation for writing this thesis because I highly value the enhancement of children's collective relationships with nature regardless of constantly changing provincial COVID-19 restrictions. Although, it is important to note how the pandemic currently emphasizes outdoor play in ELCC settings during this unique time in global history.

During this transitional period, the contextual perspectives of child-nature relationships in Nova Scotia's ELCC settings should be examined closely because there is an evident need for improved high quality early learning, including outdoor play (Lawson Foundation, 2019). A supportive lens to think with during this thesis is the common worlds approach which aims to guide ECEs towards more inclusive, sustainable, and relational practices with children and the more-than-human world. Researching the current perspective(s) on child-nature relations in the Nova Scotian ELCC context may support an in-depth understanding of the principles that guide ECEs in their practice and how nature play is valued and gain insight on the overall perspective of child-nature relationships. Researching another cultural contexts perspective(s) on this same topic in comparison may also identify tensions and similarities between and within contexts that could act as comparative examples to learn from and apply to ELCC in Nova Scotia.

Research Questions

Based on the identified gaps in the literature regarding the lack of information available on approaches to nature-based play in Nova Scotia and the construction of child-nature relationships within the province's early learning curriculum frameworks it is critical then to ask:

- How is the perspective of child-nature relationships constructed within early learning curriculum frameworks across cultural contexts?

With the research objectives of:

- How is the motivation for engaging children with nature presented within early learning curriculum frameworks?
- How does the framework's construction of the child-nature relationships express if there is or is not a perspective of inseparability and relationality of humans and the natural environment?

Chapter 3: Methods

This section will be referred to as 'Methods' rather than a 'Methodology' because the approach I intend to take in my data analysis is not guided by a theoretical framework to test a theory but is informed by the general theoretical concepts (Braun & Clarke, 2021) of common worlds approach to child-nature relationships as an inseparable web of relations between children and their surrounding worlds (Taylor & Guigni, 2012; Taylor, 2017; Nelson et al., 2018). Common worlds resist the separation between nature and culture by focusing on learning *with* the environment, remaining collectively oriented rather than focusing on individual learners, focusing on the relations between humans and all living and non-living things in the world, and seeks to break down Western colonial barriers through collaboration with Indigenous peoples (Taylor et al., 2021). Coming to the data with the understanding of common worlds theory in constructing child-nature relationships as inseparable, and the cultural, social, political, and historical ties needed to move beyond nature stewardship in early learning settings helps to better interpret the data for their constructions, motivations, and expressions of nature engagement with children.

The data will be primarily sourced from two early learning curriculum frameworks from different cultural and geographic contexts. One is a Canadian provincial framework, and the other is a national framework from Aotearoa New Zealand. The Canadian provincial framework is Nova Scotia's early learning curriculum framework (NS ELCF), *Capable, Confident, and Curious* (DEECD, 2018a) and was selected because it is the guiding document for ELCC programs in this province, therefore it is a widespread document that the majority of ECEs and ELCC programs can access. Aotearoa New Zealand's national early childhood curriculum framework, *Te Whariki*, (Ministry of Education, 2017) is selected as a comparable source to ensure the analysis is trustworthy because it acts a comparative mechanism to ensure that the

research is not based on my experience and perspective alone (Nowell et al., 2017) and to support an answer of how child-nature relationships are constructed across different cultural contexts. *Te Whariki* has been selected because of its example of representation as a bicultural curriculum with Indigenous Māori culture, language, and values throughout the curriculum (Ritchie, 2015). As discussed in the literature review, Māori people value nature through their cultural creation stories of Papatūānuku (Earth Mother) and Ranginui (Sky Father) and are deeply connected and knowledgeable about their land, providing opportunities for learning with the environment (Ritchie, 2015; Taylor, 2017). Coming to this piece of data informed by common worlds allows for further knowledge of the relationality and inseparability of child-nature relationships.

The chosen method of analysis is reflexive thematic analysis (RTA) (Braun & Clarke, 2006; 2021) from an inductive approach. RTA is a method of analysis used to identify, organize, and interpret patterns of themes in data through a six phase, non-linear process of authentically generating themes across a dataset (Braun & Clark, 2006; Braun & Clark, 2019). The steps of RTA involve becoming familiar with the data, coding, generating initial themes, developing and reviewing themes, refining and naming themes, and writing the report (Braun & Clarke, 2021). An inductive approach to RTA involves the researcher coming to the data informed by the area of literature and the theories and concepts within it but they do not apply these theories to the dataset to be tested (Braun & Clarke, 2021). This is to ensure that the themes that are developed are directly found in the primary sources of data (Braun & Clarke, 2006). The analysis is employed to answer the research questions of:

- How is the perspective of child-nature relationships constructed within early learning curriculum frameworks across cultural contexts?

With the further research objectives:

- How is the motivation for engaging children with nature presented within early learning curriculum frameworks?
- How does the frameworks construction of the child-nature relationships express if there is or is not a perspective of inseparability and relationality of humans and the natural environment?

An important aspect to note about RTA is that it allows for the research question to remain flexible (Braun & Clarke, 2006). This is because the process of analysis can prompt further research questions and possibly support answers for them that is interpreted from the themes the researcher generates from the data during in a reflexive process. The research questions do not need to remain static.

This thesis is influenced by the work of Weldemariam et al. (2017) who sought to examine how ideas about sustainability are presented in early childhood curricula across Australia, Norway, Sweden, USA, and England. While their study was focused on the aspect of sustainability, they included several theme characteristics to assess across each curriculum document, one being on the construction of human-environment relationships. Their findings revealed that Australia's early childhood curriculum best represented humans' relationships with nature as strongly intertwined with each other (Weldemariam et al., 2017). An overview of their findings described that the Australian early childhood curriculum displayed an "interconnection between human, other species and the physical world, and hence care, respect and appreciation for natural environment" (Weldemariam et al., 2017, p. 342). This is the piece of their research, along with the previously identified gaps in the literature, that motivated me to ask how early learning curriculum frameworks are constructing their perspective of child-nature relationships.

When the human-nature relationship is presented in such a way that represents collective relations with nature in the Australian curriculum, it is important to better understand the construction of child-nature relationships in Nova Scotia's early learning curriculum that credits Australia as a major influence (DEECD, 2018a). Weldemariam et al.'s (2017) study included a theoretical framework based in post-humanism's critique of anthropocentrism and was guided by critical inquiry and an inductive approach to the data. I have decided to approach my data in the two frameworks with an inductive approach to generate themes that are directly linked to the data (Braun & Clarke, 2006) in favour of not limiting the findings to themes already represented in the previous literature.

Data Selection

The data selected for this thesis are two early learning curriculum frameworks. Nova Scotia's Early Learning Curriculum Framework (NS ELCF) *Capable, Confident, and Curious* (DEECD, 2018a) is selected as I, the researcher, live in Nova Scotia, Canada, and have experience working in the ELCC sector. The NS ELCF is influenced by *Being, Belong, Becoming* – Australian Early Years Learning Framework (DEECD, 2018a), which was found by Weldemariam et al.'s (2017) study to have a "strong emphasis on human's intertwined relationship with the environment, living and non-living things" (p. 346). *Capable, Confident, and Curious* is the provincial early learning curriculum framework, setting guiding principles and values to be adapted and implemented by educators who work with children from infancy to school-age (DEECD, 2018b). Regulated child care centres and school-based pre-primary programs are listed as early childhood education programs in the province that follow the framework (DEECD, 2018a). The NS ELCF is selected as a primary data source because as a framework that is produced at the provincial level by the Department of Education and Early Childhood Development, its guiding principles and values are expected to be far-reaching and

accessed by many ECEs across the province. From this perspective the NS ELCF is then a major influence in determining the type of approach taken in supporting early learning experiences for children.

My work in the field of ECE is directly and constantly linked with the NS ELCF and is considered a secondary source to provide context for this thesis. I have supported ECEs with adapting and implementing NS ELCF's values and principles into daily practice with children and organizing the overall structure of the environment to reflect the curriculum. In the past I have worked as an ECE in the classroom where I linked children's play to the Learning Goals and Strategies in the NS ELCF and read the framework to better understand how I could adapt my pedagogical practice to reflect the curriculum. This experience allows me to provide thick descriptions of the context of where the framework is implemented. My familiarity with the NS ELCF supports my access to spending the extended time within the context of the NS ELCF that is needed for prolonged engagement (Nowell et al., 2017; Braun & Clarke, 2022). Prolonged engagement with raw data is needed to understand the social context of the data and contributes to ensuring that the research is credible and valid, and its findings are trustworthy (Nowell et al., 2017).

The Aotearoa New Zealand Early Childhood Curriculum (ANZ ECC) *Te Whariki* (Ministry of Education, 2017) is the second primary source of data. The rationale for selecting the national early childhood curriculum, *Te Whariki*, is due to its evident and strong inclusion of Indigenous Māori language into the curriculum framework and for its representation of nature stewardship in early childhood education (Ministry of Education, 2017). The purpose of including the NZ ECC in the dataset is for the themes that are generated from the analysis of this framework to be compared with the themes generated from NS ELCF. Generating themes from

both frameworks highlight any tensions or similarities in their respective constructions of child-nature relationships from different cultural and geographic contexts of early childhood education (Braun & Clarke, 2006).

Prolonged engagement with *Te Whariki* is a different process than that of my familiarity with the NS ELCF since I am unable to spend extended time directly in the New Zealand ELCC settings that implement *Te Whariki* while living and working in Nova Scotia, Canada. However, my ability to become familiar with the data through extended time spent reading and re-reading the framework document and related secondary sources is not inhibited and will be utilized to achieve prolonged engagement to ensure credibility and trustworthiness in my research (Nowell et al., 2017).

In comparison to the Nova Scotian ELCC context, I do not have first-hand experience working within the Aotearoa New Zealand ELCC context, therefore I must utilize the perspectives of those who do live, work, and conduct research within it. My discussion of the Aotearoa New Zealand ELCC setting, *Te Whariki,* and Māori culture within the literature review demonstrates examples of the types of peer-reviewed literature that will be sourced as secondary sources to provide a deep understanding of the ELCC context in Aotearoa New Zealand. Additionally, a glossary of te reo Māori words is included within the document of *Te Whariki* which I will heavily engage with to better understand the meanings of these words and therefore the context they apply to. To further extend my understanding of the context authentically, I will create a personal glossary of the available te reo Māori terms that I learn throughout the process of prolonged engagement with the framework document and the secondary sources. The addition of this second curriculum framework as a primary source also ensures that I have chosen multiple sources of data to analyse so that the themes or findings of each framework document

can be compared across the entire dataset to determine its validity and credibility through ensuring that my codes reflect truthful aspects of the documents (Bryman, 2016; Nowell et al., 2017).

Selecting two curriculum frameworks from different contexts will help answer my first research question about how child-nature relationships are constructed in early learning frameworks across cultural contexts because they represent two distinct ECE contexts from different countries. The fact that the frameworks come from different cultural contexts will also be helpful in understanding how their cultural context impacts their expression of their relations between humans and the natural environment by identifying differences or similarities through the circular process involved with RTA. An important reason for choosing curriculum frameworks as primary sources of data for this thesis was because the gaps in the literature led me to understand that there is currently not enough research done on the NS ELCF in terms of how children's relationship with nature is perceived, engaged with, or constructed. Therefore, an analysis of the framework to better understand their perspective of child-nature relationships is needed to answer that question.

Interviewing ECEs or other professionals working with children and the NS ELCF would not be an appropriate first step in answering my research questions because their perspectives and values on child-nature relationships may be quite varied or unrelated to the curriculum framework. Before that step in the research is taken, it is more appropriate to gather a better understanding of how the guiding documents, such as the NS ELCF, construct child-nature relationships. Curriculum frameworks are intended to provide a set of guiding beliefs and values with opportunity for educators to mold them into their practice (Langford, 2012). This is an indicator that a curriculum framework is the first step in understanding how child-nature

relationships are constructed in ECE as there is immediately an intention for educators to interpret the knowledge based on their own subjective experiences and prior knowledge. It is also important to note that since this is part of a master's thesis, I have limited resources and time available in recruiting participants for interviews or focus groups.

Data Analysis

The best method of analysis selected for these research questions is reflexive thematic analysis (RTA) (Braun & Clarke, 2006; 2021). RTA is considered an appropriate method when applied to research questions seeking to understand representation and construction of meanings (Braun & Clarke, 2019), and is useful when exploring new areas of interest (Clarke & Braun, 2017). The current study's topic on the construction of how children's relationships with nature is perceived through the provincial early learning curriculum framework is relatively new, as research on outdoor play in Nova Scotia has held its focus in physically active play, risky play, and loose parts play, and benefits for children's health and well-being (Spencer et al., 2019; Houser et al., 2019; Branje et al., 2021). RTA's inductive ability to venture into a new area of research is exceptionally useful in this sense because it enables myself as the researcher to generate themes within these two framework documents and not be limited by the constraints of theoretical frameworks (Braun & Clarke, 2021). Conducting research on child-nature relationships in ECE that are not yet explored in a curriculum framework is able to be approached from an open-minded perspective, which is especially important when comparing a local context to an international context in avoiding judgement. While analysing curriculum frameworks is not necessarily a new tactic in qualitative research, to my knowledge the NS ELCF has not yet been analysed on this topic or comparing its construction of child-nature relationships to that of another country, such as Aotearoa New Zealand's curriculum.

Thick descriptions of the data and its context are needed for high quality RTA, especially when investigating within a new area of research in order to create a comprehensive understanding of the context (Braun & Clarke, 2006). Thick descriptions are narratives of the data extracts that help contextualize its significance within the current research (Braun & Clarke, 2022). As discussed in the section on data selection, my work experience and familiarity with the NS ELCF provides me with the strong ability to create such descriptions of the Nova Scotian ECE context. I can supply a detailed explanation of the NZ ECC based on the prior research within the literature review that concerns *Te Whariki*, as well as becoming familiar with it from reading and re-reading the document and other research studies regarding the practice and knowledge of *Te Whariki* in New Zealand and reading from Māori perspectives of the framework. It was also stated that generating themes from both frameworks can highlight any tensions or similarities in their constructions of child-nature relationships which RTA is an excellent method to apply because it is able to bring forth the similarities and differences when applying themes across the entire dataset (Braun & Clarke, 2006).

RTA is conducted through six phases in a non-linear process to develop themes based on codes with shared concepts that aim to create a story of what the data is telling (Braun & Clark, 2006; Clarke & Braun, 2019). By non-linear, this means that when the researcher is progressing through the six phases, they are not restricted by a linear process that limits then from going back to a previous step if needed (Braun & Clarke, 2006). The phases of RTA, as updated in 2019, are labeled as:

1) Familiarizing yourself with the data through the reading and re-reading while noting for any initial codes,

2) Coding the data by identifying important or noticeable aspects throughout the whole dataset, then collating these codes together according to relevance,

3) Generating initial themes by examining codes for patterns of potential themes and collating codes to these potential themes,

4) Developing and reviewing themes by the comparing potential themes against entire dataset to ensure they are relevant,

5) Refining, defining, and naming themes by establishing their relevancy to the research topic and questions,

6) Writing the report (Braun & Clarke, 2006, Braun & Clarke, 2021).

Braun and Clarke (2006) initially described Phase 4 as 'Reviewing themes' and Phase 5 as 'Defining and naming themes' but over the years these terms were changed to better describe a clear process of analysis (Braun & Clarke, 2019). A non-linear process refers to the development of themes, and Phase 4 and 5, where themes are developed, reviewed, and defined are often when the researcher begins to circle back to Phases 2 and 3 when interpretating codes and developing themes. This process of analysis provides the opportunity to actively code and interpret the data to generate themes. The role of the researcher is active in interpreting the data to support the authentic generation of themes the come directly from the data (Braun & Clarke, 2006; Braun & Clarke, 2019; Braun & Clarke, 2021). Utilizing RTA's ability of the non-linear process supports this thesis' goal in better understanding the construction of child-nature relationships in curriculum frameworks because I can move between the phases of generating themes from codes, refining and defining these themes, and going back to generate new themes based on patterns of codes that went unnoticed without the development of the existing themes.

Inductive Approach to RTA

An inductive approach will be taken using RTA, which is when the researcher comes to the data with an understanding of previous literature and theoretical assumptions to inform their analysis but does not apply these theories in the analysis (Braun & Clarke, 2021). Inductive approach does not intend to test theoretical frameworks onto data. Initially, Braun & Clarke (2006) argued that in using inductive approaches, researchers should come to their dataset without preconceived notions of theory or even engagement with the literature prior to conducting analysis. In a more recent article, Braun & Clarke (2021) addressed the issue that a purely inductive approach is seemingly atheoretical, and that it is difficult to approach data without knowledge of the previous literature and its relevant theories. To conduct an analysis on a dataset such as a curriculum framework and provide a thick description of its context, one would need to be knowledgeable on the specific topic and context. In my position as a master's student, it is required that I first engage with the literature prior to collecting and analysing data to ensure that I gain adequate insight into a particular area of research.

The result of my engagement with literature is that I am informed by the theoretical assumptions of ecological systems theory (Bronfenbrenner, 1979), common worlds approach (Taylor & Giugni, 2012), and interrelated spheres of development (Sauve & Orellana, 2004) in interpreting the data. As previously stated, conducting RTA informed by theoretical assumptions is approached inductively when these theories are not set as theoretical frameworks to search the data for its relevance to the theories, but rather are used to support the interpretation of codes to generate themes directly from the data (Bran & Clarke, 2006; Braun & Clark, 2021). Braun & Clarke (2021) further clarified that an inductive approach in thematic analysis involves researchers approaching their data upon becoming informed by the previous body of literature and acquiring an understanding of relevant theories. An inductive approach to RTA is useful in

applying to the current proposed study because it will not restrict the themes that can be generated from the Nova Scotia and Aotearoa New Zealand frameworks to only the known theoretical frameworks but allows me, as the researcher, to remain informed by the literature and generate themes that have not yet been discussed, if possible (Braun & Clarke, 2021).

Data analysis that involves applying theory or a theoretical framework to the data would then be deductive, and often aligns more closely with coding reliability thematic analysis or codebook thematic analysis (Braun & Clarke, 2021). However, those two variations of thematic analysis would not be appropriately applied to the current study. My research questions fit more appropriately with RTA, in that they deal with construction of meaning, representation, and perspective of a topic, which require the quality of openness in coding and the emphasis on interpretation of the data. RTA can still involve deductive approaches (Braun & Clarke, 2021), but would ultimately limit the themes generated from the data to the applied theoretical framework. Coding reliability and codebook thematic analysis involve developing themes prior to or early on in the process of analysis, and often with more than one researcher involved (Braun & Clarke, 2021). Because this is a master's thesis the analysis of my data is conducted entirely by myself, therefore quality aspects of coding reliability thematic analysis like inter-rater reliability cannot be achieved since it requires a research team (Braun & Clarke, 2021). Codebook thematic analysis also proves to be a challenging approach for my study as it often develops themes early on (Braun & Clarke, 2021). Whereas the goal of this thesis is to provide themes of the curriculum frameworks as outcomes to reveal tensions or similarities between and within documents regarding child-nature relationships and expression of nature-culture relations, as is possible with RTA. Tensions and similarities would have a stronger possibility to arise

during the analysis when RTA is used rather than codebook thematic analysis and coding reliability thematic analysis because of the cyclical nature of its process.

Inductive approaches require researchers to not only describe the data but interpret it sufficiently. The researcher's responsibility in ensuring transparency lies in their ability to clearly communicate how the theoretical assumptions from related literature inform their interpretation of the data (Braun & Clarke, 2021). My research question regarding how the frameworks construction of child-nature relationships expresses the inseparability of humans and the natural environment reflects this transparency, as the question is informed by the body of literature describing the disruption of the nature-culture divide. Providing an audit trail that keeps record of the entire research process (Nowell et al., 2017), along with the dialogue regarding any rationale for decisions made is an essential piece of providing a trustworthy analysis of data (Nowell et al., 2017). This documentation was underway during the process of my literature review to organize my thoughts on how I arrived at the topic of child-nature relationships and disruptions of the nature-culture divide. More specifically, applying an inductive approach with RTA will provide better support in answering my second research question of how the motivation for engaging children with nature is presented in curriculum frameworks. This is because inductive analysis requires the researcher to actively search for and generate themes in the coded extracts and across the entire dataset, rather than the themes passively emerging from the data on their own (Braun & Clarke, 2021). When discussing how themes are developed in this process, it is essential that the themes are described as generated from the researcher's interpretation of the data. Interpretation as a main feature of analysis is supportive of not only describing more obvious content and patterns of themes, but also in identifying the underlying ideas that form them (Braun & Clarke, 2006; Braun & Clarke, 2022).

Qualitative content analysis might have been a sufficient method of analysis for this thesis because of its shared ability with RTA to approach data analysis inductively, however, qualitative content analysis is not always able to revise for new themes throughout the process or give specific details about the process of analysis (Bryman, 2016). Reflexive thematic analysis is more appropriately suited to the type of research questions for this thesis because it requires a significant amount of detail of the research process to be recorded so that the study can be considered trustworthy (Nowell et al., 2019).

Role of the Researcher

The language used in discussing theme development seeks to avoid the 'emergence' of themes because this suggests that the researcher is allowing themes to passively emerge without their attentiveness and reduces the value of interpreting codes (Braun & Clarke, 2006; 2019; Vaismoradi & Snelgrove, 2019; Braun & Clarke, 2022). Themes are actively generated by my interpretations of the extracted codes and then compared across the entire data set. The role of the researcher in RTA is an active part of the process of analysis as they bring their own knowledge and theoretical assumptions from the literature to inform their interpretation of the data as they code and develop themes. It is highly important that my subjectivity is viewed as a skill in RTA, as the interpretation of the data is the active component in coding to generate themes, rather than passively allowing themes to emerge on their own. Because of the value held in the analytical skill of the interpretation, it is essential that I am transparent about how the theoretical concepts, such as common worlds, informs my analysis (Braun & Clarke, 2021). Detailed records that document the rationale behind my decisions throughout the research process (Nowell et al., 2019) and the clarity within the construction of my literature review support the transparency of how I will interpret the data.

Researcher's Subjectivity as an Interpretive Tool

Since my role as the researcher requires that my subjective skills in interpreting meaning from data is transparent (Nowell et al., 2017), I will effectively communicate the lens through which this thesis is written, based on the theoretical assumptions I have gathered from the literature. Ecological systems theory (Bronfenbrenner, 1979) informs this thesis as the interactions between the systems, both immediate and societal, impact the children's development and their type of relationship with nature. Ecological systems theory supports in the explanation of how child-nature relationships are perceived differently in different contexts. Common worlds approach to early childhood education (Taylor & Giugni, 2012) provides a vital informational lens through which I can interpret constructions of child-nature relationships. Common worlds focus on collective relations between human and the more-than-human world while resisting the nature-culture divide and aim to break down Western colonial barriers through collaboration with Indigenous peoples (Taylor et al., 2021). The interrelated spheres of the self, others, and the environment (Sauvé & Orellana, 2004) demonstrate a focus on the relations between children and nature in recognizing that humans live in our home *with* the more-than-human world.

My personal background, educational and work experience also contribute to forming the lens through which I interpret this research. I am a young white woman, who has lived in Nova Scotia almost my entire life, aside from a four-year hiatus to New Brunswick, Canada to study for a bachelor's degree in psychology. My introduction to ELCC occurred three years ago when I accepted a position in a senior toddler classroom at a child care centre and studied for my ECE Level 1 certificate. I have worked in the position of a program coordinator for a child care centre where I supported educators in implementing the NS ELCF into pedagogical practice. This background in early childhood education is relatively recent, but my deep connection to nature

was developed throughout my own childhood experiences with my family, as I described in the introduction. My parents encouraged my brother and I to spend our time outdoors in the capacity of free play, exploration, and helping (or not helping) with outdoor chores such as cutting and piling wood to heat our home. In all these experiences, the importance was placed on nature as a foundational setting and resource for life, bonding with each other, and the enjoyment of just being outside. This influenced my approach in engaging children in outdoor and nature play, but perceived barriers also had a part in inhibiting our class's full engagement with nature. Though barriers were in place, we were still able to get outside, however I recognized a further need for children to experience nature-based play because they often sought out nature on a nature-lacking playground, such as when they were collecting, caring for, and freeing snails or reaching through the fence to grasp wildflowers.

These experiences and the existing knowledge on how nature connection can support children's developing skills motivated my research, but they also impact how I interpret the two frameworks selected as data. I have engaged with secondary sources of information on both the Nova Scotia and Aotearoa New Zealand contexts prior to the analysis, such as my own experience in two different roles in the Nova Scotian ELCC context and reading the literature surrounding the NZ ECC. This engagement continues throughout the duration of the analysis. Clearly detailing these experiences as a way to situate myself and the lens I am thinking with creates a clear image of how and why my subjectivity is important in interpreting the frameworks.

Application of Trustworthiness Criteria to RTA

High quality RTA must ensure that its process of analysis results in trustworthy findings, which are results that are useful to stakeholders of the community that research is done in

(Nowell et al., 2017), which in the current study are the stakeholders of ELCC in Nova Scotia and Aotearoa New Zealand. Nowell et al. (2017) argued that the application of the trustworthiness criteria (Lincoln & Guba, 1985) to thematic analysis supports in further solidifying RTA's value as its own distinguished method of qualitative analysis. Their goal was to support researchers in conducting thematic analysis that is dependable through offering recommendations for establishing credibility, transferability, dependability, and confirmability in the process of research to ensure that their research is useful for the stakeholders it is intended for (Nowell et al., 2017). These components of the trustworthiness criteria (Lincoln & Guba, 1985) act as the qualitative alternative to the aspect of measurement within quantitative research (Nowell et al., 2017), which means that in successfully reaching the trustworthiness criteria throughout this thesis, my research is successfully 'measuring' the research questions in a method that appropriately fits the qualitative nature of them. Overall, its recommended that an audit trail to record any of the rationale or decisions made in the research process is kept, as it documents the authentic thought process of the researcher. A journal to record this process has been in progress since the beginning of writing the literature reviewing and moved to an online Word document format throughout the process of analysis. Nowell et al. (2017) referred to this audit trail as a reflexive journal to document during RTA. Since there are no other documents to keep track of, such as participant interview transcripts, an extensive reflexive journal with documentation of prolonged engagement with primary and secondary sources and the process of the analysis is considered the audit trail.

To ensure credibility within the current thesis proposal, prolonged engagement is needed with the data. Prolonged engagement was previously mentioned during the discussion on how the NS ELCF and ANZ ECC were selected, and it ensures that the context in which the data

comes from is well understood by spending extended time within it (Nowell et al., 2017). Since I have followed the NS ELCF closely in my work experience, participated in a few module workshops to better understand the NS ELCF's implementation into my pedagogical practice, along with the engagement of reading and re-reading the document, I have spent and continue to actively spend extended time in understanding this context. Further time is spent in familiarizing myself with the data as part of the first phase of RTA, which is reading and re-reading the document while noting for potential codes. The ANZ ECC proves to be more difficult to spend extended time in that context as I am currently located in Nova Scotia, Canada. However, prolonged engagement includes the extended time spent immersed in reading and re-reading the data, which will also take place with reading and re-reading *Te Whariki* during Phase 1 of the analysis and reading related research as secondary sources regarding the context of ELCC in Aotearoa New Zealand. The latter of which was partially demonstrated within the literature review regarding Aotearoa New Zealand's ELCC setting and *Te Whariki's* illustrated partnership with Māori culture. Ensuring credibility through prolonged engagement occurs before and during the first phase of analysis, when familiarizing myself with the primary sources of data, which are the two framework documents, and documenting any initial thoughts about potential codes or themes in a reflexive journal (Nowell et al., 2017). Credibility is also ensured by providing thick descriptions of rich understandings of each context by having prolonged engagement with the secondary sources to better understand Aotearoa New Zealand's ELCC setting and reflecting on my own experience in Nova Scotia's ELCC setting (Nowell et al., 2017).

Transferability contributes to the trustworthiness of the research and involves creating thick descriptions of the data for the purpose of transferring these findings or themes to other contexts or research projects (Nowell et al., 2019). Thick descriptions of the data within the

current thesis would be to ensure that both the Nova Scotia and Aotearoa New Zealand frameworks and their contexts are described in significant detail outlining their purpose in their respective ELCC settings. Thick descriptions involve creating extremely detailed descriptions of the context setting so that it can be well understood and interpreted (Geertz, 1973). Normally done in research conducted in physical social settings (Geertz, 1973), this thesis will require me to provide a thick description by describing the context of my experience in the Nova Scotian ELCC sector and the Aotearoa New Zealand ELCC setting through engaging with the previously described secondary sources. RTA is beneficial for ensuring transferability as it requires the researcher to be transparent about their research process through detailed documentation (Braun & Clarke, 2006). Approaching the data inductively supports the transferability of the findings as well because themes are generated directly from the data so a clear process of how codes are interpretated to create themes must be recorded in the reflexive journal to demonstrate this link (Braun & Clarke, 2006).

Dependability relies on the clear documentation of the research process so that it is easily traced and understood by the audience (Nowell et al., 2017). As mentioned before when explaining the purpose of reflexive journals for ensuring credibility, dependability relies on the clear and thorough documentation of the research process, especially when generating themes from codes. Codes should be extracted and confirmed for being relevant across the data set, and it is recommended that notetaking during the entire process of analysis (from familiarizing oneself with the data to writing the report) is essential in developing a thorough account of all themes that can be generated out of the data based on the topic of interest (Braun & Clarke, 2006). In the case of the proposed thesis, an additional step of confirming the relevancy across one document first and then the other will take place and may reveal tensions or similarities.

Therefore, the reflexive journal used to document the process of analysis will support the dependability of the study.

Confirmability relies on the researcher's demonstration on how their findings were concluded and prove that any interpretations made were clearly generated from the data set (Nowell et al., 2017). Confirmability of the proposed research will be presented during the sixth phase of thematic analysis, which is the final discussion of argued ideas and reasons for why the generated themes were found and their relevancy in answering the research questions. Reflexive journaling to create a documented record of the reasons for the decisions made is an essential action to perform throughout the process of analysis to support a well-described report (Nowell et al., 2017). During the analysis a thematic map will be created to support the development of themes and organization of codes to map the relevancy of the themes across the entire data set and make meaning of the themes. The transparency of how I interpret codes to themes while informed by the theoretical assumptions of common worlds and ecological systems theory provides readers with a clear explanation of how I came to these conclusions.

Recursive Process of Analysis

Achieving high quality in RTA is described as recursive process that is continuously reflective and engages with the data attentively (Braun & Clarke, 2019). One aspect of my analysis is to generate a better understanding of how child-nature relationships are constructed in early learning curriculum frameworks. However, I am also asking how these are constructed across cultural contexts and would then need to engage with some degree of comparison of the themes. Since RTA is rooted in a recursive process that supports the researcher in moving back and forth between its phases (Braun & Clarke, 2019), the analytic process itself is a comparative mechanism. It can highlight tensions within the individual frameworks, or the similarities and

differences between the two when their themes are displayed in thematic maps to organize the development of themes. The comparative and interpretative aspects of RTA support the comparison of themes within and between the two frameworks through a reflexive process that moves between stages by reviewing and developing themes in comparing the coded extracts across the entire dataset (Braun & Clarke, 2006). For example, if I were to generate a theme from the coded extracts within the NS ELCF regarding their value of ensuring children have access to natural materials (DEECD, 2018), then I could have the option to go back to the coded data to search for a similarity of difference in notions regarding access to natural materials or natural spaces across Aotearoa New Zealand's curriculum framework.

Themes as Findings

The intention for the outcomes in inductive RTA is the development and presentation of themes as the findings of the research study (Braun & Clarke, 2006; Clarke & Braun, 2017). The purpose of RTA does not intend to develop a theory based on the findings, as is the purpose in grounded theory methods (Vaidmoradi & Snelgrove, 2019). Hence, the rationale for referring to this section of my thesis as 'Methods' rather than 'Methodology' as I do not intend to apply a theoretical framework to the data analysis or generate a theory from the themes developed. RTA is best method of analysis regarding the current research questions for this thesis because I'm not aiming to generate a theory based on how the perspectives of child-nature relationships are presented in early learning frameworks across cultures. Instead, my intention is to reveal a descriptive understanding of the cultural perspectives of child-nature relationships in ELCC frameworks, their motivations for engaging with nature, and if they do or do not express notions of nature-culture inseparability and relationality. I also intend to provide recommendations for those working in the NS ELCC sector on how to enhance outdoor play experiences to be more inclusive based on the generated themes and interpretations I make.

The data consists of two early learning curriculum frameworks from different cultural and geographic contexts where the purpose is to utilize the thorough and specific understandings of the themes to apply in future research for the possibility of transference of the findings in different contexts (Vaismoradi & Snelgrove, 2019). I do not intend to generalize the findings across all contexts, or even the two contexts involved. These themes generated through RTA have the potential to highlight tensions within one framework as well as any differences or similarities between the two. These outcomes could then be applied in other contexts or utilized in further research for a precise understanding of child-nature relationships for ECEs who access these frameworks and implement their values and principles into their pedagogical practice.

Chapter 4: Thematic Results

When conducting a reflexive thematic analysis (RTA), the themes that I have generated from the data through grouping together codes that share core concepts formed the results of the analysis. Braun & Clarke (2022) suggest that the researcher (myself) is diligently recording this process to track my progress and use these recordings to reflect on when generating themes. Braun & Clarke (2022) recommend that when sharing my process of analysis, it is better to share the story about the work that I did from my own perspective, rather than simply list the six steps that were taken. This detailed process has been adapted from my reflexive journal and is what I will share in the following paragraphs, followed by a detailed description of my thematic results that I generated during the analysis of the Nova Scotia early learning curriculum framework (NS ECLF) and the Aotearoa New Zealand early childhood curriculum (ANZ ECC). The themes I have generated are presented in a concentric circular thematic map surrounding *Child stewardship: big responsibilities* at the centre. Moving outward, the subthemes of *Dichotomous motivations of children's responsibilities for nature*, *NS: Beneficial gains from nature, and ANZ: Belonging constructs relations* share interrelated concepts but tension on the focus of reciprocity occur at the intersection of *Human-centred reciprocal relationships*. The two outermost themes of the circle are *Interactions with nature are ideally respectful* and *Exploration of the environment build relationships.* This thematic map was developed into a circular model (see Appendix 1) to better reflect the contexts of holistic and relational frameworks of the NS ELCF and the ANZ ECC.

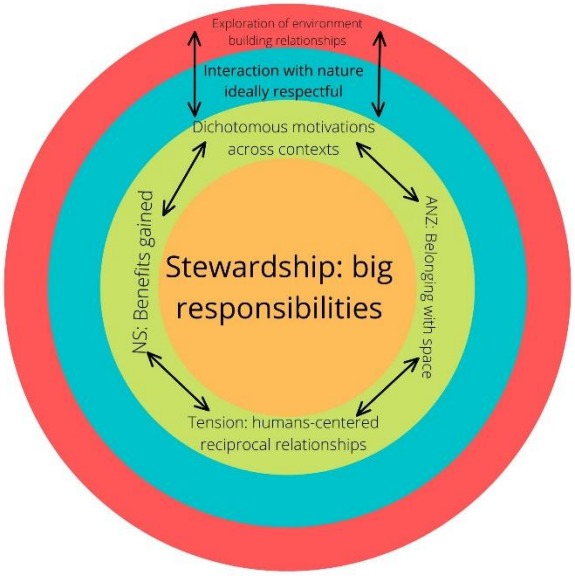

Figure 1. Final Thematic Map (see Appendix 1)

Analytic Process

RTA takes shape through six non- linear steps, meaning that these steps can be repeated if necessary (Braun & Clarke, 2022). These steps were 1) familiarizing myself with the data, 2) generating codes, 3) constructing themes, 4) reviewing potential themes, 5) defining and naming themes, and 6) producing the report (Braun & Clarke, 2022). Please note that while this section is written in sequential order using titles to outline the analytic steps taken, I will discuss that there was a recursive aspect to this process and I often rotated back and forth between generating codes, further familiarization with the data, and generating themes as this was not a linear process.

Familiarization

To begin my process of RTA I started with reading and re-reading the Nova Scotia early learning curriculum framework (NS ELCF) and reflecting on my own experience as a practicing early childhood educator (ECE) and program coordinator in the recent past. During these rereads of the NS ELCF I spent time pulling out initial things that I took notice of that could be potential codes. For example, this excerpt

> "Play spaces in natural environments include plants, trees, edible gardens, sand, rocks, mud, water, and other elements from nature. These spaces invite open-ended interactions, spontaneity, risk-taking, exploration, discovery, and connection with nature." (DEECD, 2018a, p. 32)

I had tagged early on during my familiarization with the NS ELCF because it seemed to point to the concept of nature being a space that offers learning materials, such as natural loose parts, to children. I also read and re-read the companion Educator's Guide (DEECD, 2018b) for the NS ELCF because that document is intended to accompany the framework and provide further support to ECEs in understanding, adapting, and implementing the framework into their practice (DEECD, 2018b). I spent several weeks becoming more comfortable with my own understanding and interpretation of the documents.

Once I felt that my engagement with the NS ELCF was thorough enough for the moment, I moved onto reading and re-reading the ANZ ECC. Since RTA is recursive, I came back to further familiarize myself several more times throughout the entire process of analysis. My process of familiarization with the ANZ ECC framework also required supplementary readings to go along with it, as I do not have the same depth in my understanding of Aotearoa New Zealand's ELCC context. I have not visited the country myself or have the experience in their

ELCC setting like I do in Nova Scotia. I read through the entire *Te Whariki* Online website produced by the New Zealand Ministry of Education as this website was comparable to the Nova Scotia's companion document in furthering the information within the ANZ ECC and provided practical examples to educators. I read several academic journal articles from different authors that centered on the ELCC setting in ANZ and the framework. During the process of familiarizing myself I kept track of the new Māori words I was reading throughout the framework with a personal glossary (Appendix 5). This glossary included the terms in the available glossary at the back of the ANZ ECC (Ministry of Education, 2017), and other Māori words I searched on my own to make better sense of the document. An excerpt from my reflexive journal detailing my engagement with te reo Māori during my first read through of *Te Whariki*, displays my analytical thoughts about the experience:

> Right away I am met with unfamiliar words, which are words in the Māori (Indigenous peoples of Aotearoa New Zealand) language. From my previous read throughs during the process of my literature review, I noticed that Māori language (te reo Māori) is used throughout this entire document and without direct translation, forcing the reader to consider searching for the translation in the glossary or elsewhere, using the context of the sentence/paragraph to understand the meaning of the word, or to simply pass by it and not fully understand. I see this as a way to enhance educators' learning of the language if they are not already familiar because they must actively seek out the meaning or otherwise forgo the meaning. Another point of interest is that since the language is used throughout it does not place Māori language only in a section concerning that culture, as the NS ELCF does with its minimal use of the Mi'kmaw language.

My initial interpretations were already engaging in analytical thinking and a natural comparison between the two frameworks. It was during this prolonged engagement with the ANZ ECC that I started to tag sections of the framework as initial codes from this portion of the data so that when I went back to it with the mindset that I was officially going to code, there would already be some ideas and interpretations started to build upon. One that particularly pulled my attention and caused me to think further about it was

> "Kaiako are cognisant of the concept of tangata whenua and the relationship that Māori have to each other and the land. This guides Kaiako relationships with whanau, hapu and iwi." (Ministry of Education, 2017, p. 33).

This sentence initially made me pause because it signaled that there was an expectation for Kaiako (educators) to be culturally aware of Māori worldviews and their perspectives and treatment of nature. I will elaborate further on this within my discussion of the generated themes.

While engaging with both frameworks to familiarize myself, I did this reading and journaling in my reflexive journal in different locations. I would read in my bedroom or in my shared office space and chat with my colleagues about what I was reading. I would also read the frameworks outside, on my deck, on a hammock, on the grass. I felt that reading in different locations helped me to think differently about what I was reading, as if a change in the environment allowed for me to take new perspectives on the material. I also read different formats of the frameworks; PDF formats, physical copies, and when it came time to start coding, I read them on a data analysis software program, MAXDQA. To help narrow in my focus and try to not overwhelm myself with the large amount and detailed information within the frameworks, I decided to narrow down the sections that I would pay particular attention to in each document based on how often I noted potential codes or if they supported a description of children's

engagement with the natural world. The NS ELCF described the use of natural materials and the benefits of the natural environment within the Principles of Early Learning – Learning Environments and the interdependence and responsibility for the environment within the strategies for the Learning Goal – Personal and Social Responsibility, therefore I interpreted these sections more closely than others as their content was extremely relevant to the questions I was asking. I also knew this to be true from my experience in connecting children's actions and activities to the Learning Goals of the curriculum to share with parents and families through communication apps. The ANZ ECC proved to be more challenging in identifying specific areas or sections to focus on as the descriptions of children's connections with nature, and in what methods this occurs, is threaded in different areas throughout the framework. Though there are certain sections such as the Strands of Belonging and Exploration, that I realized after reading through several times showed a deeper focus on children's relationships with nature and how educators could support it. The accompanying website for *Te Whariki* further indicated that Belonging and Exploration were related to children's engagement with the environment.

Generating Codes

The second step to come was generating the codes within the framework documents. I started to generate my codes by going through the physical copy of the NS ELCF, writing codes and comments in the margins and on sticky notes to flag the sections that I wanted to further interpret and organize into themes. However, after going through the document several times, I found that it was hard for me to visualize the organization of these codes, so I tried to use a digital format for coding. I used a data analysis software, MAXDA to organize my code sets in a strategic format that allowed me to see all the codes at once on the laptop screen while I was reading through both frameworks. I could the connect the codes in the list to the data extracts simply by clicking on the code and the program would present all coded extracts under that code.

The only downfall of coding within MAXQDA was that when you exported the code system it did not link all the coded data extracts with it. Since I had found it helpful before to switch formats because it caused me to look at the data through a different lens, I did so again. This time I transferred my code system and the coded data extracts into a table in a Microsoft Word document and included a column to describe the codes' meanings and the reasons for why I had generated them as a code (Appendix 4). This would become very helpful later on, along with my reflexive journal writing in further interpreting and organizing my themes. Codes are the building blocks of themes, but if I were to leave my code system within MAXDA without making the inductive codebook table, it would have been difficult for me to see how the data was connected to the codes and the driving influence for the generated themes.

It was difficult to know exactly when I should move on from generating codes to generating themes. I felt stuck in coding because every single part of the frameworks seemed so important to me. Which, of course, they are, especially with my history of working in ELCC and aiming to implement the entire framework within various areas of my practice. But in this type of engagement, I needed to keep in mind what my purpose was during with both frameworks, which were to keep my research questions at the forefront of my mind. During RTA, research questions are flexible and can evolve throughout the process (Braun & Clarke, 2022), as I would naturally develop more questions due to prolonged engagement. At this point though, I aimed to keep my questioning in line with my set three research questions because I felt I was becoming overwhelmed with trying to interpret so many parts of these longer documents and that I would exceed my limited time. Referring to Braun & Clarke's (2022) book *Thematic Analysis: A Practical Guide*, reassured me that my concern about how much time to spend in coding was normal, and that if I had reached the point where I was now just tweaking code labels over

actually generating new codes, then I was likely safe to move onto generating my initial themes. Reaching this point in the process of coding had meant that I reached data saturation for the current study's purpose of research.

Generating, Refining, and Naming Themes

I began mapping out my themes and grouping them together based on their shared core concepts. I did this within a Google Jamboard, then found that format to be a bit constricting due to the limited room for movement, which is a reflect of the restriction of colonization of academic practices. I copied all codes onto sticky notes and organized them on large sheets of paper, where I was able to move the codes around into different themes and explore the relations between codes through circular visuals. Repeating this activity in a new format again helped me to look at the codes differently and restructure them. The codes were colour-coded on their occurrence within the frameworks; pink if the codes were only present in ANZ ECC, blue if the codes were only present within the NS ELCF, and green if the codes were shared between both frameworks. I organized codes in this way so that I could highlight the differences and similarities between the frameworks, but also the tensions within each framework itself. For example, there were several codes that were only present within the NS ELCF that all seemed to revolve around the same general concept that nature provided beneficial aspects to children. This will be further discussed in my description of the generated themes. These initial patterns within the codes almost felt final because I had spent so much time in familiarizing myself with the data and generating codes. Except, my further interpretation is a key research tool and I had to ensure that these initial themes were compared back across the entire dataset to check that they were relevant and made sense in the analytic story I was trying to tell. Then after discussing it further with my supervisor, Shane, who assured me he thought I was ready to move on, I was felt ready

to define and name these themes. My interpretations of the data into meaningful codes, and how they came to be themes are discussed in the following section.

Themes

Generated, reviewed, and finally, defined themes are the results of a reflexive thematic analysis (Braun & Clarke, 2022). The themes I generated and interpreted out of the data were in line with answering my research questions. To reiterate, my research questions I intended to explore were:

- How are child-nature relationships constructed in early learning curriculum frameworks across different cultural contexts?
- What are the motivations for children's engagement with nature?
- Is there or is there not a perspective of inseparability or relationality between children and nature within early learning frameworks?

My themes are organized within a circular visual concept that demonstrates how the themes are related to each other (Appendix 1). The themes were generated by grouping codes together that shared core concepts, however, these themes are also related to each other, especially when discussing relationships through Indigenous worldviews, it is difficult and essentially redundant to write about them as if they exist in isolation (Wilson, 2008). This format is similar to how Wilson (2008) positions ideas into the form of a cyclical process to illustrate the interrelation between each part, where when one aspect of the circle changes, the flow to the rest changes as well. Before describing the circular thematic map, it is important for me to acknowledge that in organizing my thesis in a circular visual, my intentions are not to appropriate Indigenous research paradigms (Wilson, 2008), but instead reflect the relational perspective of the ANZ ECC with Māori worldviews and the NS ELCF's holistic approach to their early learning

principles. Compartmentalizing themes for the sake of a Western-lens analysis is an action of a colonized mindset, and throughout my work on this research I have been aiming to decolonize my mindset with the new information I learn about Indigenous research methods, worldviews, and environmental relations.

The thematic map first started out as straightforward and top-down categorization of the final generated themes and the codes that connect them (Appendix 2), after organizing the patterns identified while grouping together the codes in the initial theme development and refinement process (Appendix 3). After writing these out and discussing them in this compartmentalized order, I felt that it did not fully represent what I have interpreted. Instead, representing the themes within a circular map that is visually similar to the concentric circles of Bronfenbrenner's (1979) ecological systems model and Sauvé & Orellana's (2004) interrelated spheres of social and personal development more accurately supports my explanation of how each of the themes are related to one another. At the centre of the concentric circle is the theme of stewardship, *Child stewards: big responsibilities*. Moving outward, the subthemes of *Dichotomous motivations of children's responsibilities for nature, NS: Beneficial gains from nature, and ANZ: Belonging constructs relations* represent the perspectives that were interpreted to be motivations for children's engagement with nature. These themes are all interrelated though I did interpret that there was a tension in relation to *Human-centred reciprocal relationships* within each framework. The two outmost themes of the circle are *Interactions with nature are ideally respectful* and *Exploration of the environment build relationships* and are set on the outer most part of the circular because they both interrelated to each other. These essentially help to organize the themes to tell the analytical story I have generated throughout this research. A visual overview in the form of a thematic map can be found in Appendix 1.

Child Stewardship: Big Responsibilities

The overarching concept at the core of the interrelated themes centers on children in a stewardship role for the environment. Both the NS ELCF and the ANZ ECC's perspectives of children's relationships with nature were interpreted to be rooted in situating children to be responsible for the environment. However, their pathways to becoming responsible – or learning to be responsible – came from differing perspectives. This theme encompasses the core concepts of themes I generated from both frameworks that responsibility is a key part of the perspective on children's relations and engagement with and for nature. This overarching theme displays many of the similarities between the NS and ANZ context.

Theme 1: Dichotomous motivations of children's responsibilities for nature

The shared core concept among the codes that generated this theme were that the NS ELCF and the ANZ ECC have constructed different motivations behind their expectations of children's engagement with nature. The NS ELCF relies on children beginning to explore, discuss, and learn about what interdependency with the environment means as a reason for why children should become responsible actors for the environment (DEECD, 2018a; DEECD, 2018b). The ANZ ECC's motivational aspects for children learning to be responsible and care for the environment is reliant on the concept of Kaitiakitanga, a Māori view of environmental stewardship. Important to note here is that both of their motivations are grounded in that their actions are *for* nature and it's well-being, which from an outsider perspective would appear to be a tension with child-centred curriculums, especially for the NS ELCF, as it describes itself as aiming to centre the environment on children. However, I have interpreted this tension as part of the holistic cycle of child-centred curriculums because the view that their acting *for* the environment, is also acting for the well-being of themselves.

In the NS ELCF, humans and nature are framed as being interdependent on each other. For example, the *Learning Goal – Personal and Social Responsibility's Strategies for Objective #5: Children become environmentally aware and show respect for the environment* (DEECD, 2018a), many of the strategies listed rely on children understanding the interdependency between humans and the environment through their interactions with their surrounding worlds. For example, this is an excerpt from the strategies list:

> "[This is evident when children] explore, infer, predict and hypothesize to develop an increased understanding of the interdependence between land, people, plants, and animals, develop an awareness of the impact of human activity on the physical environment, and develop an awareness of the interdependence of living things" (DEECD, 2018a).

This then infers those children in ELCC programs should have consistent and regular access to nature. I understand from my experience as an ECE that not all ELCC spaces have access to the green spaces that we would initially imagine as nature, such as natural, wild landscapes. Therefore, the framework can be seen as an aspirational document for educators to adapt their practice and their early learning environments in line with to provide regular access to nature through various means. Access to nature can be through many methods.

Willis' (2011) notion of re-storying our narratives with nature to reflect that the natural environment is always impacted by humans supported my interpretation in better understanding how the NS ELCF may intend for children to have access to natural environments is not necessarily expected to be within these wild settings. Children do not need to have contact with wild spaces all the time to develop a connection to nature (Coe, 2016), but I would argue that not every ECE may realize this if there is the pressure to be outside and 'reconnecting' with nature

that is the mainstream narrative now, as if we were ever separated from nature. Therefore, this underlying expectation for children to become responsible for the environment would require regular access to nature. The *One Chance to Be a Child* report indicates that 80% of homes in the province of Nova Scotia can access green space at least 10 minutes from their home and that greenspaces need protection for continued use (Department of Pediatrics and Healthy Populations Institute, 2022). ELCC programs were not included in this statistic, so we are unaware of the amount that the greenspace are currently used by those in the ELCC sector.

The ANZ ECC's perspective of child-nature relationships encourages children to be responsible in caring for the environment as a key part of their relationship with nature. Their perspective differs from the NS ELCF in that their responsibility to the environment is tied with Māori cultural worldviews of environmental stewardship. The framework refers to Kaitiakitanga being encouraged, which is a method of sustaining the environment through a Māori worldview of protecting the environment and being guardians of the land, as demonstrated through cultural stories and values.

> "Kaiako encourage a sense of kaitiakitanga by providing children with regular opportunities to connect with the wider natural environment and with materials drawn from nature." (Ministry of Education, 2017, p. 50)

I interpreted this as a motivation for children's engagement with nature. Their engagement is often to learn to protect, be responsible in caring for the environment because of our relation to the land. *Te Whariki* involves Māori worldviews to frame their guidelines around children's responsibility to the environment. Historical, cultural, and spiritual relations between humans and the land are central in these passages, indicating that Māori worldviews of human's relationships with land are holistic and involve more than just protection for the earth, but for

spiritual, cultural, emotional health of humans as well. This is similar to my interpretation of the NS ELCF's motivational feature of the interdependence between humans and the environment, as each of these frameworks are being interpreted as being responsible for the environment for nature's well-being, but also for the benefit and well-being of those who rely on it.

An important difference to consider is that the ANZ ECC includes the specific Māori spiritual and cultural ties to the land as part of the responsibilities to care for nature and through their belonging to the land, themselves. On the other hand, the NS ELCF focuses on a more general approach with the interdependency of all life and does not tie in Indigenous Mi'kmaq connections to land when referring to responsibilities for caring for nature. Instead, the NS ELCF focuses generally on how humans rely on the natural environment and vice versa, therefore children should be responsible for learning to take part in our collective well-being. I struggled with trying to determine the differences between the concept of relationality and interdependency as they appear to be closely related to each other. This was why I initially saw Nova Scotia and Aotearoa New Zealand as having many similarities between the two ELCC frameworks and struggled to see the differences beyond that obvious strong inclusion of Indigenous worldviews presented in *Te Whariki*. Interdependency can be defined as the dependence of two or more people or things on each other (Merriam-Webster, n.d.), which approaches the concept of nature stewardship with a focus on reliance and leans towards scientific facts of living with other species. Relationality refers to connectedness, a view of the world that underlines how no person or thing exists in isolation (Wijngaarden, n.d.), because existence necessarily means being 'in relationship'. The ANZ ECC looks at nature stewardship through the lens of Māori worldviews that value the connectedness between the people and the land through spiritual, emotional, and community-based pathways, not only the reliance they have upon it.

Theme 2: Nova Scotia and beneficial gains from nature

What can nature do for me? How can nature provide beneficial factors for children and in what ways? That's the underlying question the NS ELCF appears to ask and answer in their descriptions of children's and engagement with the natural environment as a setting and as a resource. As in Ernst & Burcak's (2019) study, the relationship between children and nature is viewed as characterizing nature, with its resourceful setting and natural materials, as part of a beneficial relationship in favour children's learning opportunities.

> "Outdoor learning spaces are an important feature of children's learning environments. They offer a vast array of possibilities not available indoors. Play spaces in natural environments include plants, trees, edible gardens, sand, rocks, mud, water, and other elements from nature. These spaces invite open-ended interactions, spontaneity, risk-taking, exploration, discovery, and connection with nature. They foster an appreciation of the natural environment, develop environmental awareness, and provide a platform for ongoing environmental education." (DEECD, 2018a)

I had coded often throughout the NS ELCF that nature is viewed as being beneficial to children as both a *resource* due to its unique materials that are not always available indoors, such as trees and streams, but also as a *setting* in which children use a backdrop for their play and their exploration of its features. Each of these codes generated my interpretation that the outdoor environment and nature is valued considerably high on the condition that it provides some type of beneficial learning opportunity for children.

I should mention that this is the same for indoor learning environments as well. The NS ELCF positions that indoor and outdoor environments are more effective in providing children

with meaningful play-based learning opportunities when they are thoughtfully and intentionally planned by educators who have observed children's activities and adapted the environments based on these observations (DEECD, 2018b). The intention of any learning environment is to be a part of the holistic mechanism that supports the child's progress of growth in learning and their well-being. The intentional planning of the outdoor environment was another meaningful code that I generated across the entire NS ELCF document.

This is reflective of a child-centred approach to early learning which the DEECD (2018a) clearly states that learning environments are child-centred and bases on children's interests. I have experienced this myself working as an ECE, in making sure that the outdoor environment included materials that I observed children working with for lengths of time or expressing joy when using them. Even with natural materials, they were used for children's benefit. Since our playground lacked natural elements and materials, I specifically went out and found pinecones, mushrooms, bark, fallen branches, and moss to place around the playground for the purpose of children to find. I was new to the ECE field, and this was during my ECE Level One course where I was required to complete an outdoor activity with children. I created a scavenger hunt and found that children were more motivated by their excitement in finding novel natural materials than following the scavenger list sheet. However, my point is that my activity was aimed to benefit the children's experience and to demonstrate how their play with natural materials can spark joy, curiosity, and discovery. My focus was not on how their relationships to these natural items were generated other than my strategic and artificial placing of them on the playground.

Looking back on my activity along with the curriculum framework and through the lens of a common worlds approach (Taylor & Giugni, 2012), I am beginning to understand how my

early learning experiences illustrate how the focus on the benefits to children from the natural world/materials as a setting and resource could limit children's and educators' recognition and deeper engagement with their nature-relationships. This is because nature is not as heavily emphasized as part of the reciprocal relationships in ELCC from the framework. Nature is included in the framework's interdependent relationships when it describes how children become socially and personally responsible through their awareness and respect for the environment. However, throughout the framework, more weight is given to humans' reciprocal and interdependent relationships which evokes a sense of human-centredness within the curriculum. The relationships are expected to be as responsive and reciprocal but are largely intended between humans (ECEs to children, families, communities), but might also reveal the broken link within the web of interdependent relations between humans and more-than-humans (Taylor & Giugni, 2012) because without de-centring the child from the focus it could be difficult to engage in collective action for the well-being of the whole environment.

What is most significant about the intentionally planned environments was about who the learning environment was planned for. As mentioned previously, the learning environment centers the child (DEECD, 2018a) as this is a unique space meant to support children's growth and development. However, the concept of an intentionally planned environment causes some tension when combined with the NS ELCF's strong notions of respect for the environment. I've interpreted their respect for the environment and its interdependency with humans as being a part of their reasons to be responsible and care for the environment. Caring for the environment is commonly conceptualized through Leave-No-Trace principles, which implies that nature spaces and elements are left as they are, or untouched and wild as Willis (2011) would call it. Intentionally planned spaces require educators to adapt environments to enhance their ability to

support educators in building relationships with children (DEECD, 2018a), which contrasts with the prominent concept of being respectful actors or stewards with the environment that shapes the main perspective on children's relationship with nature.

This internal inconsistency demonstrates a pull occurring in the NS ELCF that illustrates that the current perspective of nature aims to both modify nature to provide positive learning opportunities and protect it from destruction or harm. These two notions create a tension and the meaning of how nature is expected to be engaged with has several faces. In terms of being inseparable from nature this tension shows that the NS ELCF is relatively undecided in their role with nature. Even their concept that interdependency with nature is a reason to care for it is rooted in favour of humans due to these beneficial learning components provided, and these can be adapted to cater to children. Therefore, nature is still separated from children, the relational understanding between them severed by learning objectives learning *about* and *for* the environment, but not connecting with it culturally or with a sense of belonging. The separation between children and nature further promotes environmental education that focuses on learning about nature with distance between the learner and the subject (Taylor, 2017).

The environments that children spend time in and interact with have a profound effect on their development, as seen in Bronfenbrenner's ecological systems theory (1979), where different environments of the child's life interact and affect the child, along with the actors within it. Therefore, the child's relationship with nature is affected by the contextual setting they are exposed to in their regular ELCC space.

> "They [outdoor learning environments in natural spaces] foster an appreciation of the natural environment, develop environmental awareness, and provide a platform for ongoing environmental education." (DEECD, 2018a).

This sentence comes immediately after the description of the natural space as setting and resource for children's learning, so I am seeing children's access to natural materials and environments as the prescribed method of building awareness about the environment. Not covered in this thesis is how ECEs currently perceive outdoor play and how often it occurs. From Munroe & McLellan-Mansell's (2013) study, educators in First Nations communities in NS experience barriers to outdoor play in various forms, such as being short-staffed or weather and safety concerns. These barriers educators perceive about outdoor play could be a limiting factor in children's access to outdoor play and nature and would ultimately limit their knowledge and awareness of environmental education that the framework aims for.

I have interpreted that natural materials are intended to be beneficial to children's learning because of their inclusion in the list of elements and aspects of nature that support children in having an appreciation, awareness, and knowledge of the environment and sustainable practices (DEECD, 2018a). While that might initially appear to be a surface level observation, I think that it goes deeper than that because the materials provided in all spaces in ELCC settings described as child-centred are intended to be tailored to children's interests and their needs (whether this be emotionally, physically, etc.). It implies that the earth is offering something to us. Nature has to offer something beneficial to the community/child for it to be considered part of a high-quality learning environment.

In terms of what could potentially be changed in the NS ELCF, my critical thoughts are stemming from the common worlds lens (Taylor & Giugni, 2012) that for educational practice to be more inclusive and involve more cultural values and responsiveness (e.g., Indigenous – Mi'kmaq values of living in relation with the land). Nature's role within the curriculum needs to be further emphasized as part of the reciprocal relationships in the curriculum, and not only to be

recognized for its role as a beneficial resource for play and learning or in sustaining an interdependent relationship with humans. The intentional inclusion and stronger involvement of the natural environment within the framework's description of valued relationships may work towards resisting the division and separation between children and their full engagement and relationship with the natural world (Taylor et al., 2021). This provocation for reflection for those revising the NS ELCF will be further explained when discussing the theme of human-centred reciprocal relationships and in the conclusion.

Theme 3: Belonging constructs child-nature relations in Aotearoa

The core concept within *Theme 3* surrounds the notion that belonging is an underlying foundation of the ANZ ECC framework's desired relationship for children to have with the natural world. This theme is unique from the rest as it is the only theme consisting of codes that were only present within the ANZ ECC, meaning that there was no sense of belonging with the environment interpreted within in the NS ELCF. Furthermore, nature is viewed as something that children can feel a sense of belonging with.

> "Belonging | Children know they belong and have a sense of connection to others and the environment. Mana whenua | Children's relationship to Papatūānuku is based on whakapapa, respect and aroha" (Ministry of Education, 2017, p. 32)

Belonging can be defined as a "close or intimate relationship" (Merriam-Webster, n.d.). The sense of belonging, as compared to interdependence places more emotional depth into the relations between children and the environment than is portrayed in the NS ELCF. Having the sense of belonging within a space indicates that a child may feel closely connected to nature through their social or emotional being. Warden (2019) describes her own definitions of being inside as the emotions and thoughts of the inner self which is

connection to our outside. The outside "represents our relationship with others, the living and the non-living aspects of the planet that we encounter" (Warden, 2019, p. 8). This representation of being in and outside in relation to the self and relationships with others supports the sense of belonging children may feel within themselves and tie them to nature and their community if educators support this approach.

We often feel that we connect with nature when we spend time outside in natural spaces doing simple activities such as being present in the space or being active in that space, reflective of the now popular concept of *friluftsliv* (Gelter, 2000). However, that simple connection can often feel like skimming the surface of something more complex. Feeling like you are a part of the environment and not an outsider reflects a perspective of inseparability with the environment because when you feel like you belong in a space (Warden, 2019), you start notice more about the world around you and how you interact with it. To feel as if you belong with nature is foundational to having a relationship with the space. The ANZ ECC framework encouraging educators to provide opportunities for children to form a sense of belonging with the environment can build foundations for children to have a relationship not only with themselves, but also with the land. Sauvé & Orellana (2004) understand that our identities are constructed with the environment through interrelated spheres of our relations with it, and all other living things in our shared world. Developing a sense of belonging with natural environments and others, such as the ANZ ECC suggests, holds the potential for children and their educators, families, and communities to further recognize our inseparable relations with nature. In comparison to the NS ELCF, the concept of belonging with the environment may support a further understanding of respect and interdependent relations, not only for our own benefit, but as a collective and shared world.

I have interpreted that every time the ANZ framework refers to the child-land relationships, educators are being encouraged to recognize it in practice and educate themselves to build on their awareness of how Māori culture values the natural world through their ancestors and cultural stories. Encouraging educators to understand and incorporate the cultural connections Māori people have with their land in Aotearoa into their ECE practice reflects the notion that humans and more-than-human others cannot simply be separated (Taylor & Giugni, 2012; Willis, 2011). This is especially relevant as I'm interpreting that caring for the land as their ancestors (kaitiakitanga) is a strong motivator in encouraging children to interact with the natural world with respectful and caring actions (caring for plants, wildlife, etc.)

Thinking with a common world lens (Taylor et al. 2021), I'm interpreting that *Te Whariki* is encouraging educators to think about how they can connect children with nature not only for their health and well-being but to provide them with the opportunity to connect with nature through Māori cultural knowledge and histories as well, which would represent a holistic connection between all parts of the self. Respect for the land is especially connected through their ancestral stories of Papatanguata and Ranguini, and when children can connect through their culture, especially on a collective level there are more ties to nature that they can make meaning of. Children who feel that they belong in their ECE spaces, and their community will feel safe, secure, and accepted which allows them to be confident and strong in their wellbeing. This section of the curriculum engages with the interconnection between Māori worldviews and culture and their respectful connection with the natural environment. The following sentence demonstrates that the curriculum constructs an image of children's relationships with nature as being an inherent part of the valued Māori culture and important to the wellbeing and belonging of all children living in Aotearoa New Zealand:

> "Respect is shown for Māori views of the world, the natural environment, and the child's connection through time to whenua, atua Māori and tīpuna. The identities, languages and cultures of Pasifika children are strengthened by acknowledging the interconnectedness of people, place, time and things." (Ministry of Education, 2017, p. 31)

This cultural connection with the land is also demonstrated as being partnered with the protection and stewardship of the land because of these sacred connections. It does not appear to be simply for the health of humans, but also for the land itself with importance to keeping culture and spirituality alive. For example, the curriculum describes observing the child developing "skills in caring for the environment, such as cleaning, fixing and gardening" (Ministry of Education, 2017, p.32) as a way to show that they know that they have a part to contribute in taking care of that place. It also describes educators observing children demonstrating their "knowledge about features of the local area, such as a river or mountain (this may include their spiritual significance)" (Ministry of Education, 2017, p. 32) which connects their culture, history, and society to the land in relation to why they should be protecting it. Environmental connectedness is interrelated with cultural identity and children's belonging to their place, land, culture in the ANZ ECC.

Theme 4: Human-centred relationships

Across the NS framework, human-human relations were given substantially more focus than those of human-nature relationships. This does not necessarily indicate that the child-nature relationships are not valued within frameworks, but that there is a more immediate focus on children's needs and interests first because ELCC environments are unique places that centre children within their community settings to support their holistic development. The ANZ ECC

also focuses on their explicit discussions of reciprocal relationships with mostly human others, however their concept of belonging includes children's connections with "people, places, and things" (Ministry of Education, 2017, p. 24) which I interpreted as including more-than-human others and the natural world because of the frameworks indication of Kaitiakitanga. However, the term 'things' is not the same as 'being', leaving a slight separation to nature because of the objectification narration of 'things' over the relational concept of 'beings'.

NS and ANZ promote ideal relationships as being responsive and reciprocal, which are mostly between humans. The ideal relationships include educators being responsive to the children and their families and communities, seeing as these documents are intended to help in guiding their practice which includes communication and relationships with these stakeholders.

> "Responsive learning relationships are strengthened as educators and children learn together and share decisions, respect, and trust. Responsiveness enables educators to respectfully enter children's play and ongoing projects, stimulate their thinking, and enrich their learning." (DEECD, 2018a, p. 39)

Centring children within the framework only makes sense, considering these frameworks are guiding documents for those working in ELCC programs. Except, truthfully, I was surprised that I did not interpret the ANZ ECC to have a more inclusive relationship with nature immediately because I knew before reading it in-depth and repetitively that *Te Whariki* was considered a bicultural curriculum with both Western-settler perspectives and Indigenous Māori perspectives. This labelling made me assume that there would be explicit evidence that children were expected to be in reciprocal and inseparable relationships with the environment. I would argue that *Te Whariki* does imply that through their encouragement of respect and responsibility for nature through cultural values and educators expected cultural awareness and actions. However, I have

interpreted that there is an internal inconsistency between the human-centered perspectives on ELCC and the inclusion of Māori values of children's stewardship and belonging with the land within the ANZ ECC. Though the ANZ ECC does state that relationships between children and place should be reciprocal, it does not necessarily mean nature, as it could be interpreted as many different places.

> "Curriculum and pedagogy recognize that children learn through responsive and reciprocal relationships with people, places and things." (Ministry of Education, 2017, p. 60)

The ANZ ECC highlights children's interactions with nature through caring for it, through their responsibility and respect. As mentioned before in *Theme 2* about the NS ELCF's aim to gain benefits from using nature, these responsibility-based practices don't immediately connect children to the environment in inseparable ways. Therefore, without the consistent recognition of belonging with the land in relation with it, it can be more difficult to identify the connection beyond skimming the surface. Communities and relationships also involve more than human others (Taylor et al. 2021), though humans are a focus when it comes to encouraging reciprocities amongst ourselves within both the ANZ ECC and the NS ELCF. This is similar to the NS ELCF's explicit focus on human-human relationships. Nature is more likely to be identified as less than humans due to the NS ECLF's lack of Indigenous Mi'kmaq valued content, connection to land, and sense of belonging. I want to carefully address that in inviting those who work on the revision of the NS ELCF to rethink their perspective of interdependence and work to think about children not in separation from nature, but in a collective relation with it, that Mi'kmaq relational worldviews are involved through collaboration and partnership with

Mi'kmaq people and not simply added in without consultation. The addition without collaboration and respect would be appropriating cultural beliefs.

From my experience in the ELCC setting, the relationship between educators, children and families is highlighted and focused on. Even in the outdoor play setting we are focused on our relationships with children. I worked very hard to continue the responsive and trust-based relationships with children outside such as entering their play when invited, offering them materials, scaffolding their play ideas, and simply just being present and talking with them when they wanted to. But trying to engage them with nature could often be difficult as the playground lacked big nature (e.g., many noticeable natural elements) so we needed to pay closer attention to the environment.

A possible change to enhance future practice in ELCC could start with the framework including their description of the environment within our relationship web along with families, communities, educators, and children. The framework speaks of children's responsibility to care for the environment because of interdependence on each other, but I am recognizing here that the connection between caring and interconnectedness with the environment is understanding how our relationship to the environment fits in reality and this can be strengthened. A narrative change may be needed.

Theme 5: Respectfulness characterizes interactions

The majority of references to children's interactions with nature within both frameworks are reflective the concept that children should consistently be encouraged to interact respectfully with nature by their educators. Similar to *Theme 1*, the ANZ ECC is consistent in weaving in Māori worldviews regarding children's interactions with nature.

> "Kaiako [(educators)] develop understandings of how children and their whānau make sense of the world and respect and appreciate the natural environment. Children may express their respect for the natural world in terms of respect for Papatūānuku, Ranginui and atua Māori. Kaitiakitanga is integral to this." (Ministry of Education, 2017, p. 46)

Children's opportunities to learn about sustainability and nature are guided through Māori worldviews and are tied to cultural stories. Nature is highly valued throughout the framework as it is constantly referred to as something to be protected. However, another layer is added to why educators and children should care for the environment; Māori ancestors are sacred and deeply connected with the earth through creation stories (Kaitiakitanga, n.d.; Ministry of Education, 2017). This value supports a view of nature as being closely connected to culture.

NS ELCF highlights respectfulness with nature when children are learning *about* the environment and learning *for* the environment – they are rooted in having a responsibility to the environment, again framing that environmental stewardship approach. Respect for the environment then comes when children have the opportunity to learn about it, though this must occur through access to nature.

> "Outdoor play cultivates a respect for the environment, and allows children to experience their natural environments in a first-hand and concrete way, and to understand their roles and responsibilities in taking care of our world." (DEECD, 2018a, p. 53)

From this excerpt, it is suggested that children will learn respect through contact, experience, and hands-on opportunities that allow them to connect with the environment they will have a responsibility to respect. The following excerpt demonstrates the same underlying assumption.

> "Educators foster children's capacities to understand and respect the natural environment and the interdependence between people, plants, animals, sea, and land." (DEECD, 2018a, p. 37)

Thinking with a common worlds lens (Taylor & Giugni, 2012; Taylor et al. 2021) about these concrete and experiential methods meant to generate respect for nature from children acknowledges that these practices of engagement with nature demonstrate children could be learning *about* and *for* the environment through interacting with it. Without the sense of belonging that the ANZ ECC encourages educators to support children in developing, children in ELCC programs in Nova Scotia may not be inseparable with the environment. This is because that relational mechanism of feeling that they not only respect the space but belong within it is not currently a guiding message in the NS ELCF.

Theme 6: Exploration builds nature relationship

The final theme refers to the development of children's relationship with nature and how each of the frameworks are encouraging the method through which this occurs. It is essential to identify here that regardless of the type of child-nature relationship each framework constructs, they do construct a perspective of this relationship either directly or indirectly. As discussed within *Theme 1: Dichotomous motivations of children's responsibilities for nature*, the frameworks share a motivation behind their relationship with nature that is being responsible to care for the environment. However, there are tensions between the frameworks motivations for their responsibilities to the environment due to the NS ELCF focusing on interdependency

between humans and nature and the ANZ ECC's motivation of cultural and spiritual ties of relationality and belonging with the land. I interpreted that both frameworks aimed for children to gain knowledge about the natural world through educators providing children with access and opportunities to interact with it. Through this exploration children should have the opportunities to make sense of the environment and involve themselves in unique play experiences with the natural environment.

> "[Children] Use play to investigate, propose, and explore new ideas about their environment—including indoor and outdoor environments, clean air, water, and the planet." (DEECD, 2018a, p. 74)

Unique to the ANZ context is the notion that children explore the natural world for the purpose of understanding and making sense and meaning of nature. This mean-making is tied to scientific, spiritual, and cultural ways of gathering information about nature. While both frameworks indicated exploration as a factor related to nature as a way for children to benefit through more learning opportunities, *Te Whariki* also indicates that children's exploration is a method of them making sense of the world – which when coupled with the strong Māori worldviews on nature in the framework shows how exploration of nature and the environment can support children's developing sense of their identity and belonging.

> "Curiosity and the ability to inquire into, research, explore, generate and modify working theories about the natural, social, physical, spiritual and human-made worlds." (Ministry of Education, 2017, p. 47)

This reflects Sauvé & Orellana's (2004) interrelated spheres of personal and social development in that when children are supported to connect with their environment through both

their own individual exploration through play and learning and a collective connection of learning about respect through cultural and spiritual values, they are working to construct their own identity in relation to the environment and their peers and community.

I have interpreted that the NS ELCF considers children's play with natural materials and elements to support them in learning *about* nature. For example, learning scientific facts about how water moves, etc. The missing link is the relationships that are built through emotional, spiritual, and a sense that they belong as a part of the environment to understand it. Like Willis' (2011) call to re-story human's narrative with nature from something vast, wide, and inaccessible to smaller, closer, more accessible parts of life, children's exploration of nature in ELCC can reach both conceptualizations depending on their context. Exploring the environment allows children to practice their skills and become familiar with their surroundings. The frameworks of both NS and ANZ articulate that exploration of the natural world opens further possibilities into children's learning and building on their knowledge each time they engage with it.

Chapter 5: Discussion

The purpose of this discussion section is to situate the results of this thesis into the literature and how it can contribute to the field of knowledge relating to ELCC, child-nature relationships, and ELCC frameworks across different cultural contexts. I want to preface this with a discussion of how the remainder of my writing in this thesis is structured, reflect on the organization of my thematic results, and describe how this work has been a part of my process of changing my way of thinking about child-nature relationships and working towards decolonizing my mindset.

The structure of my writing has been intended to reflect a more relational method of presenting the findings of my analysis with the established field of literature, and to demonstrate that merely reporting thematic results without discussing them at length does not support my interpretation and subjectivity as a research tool (Braun & Clarke, 2022). The thematic results section included discussions connecting my findings to the literature that informed me throughout the analysis, and how the themes were interrelated. This presentation of my results was purposeful where some provocations I extend to the ELCC stakeholders were discussed immediately, as it reflects that not all qualitative research can be so early compartmentalized. I have analyzed the ANZ ECC, which reflects Indigenous Māori worldviews that are relational and cyclical processes (Ministry of Education, 2017) and the NS ELCF that views itself as being holistic, where each section of the framework must be supported by all the other sections (DEECD, 2018a).

Relational and holistic approaches would view every part as related to the other (Wilson, 2008), and this current discussion section is entirely related to my process of analysis and thematic results, as well as the former introduction, literature review, and methods that I wrote

prior to analysing data and reporting results of my research. Describing the cyclical process of analysis through a linear structured section, as well as the separation of the results and this succeeding discussion section is ironic because I am actively trying to look through the lens of cyclical relations to nature, and therefore data as well. Fitting the interrelated themes that I generated into a separative writing structure demonstrates the tension between my own learning experiences within Western-colonized worldviews and the current process of rethinking and restructuring how to present these themes so that they accurately reflect their meaning. This process is shifting my thoughts on how to present research within the limited outlines of this master's thesis. Even within the presentation of my themes, I needed to separate codes and themes based on shared core concepts to tell an analytical story (Braun & Clarke, 2022), a part of my chosen method of analysis. However, actually separating the codes entirely was challenging because many of the codes were related to each other in one way or another. For this reason, I adjusted the thematic map to better reflect the relations between each of the themes through the concentric circle model of the thematic map (Appendix 1).

Shawn Wilson chose to partially write his book *Research is Ceremony: Indigenous Research Methods* (2008) in a narrative directed to his children to reflect the relational accountability of writing or speaking to someone as if you have a direct relationship with them, as opposed to an anonymous reader. Since I have only recently read Wilson's book during the analysis of my data, I will not be writing directly to someone I know within this section, because I would be changing my narrative entirely and create an inconsistency in my method of communication. Though as a student who has been working through the process of decolonizing my mindset within my academic work, I have decided to use this discussion section to demonstrate the shift in my understanding and decolonize the way that I think about child-nature

relationships through ensuring that I am speaking of my findings as a whole and demonstrating their interconnection.

My process of reading, writing, researching, and analyzing for this thesis has created a significant shift in my own thinking about child-nature relationships in terms of colonized perspectives and how those with certain privileges can work to become critical of themselves, the structural factors that disconnect or connect children with nature, and their own position in relation with nature. As mentioned previously in this thesis, I am a young white woman coming from a middle-working class family. I have the privilege of this position, and because of that, I have engaged with nature through a Euro-Western lens. I am also in the process of unlearning the mindset that nature is a separated, binary construct that can either be protected or used for its resources. Because of the engagement I had with the literature compiled of authors and researchers of various backgrounds, I am beginning a new learning of culturally appropriate and responsive perspectives and ways of interacting with a diverse range of humans.

Throughout the process of this thesis, I have come from identifying nature as a celebrated, beneficial resource and setting for children to play in and learn from. In my experience as an ECE, reconnecting children with nature was part of a holistic lifestyle to value within the ELCC setting but 'reconnecting' with nature seemed to always involve barriers of reaching nature. My perspective is shifting to recognize that children (and all humans, no matter their age) are always tied to nature through our relational and interdependent relationships (Wilson, 2008; Willis, 2011; Taylor & Giugni, 2012; Taylor et al. 2021), which supports a more accessible mindset in reaching nature, whether it be a wild space or close to home. Children and nature are inseparable and impact the other either directly or indirectly (Willis, 2011). With my understanding shifting to this perspective informed by common worlds approach (Taylor &

Giugni, 2012; Taylor, 2017; Taylor et al. 2021) to ELCC, it is also essential that I acknowledge that many Indigenous groups have shared these perspectives, long before those in privileged positions began to understand that the separation between nature, society, and culture is harmful for our health and wellbeing, along with the environments.

Selecting the ANZ ECC as a comparative framework to be analyzed alongside the NS ELCF was based on the knowledge that *Te Whariki* was considered a bicultural curriculum with the settler and Indigenous Māori cultures woven throughout the framework (Ritchie, 2015). My understanding of the context of New Zealand and my process of coming to recognize it as Aotearoa New Zealand evolved throughout this process as I engaged longer with the framework and *Te Whariki* website. My engagement with the ANZ ECC pushed me to read and interpret the NS ELCF through a different perspective and search for further meaning in the connection of nature and culture. Here is the thought process that brought me to my conclusion in how I would refer to Nova Scotia in reference, through an email sent to my thesis supervisor:

> "I have been reviewing my thesis proposal over the past week and I've just now noticed that throughout the whole document I have been referring to Nova Scotia, obviously as Nova Scotia. When I introduce the New Zealand context, I begin by calling it New Zealand. When *Te Whariki* is brought in, I refer to it as Aotearoa New Zealand because their bicultural framework does. So now I am in a bit of a limbo in trying to decide on if I should go back through the proposal and change how I refer to both contexts by their colonized names. However, when I reflect on that I realize that Nova Scotia is only a portion of land that is Mi'kma'ki and referring it 'Mi'kma'ki Nova Scotia' may be confusing as to where I am referring to. The NS Early Years Curriculum Framework also does not use Mi'kma'ki in the same way or

> capacity that *Te Whariki* does with Aotearoa, and I wonder that if I were to remain calling it Nova Scotia then I might further highlight a difference between the two contexts and their representation of Indigenous culture in the curriculums. Having said all this, I also think that going back and changing my language from the first part misrepresents my learning through this writing process. I do believe that these are important aspects to highlight because traditional Indigenous knowledge is heavily related with the land."

Through this thesis I have grappled with my understanding of what mainstream constructions of child-nature relationships has been. The generated themes have demonstrated to me that when cultural connections to land are not present in the framework, it is more challenging to understand, as an ECE, how to support children's relationships with nature beyond protecting it or using it for our own benefit.

In answering my research questions, the themes interrelate with each other to answer my three research questions as a whole. The research questions aimed to explore 1) how early learning frameworks across cultural contexts constructed child-nature relationships, 2) what motivates children's engagement with nature, and 3) if there is or is not a perspective of inseparability between children and nature. It is clear from my interpreted themes that both the Nova Scotia and Aotearoa New Zealand early learning frameworks construct their child-nature relationships through a focus on children's engagement with nature with environmental stewardship approaches. While this is a similar approach that is rooted in responsibility to care for the environment, there is a dichotomy between each context's motivations for stewardship. The NS ECLF looks at the environment in relation to children as being an interdependent and important beneficial aspect of life that children should take part in caring for. The ANZ ECC

roots their care for the environment with cultural values of the Māori and is closely tied to their knowledge of their ancestral relationship with the land. The concept of Kaitiakitanga is viewed as the protection and guardianship of the environment because Māori believe that there is a kinship between all things in life (Kaitiakitanga, n.d). The differences between the contexts' approach to stewardship demonstrates the worldviews that are most strongly valued in each of their cultural contexts. The Māori are the Indigenous group to the land in Aotearoa, and the culture has become more prominent in their government produced documents. In Nova Scotia, our worldview of nature represented in the ELCF has not been directly tied to any specific culture, let alone recognize the ties between the Indigenous Mi'kmaq people and the portion of the land in Mi'kma'ki that we now call Nova Scotia. The NS ELCF includes descriptions of the history and contexts of the four founding cultures of the province within the section outlining the communities, cultures, and families living in the province (DEECD, 2018a). Aside from a brief sentence identifying having access to land as being part of accessing culture for Mi'kmaq people, cultural connections and even the acknowledgement of how deeply embedded nature is with culture is not currently present in the NS ELCF or how this relates to children's nature play. Even the term 'interdependence' that is used is coming from a Western scientific approach that looks at the relationship through a dualist lens. Interdependence means to be mutually dependent on another (Merriam-Webster Dictionary, n.d.), though this concept is not inclusive of the interrelated web of beings that are connected in many different ways through social, cultural, political, and physical ties (Taylor, 2017). In comparing these two different contexts, this indicates that Nova Scotia's ELCF may be able to look to the ANZ ECC as an example to begin to introduce stronger collaboration and partnership with Indigenous Mi'kmaq people.

Weldemariam et al.'s (2017) work on how ideas about sustainability are presented in early childhood curricula across different cultural contexts had been a central prompt for my research questions because the Nova Scotia ELCF credits the Australian framework, which was included in their study, as an influential document used during its creation (DEECD, 2018b). Weldemariam et al. (2017) found that that Australia's early childhood curriculum best represented humans' relationships with nature as strongly intertwined with each other. Interconnection between the physical world, human world, and the other living things within them were identified as reasons to respect the environment (Weldemariam et al., 2017).

While I have not analyzed the Australian framework in depth like I have with the NS ELCF, the themes I generated indicate that the NS ELCF has shown that there is an understanding that humans are interconnected with the natural word. However, the relationship between children and nature are guided through values of respect for the environment based on our interdependence with it. The tensions associated within the NS ELCF reveal that while educators are guided to encourage children to respect nature based on our interdependence with the natural world, I have interpreted that the motivations for respect come from the direct or indirect benefits of using nature and the outdoor environment as a positive setting and resource for children's learning and play opportunities. This may be represented as a double pan balance scale, where the natural world and children and educators are placed on opposite sides. The more we *use* nature as a resource and setting without acknowledging and understanding how complexly intertwined we are with all living and non-living things in life and how these relations work to shape each other (Taylor et al. 2021, Sauvé & Orellana, 2004), we become further separated from the environment and keep an outsider view.

The concept of interdependence may evoke an image of living in harmony with the environment, but as Taylor et al. (2021) argues, the picture-perfect image of harmony with nature is not a reality anymore. Interdependence is an understanding of our reliance on the environment, and of its reliance on the human world to not harm it. Reliance does not encompass the missing pieces of just how culturally significant nature and this land we call Nova Scotia is to the Mi'kmaq people. The simple lens of reliance and interdependency evokes an image of caring for the environment to ultimately save ourselves.

In comparison to the results of Weldemariam et al.'s (2017) depiction of the Australian frameworks representation of human-environment relationships as living interconnectedly, the NS ELCF does have a similar view of the environment because it views nature as an interdependent entity that should be learned about, respected, and appreciated. However, it is viewed this way because of what children and educators gain from it to benefit their opportunities for learning. I cannot confirm that the Australian framework has this same reliance notion or gaining perspective on the environment from the results in Weldemariam et al.'s (2017) research, however their discussion states that in comparison to the other curricula analyzed that did not portray reciprocal relationships with the environment, the Australian framework had "a strong emphasis on human's intertwined relationship with the environment, living and non-living things". (Weldemariam et al., 2017, p. 346). The NS ELCF may have used this document as an influence, but this notion has certainly been adapted to what is currently the understanding and relationship with the environment in the Nova Scotia context. From my experience in the ELCC setting in NS, the understanding of the environment's relationship with us in the sector is heavily based on how it can benefit children and the information we've

received from white-settler perspectives of physical activity and nature-use activities (resources and settings) as beneficial supports to engage with nature.

The ANZ ECC's perspective on child-nature relationships is also framed through the expectations for respectful interactions with the environment, but their motivation behind these interactions is based on the considerations of Māori history, worldviews, and values of nature and the land of Aotearoa (*Theme 1: Dichotomous motivations of children's responsibilities for nature*). This motivation is also centred by the concept of belonging within a space, the feeling of knowing that one is a part of the greater community or environment that they are in. Belonging is one of the five strands woven throughout the principles within *Te Whariki* representing the curriculum (Ministry of Education, 2017). Since the ANZ ECC's revision in 2017, it has been stated by the Ministry of Education (n.d.) that the biculturalism within the curriculum has been "strengthened" by bringing culture, identity, and language into the forefront. Ritchie (2020) stated that the prior edition had mostly included Māori values through recognition and promotion. After conducting this analysis searching for the ANZ ECC's construction of child-nature relationships, I have interpreted that the 2017 revision of the ANZ ECC does have a strong inclusion of Māori cultural values included within it in the form of framing sustainability, nature stewardship, and encouraging children's sense of belonging through the guidance of Māori worldviews that value human-land connections.

In contrast to the child-nature relationship concepts within NS ELCF and the Australian framework, the ANZ ECC's connection between belonging and the natural world reveals the tensions between these contexts as ANZ places a higher value on the inclusion of Indigenous worldviews of the natural world, and the NS ELCF lists the Indigenous Mi'kmaq people as a "founding culture" but does not continue to include or collaborate the cultural respect and

connection to the environment throughout the rest of the framework, and almost entirely disregards it when discussing interdependence and children's learning personal and social responsibilities to the environment. The NS ELCF understanding of children as interdependent with the environment does not account for cultural or relational connections in this relationship either, reflecting that nature is an isolated, separate entity that we need care for and learn about (Taylor, 2017), rather than children understanding that they belong as a part of the same system. Without identifying cultural connections to land, the NS ELCF does not provide further guidance to ECEs in fully incorporating culturally responsive practice in outdoor settings and in congruence with the encouraged stewardship practices. The NS ELCF's understanding of human interdependence with the environment should not be discounted, as it is a first step in acknowledging how closely related children's lives are lived to nature and expanding environmental stewardship practices further to become more inclusive of cultural relations to land and provide meaningful outdoor play opportunities for all children.

The common worlds approach to early learning views the relationships between children and the natural world as an inseparable and complex web of relations grounded in collective action with each other (Taylor et al., 2021; Taylor & Giugni, 2012), meaning that children and nature both belong to the same world together. The ANZ's concept of belonging with the environment reflects a view of children's relationships with the natural world to be one that is not easily compartmentalized or separated easily. When the Māori worldviews, values, and ancestral connections with nature combine with an encouraged sense of belonging to a space as the motivations to be responsible and take care of the space, the relationship may be more likely to have a collective and reciprocal nature to it. Children and more-than-human others are involved together in the environment, belonging with and living together in their shared world

and constructing each other's identities through their interactions (Sauvé and Orellana, 2004). This view of child-nature relationships may connect the child to the natural world through more than just their dependence on it for their health and survival and vice versa, but rather allows them to strengthen their knowledge and connection to the environment through understanding that each part of the natural world and themselves belong together can be collectively engaged. The understanding of how they belong to the environment expands further than interdependence and encompasses many of the other aspects of living well with the environment and have the sense that nature and children are not separated.

The main discovery overall in analysing the NS ECLF in comparison with the ANZ ECC is that there is an opportunity for the reflection and reimagination how the ELCC sector in Nova Scotia views children's relationships with nature and how this is presented, perpetuated, and supported. Outdoor play is becoming more recognized as beneficial to children's health, wellbeing, learning opportunities, and risky play, though with culturally responsive early childhood education practices becoming better recognized as the necessary component that it is, outdoor play and nature play should not be excluded from this narrative. The themes generated from the ANZ ECC and the connection between children's engagement with nature, environmental belonging, and the influence of Māori worldviews could be an influential piece of their framework for Nova Scotia's DEECD to consider when revising the current ELCF. However, it should be noted that the difference between the NS context and the ANZ context is that the ANZ ECC has been considered a bicultural curriculum since its first version in 1996, with critique to strengthen the Māori worldviews and values within it (Ritchie, 2020), whereas the NS ELCF is not credited or claiming to be bicultural.

As previously discussed, the NS ECLF takes an approach that acknowledges the contributions and past and current situations of the "founding cultures of Nova Scotia" (DEECD, 2018a, p. 16) which includes the Mi'kmaq, the Gaels, the Acadians, and the African Nova Scotians. The involvement of the cultural values of these groups is not overtly threaded throughout the document other than to encourage that educators communicate with families and communities to provide culturally responsive care and early learning. My position is grounded in my experience as a white woman who has the greater structural and process elements of ELCC historically catered to my benefit. When I first started to work in the ELCC sector I thought that the ELCF's recognition and push for awareness of the Mi'kmaq, African Nova Scotian, Acadian, and Gaelic cultures to be a step moving forward in setting a guiding lens for educators to be more inclusive in their programming. However, as I continued through my courses during this master's program and reflected on the ELCF I began to shift my perspective on how inclusion and culturally responsiveness looks in curriculums. Without the intentional connections between how to provide culturally responsive programming and the natural environment present when the ELCF describes outdoor play opportunities or environmental responsibility, the link is missing. Perhaps since the NS ELCF has been described as a guiding document and not a strict agenda of activities for the educators to follow (DEECD, 2018b) this was intentionally vague. But without guiding educators in this direction, the topics of outdoor play and environmental responsibility within the framework will remain in the same separative narrative from the environment, where interdependency does not provide closeness between humans and the more-than-human others in the natural world as in collective relations.

Chapter 6: Conclusion

The overall learning interpreted from the findings of this research is that the current perspectives of child-nature relationships that are presented within the NS ECLF would need to shift if we want to provide children with inclusive, meaningful, and culturally responsive engagements with the natural world. Taking a one-lens approach in constructing child-nature relations through our reliance on nature and applying nature stewardship in ELCC settings supports sustainable action. However, this does not promote authentic interactions if children are constantly responsible for an environment that is separate from themselves, or that they do not understand how they belong within it. In conclusion, I aim to provide answers to my leading research question and objectives. I also present provocations and invitations to the stakeholders of the ELCC context in Nova Scotia and discuss how these provocations could influence future ECE practice. I extend educated thoughts on my interpretations of the ANZ ECC to ELCC stakeholders in Aotearoa New Zealand. The limitations of the current study and further opportunities for future research that I identified in the process of writing this thesis are communicated.

Limitations & Further Research

I selected two early learning curriculum frameworks as data to better understand the context of the Nova Scotia and Aotearoa New Zealand ELCC settings and their constructions of child-nature relationships. The frameworks are accountable for providing educators with evidence-based guidance in supporting young children and their families with high quality early learning and child care. My research has focused on this exosystems level aspect of guidance that is available for use by ECEs working in ELCC programs in Nova Scotia, though it does not currently explore the perspectives of child-nature relationships by ECEs at the individual or microsystems level. To gather a more in-depth understanding of how the construction of child-

nature relationships translates into practice, I would have had to have direct contact with ECEs, either through observation or interviews, to learn more about their practice related to child-nature relationships. This limitation has also been a significant reason for why I will not provide the ELCC sector in Nova Scotia with concrete examples of what this shift in perspective of child-nature relationships looks like in their current practice because I am not aware of the ECEs individual perspectives of child-nature relationships or their current practice of the framework. These concrete examples of practice would be inauthentic and perhaps not applicable, depending on the ECEs' context and early learning environment. However, this gap in understanding of the context is an opportunity for future research.

However, the current study did not include this type of direct consultation for two reasons. The first being that there are limitations to completing theses projects within specific amounts of time. The second being that interviewing or observing educators on their perspectives of child-nature relationships would be limited research if there were no prior knowledge of the constructions of child-nature relationships at the exosystem level that I have interpreted from the themes I generated within the NS ELCF. Therefore, exploring the constructions of child-nature relationships in government-produced documents that intend to guide practice is an important first step in understanding what the provincial view is, and how this can be shaped into a more inclusive and relational document for use by ECEs.

Provocations & Invitations for ELCC Stakeholders

The purpose in generating thematic results was to provide recommendations to support ECEs in enhancing inclusive and relational outdoor play and nature-based practices, as well as provide global and local perspectives of child-nature relationships to inform ECEs' discourse on children's relations with nature in Nova Scotian ELCC settings. My overall recommendation is

that to move beyond stewardship and using nature as a setting and resource as guidance in the NS ELCF, a greater shift of perspective is needed within the ELCC sector in Nova Scotia. Due to the nature of my findings, these recommendations are instead framed as provocations and invitations to rethink our positions as stakeholders of both ELCC and of the natural world. This shift of perspective requires those who contribute their research and writing to the revision of the framework and those who work within the ELCC sector, as well as those who conduct research on outdoor play to reflect on how they can start to decolonize their own perspectives on nature and how children engage with it. It is essential that there is a shift from looking at nature through profit-based mainstream views that values nature mostly when it benefits children's learning, health, and well-being. While these are important and necessary elements of nature-connection, research has identified that reciprocal relations with the environment can support relationships that extend to include more holistic elements such as connecting with nature through cultural, relational, and social methods (Taylor et al. 2021) that could align with the NS ELCFs holistic view of child development (DEECD, 2018a).

Based on the themes I generated, I have formed several recommendations for the NS ELCF as well as for the educators who use it to guide their practice. The purpose of the research and the resulting provocations and invitations to the ELCC sector in Nova Scotia is not meant to discredit the valuable knowledge within the NS ELCF. Rather I aim to provide a new perspective on the framework so the NS ELCC sector might begin to reconceptualize child-nature relationships and how these can shift to be more culturally inclusive. I will not provide formal recommendations to the ANZ ECC and their ELCC contexts since I do not have experience in that setting, I feel that I cannot authentically provide recommendations, but I have described

what I have found in my analysis of the framework and what these findings mean in relation to the Nova Scotian ELCC context.

I invite the NS Department of Education and Early Childhood Development, the contributing authors, and researchers working on any future revisions of the NS ELCF to reflect on their approach to how outdoor play is described as not only a setting and resource for children's development and learning, but also as a space that children belong within. Ultimately a shift in the way children are viewed in relation with the natural world is needed, but this can be built on the already existing values of human's interdependency with the environment. This perspective would shift from children involved in a benefits-reaping relationship with nature that relies on interdependence, to understanding their sense of belonging as a part of nature and their cultural, historical connection to it. This could support the expansion of nature stewardship practices towards recognizing that children are part of the inseparable system of relations (Taylor, 2017; Warden, 2019) with the rest of the natural world, and how cultural connections of the First Nations groups shaped Nova Scotian relations with nature. The NS ELCF describes reciprocal relationships between humans (parents, children, community, educators, etc.) frequently. With the understanding of relationships as a foundation for the curriculum, this an area that could be further extended to include more-than-human others.

Intentionality is a strongly recommended practice from the NS ELCF in terms of planning early learning environments and ECEs actions and communication with children, their families, and the community (DEECD, 2018a). This same value of intentionality is important to apply when engaging with the environment. The needed shift towards a relational approach to engaging with nature in outdoor play and in the overall ELCC setting should begin to take note of the type of language that is used. Warden (2019) states

> "A relational pedagogy, on the other hand, focuses on the connection between things. How can you visit something of which you are a part? When we say we are for nature, does that mean we are eco-centric, or that our environmentalism excludes humans as something other than nature?" (p. 9)

Revising the approach to children's nature engagement would include reflecting on the way we speak of nature. Talking about nature as a thing, which has been intentionally done in parts of this thesis, separates children from nature as merely a physical thing that humans can choose to connect with or not (Warden, 2019). Recognizing in our spoken and written communication among the sector that nature is also a phenomenon we are always a part of should be more widely practiced in ELCC.

I will reiterate that in taking on any of the mentioned provocations, since the relational accountability (Wilson, 2008) with others is an Indigenous perspective of life, the DEECD must be diligent in working on decolonizing their approach to outdoor play and nature relationships. This involves respectfully working in partnership with Mi'kmaq peoples and that any future revisions involving relations of land do not appropriate cultural values or co-opt Indigenous knowledge to continue a benefits-gained approach to caring for nature.

This thesis has been a process of my shifting perspective of child-nature relationships in colonized mindsets. My goal is to provide the stakeholders of ELCC in Nova Scotia, the rest of Canada, Aotearoa New Zealand, and other ELCC contexts insight into how we can continue to decolonize structural barriers to accessing nature engagement for children and rethink our pedagogical practices through this lens. I hope that my analysis and findings within the NS ELCF and ANZ ECC might support ECEs in understanding how they can look beyond separative narrations of child-nature relations to allow children the opportunity to explore nature

and understand their social, emotional, cultural, and physical belonging to the natural world. The story of the robin bird's nest that opened this thesis, might then change from telling of two educators with different approaches to children's nature engagement, where one relies on a separative narrative to ensure children interact respectfully, to a story that tells of educators working collectively to ensure that children not only have access to nature, but understand their sense of belonging as part of this world we share.

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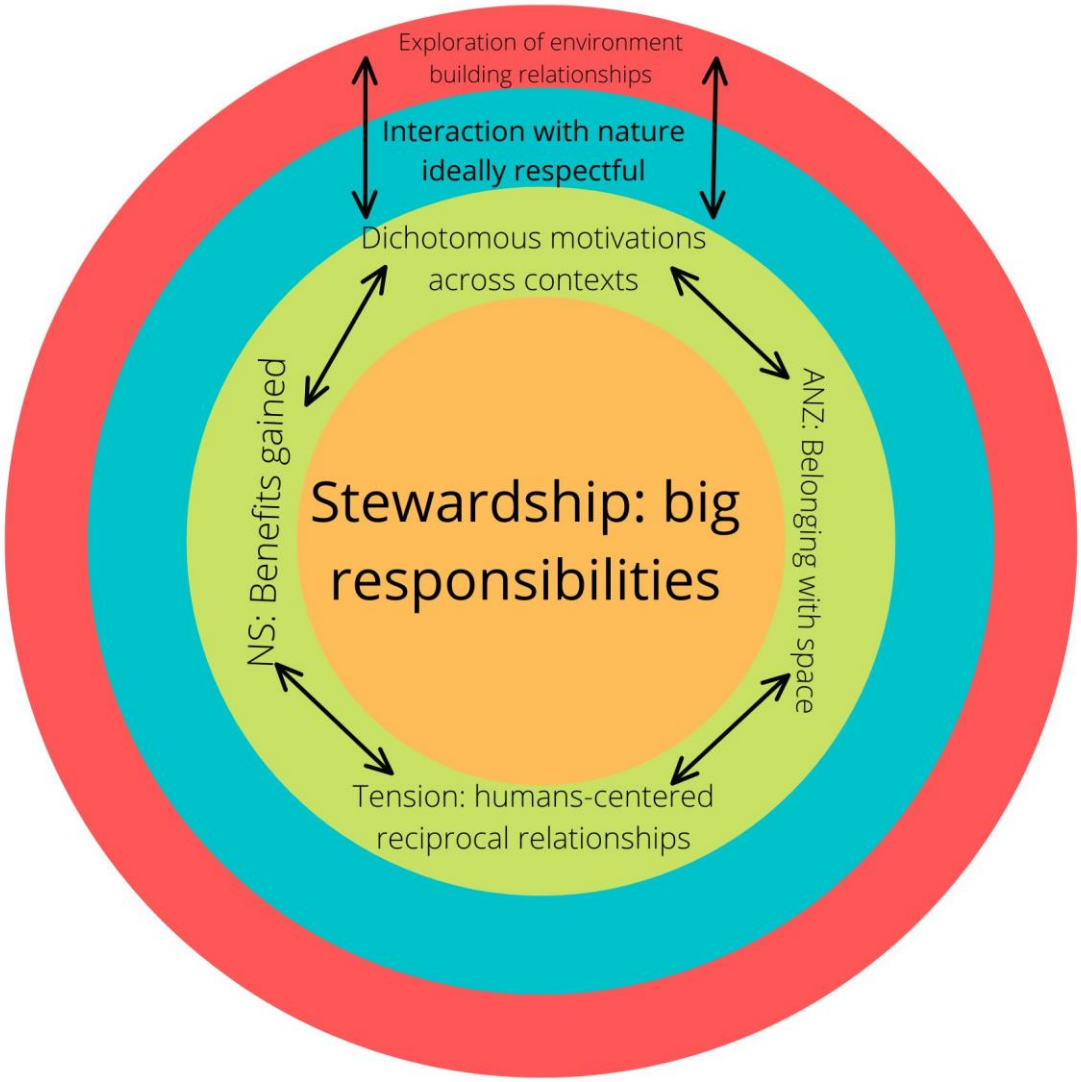
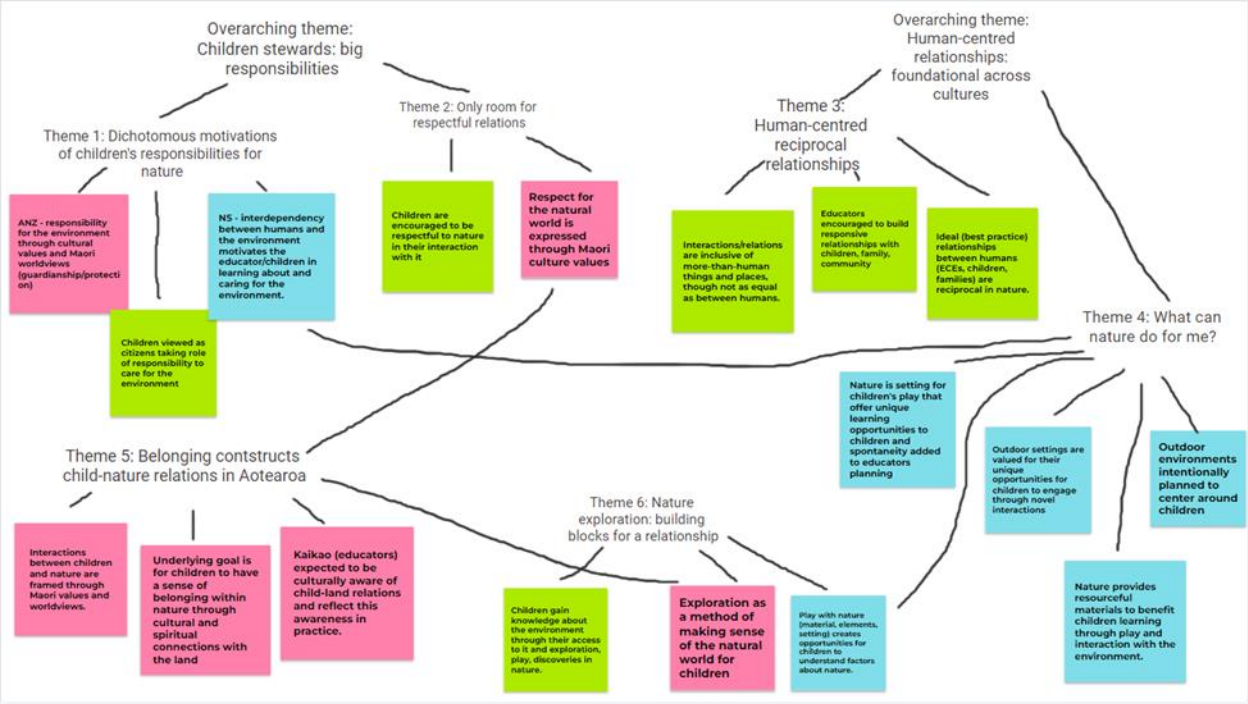
Appendix 1
Final Thematic Map



Appendix 2

Thematic map before final refinement and naming



Key:

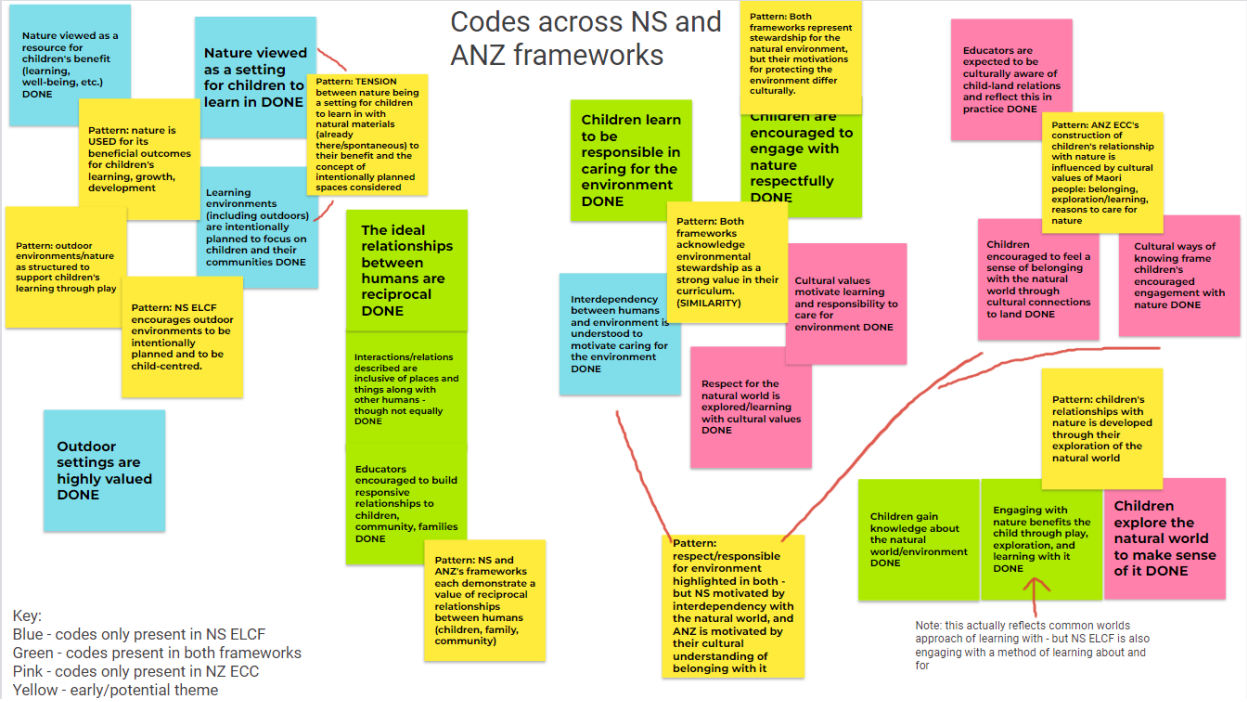
Pink: codes only present in ANZ ECC

Blue: codes only present in NS ELCF

Green: codes present in both frameworks

Appendix 3

Initial theme development



Appendix 4

Excerpt from Inductive Codebook

Key:

Blue – codes present only in NS ELCF

Pink – codes present only in ANZ ECC

Green – codes present in both context's framework documents

Code	Reason	Examples
Nature provides resourceful materials for children's learning opportunities	Natural materials are described in the NS ELCF as materials to be used in children's play – some descriptions used imaginary play or loose parts play. "They [outdoor learning environments in natural spaces] foster an appreciation of the natural environment, develop environmental awareness, and provide a platform for ongoing environmental education." (DEECD, 2018a). This comes immediately after the description of the natural space as setting/resource for learning, so I am seeing children's access to natural materials and environments as their method of building awareness about the environment. I am also interpreting that natural materials are intended to be beneficial to children's learning because of their inclusion in the list of elements and aspects of nature that support children in having an appreciation, awareness, and knowledge of the environment and sustainable practices. While that might initially appear to be a surface level observation, I think that it goes deeper than that. This is because the materials provided in all spaces in ELCC settings should be tailored to children's interests and their needs (whether this be emotionally, physically, etc.). It means that the earth is offering something. **Nature has to offer something beneficial to the community/child for it to be considered**	"Outdoor learning spaces are an important feature of children's learning environments. They offer a vast array of possibilities not available indoors. Play spaces in natural environments include plants, trees, edible gardens, sand, rocks, mud, water, and other elements from nature. These spaces invite open-ended interactions, spontaneity, risk-taking, exploration, discovery, and connection with nature. They foster an appreciation of the natural environment, develop environmental awareness, and provide a platform for ongoing environmental education." (DEECD, 2018a) "Learning materials enhance learning when they are easily found in nature, such as sticks, rocks, and leaves, and familiar, while at the same time introducing novelty to provoke interest and more complex and increasingly abstract thinking. For example, the use of "loose parts" (materials that can be moved, taken apart, lined up, and put back together in multiple ways) encourage

	part of a high quality learning environment.	creativity and open-ended learning." (DEECD, 2018a) "Children use their representational knowledge to invent new play—a rock may become a truck, a tree may become a house, and a line of chairs may become a train. Creativity allows children to create their learning environments over and over and in different ways." (DEECD, 2018a) "[Educators promote this type of learning (children become environmentally aware and responsible) when they] provide children with access to a range of natural materials in their environment." (DEECD, 2018a)
Interactions/relations described are inclusive of places and things along with other humans - though not equally Note: Only one segment coded from NS ELCF involved here… maybe its not a significant enough aspect to consider code, especially when compared with *Te Whariki*.	These relationships are described as between humans mostly, children, educators, and families in both documents, with the exception of the ANZ ECC, as it includes children's connections with "people, places, and things" which I am interpreting as including more-than-human others and the natural world because of the frameworks indication of kaitiakitanga (environmental stewardships grounded in Māori cultural and spiritual values). I am interpreting the relationship between children and the land or natural world to be a highly valuable part of the curriculum. Descriptions of this relationship are brief but often are framed through the cultural importance held in Māori or Pasifika cultures. Connection is described briefly – it is hard to tell exactly what connection means, until *meaningful interactions* are mentioned. Later on in the framework,	"In *Te Whāriki* children are positioned as confident and competent learners from birth. They learn by engaging in meaningful interactions with people, places and things – a process that continues throughout their lifetimes." (Ministry of Education, 2017, p. 12) **"Belonging Mana whenua** Children and their families experience an environment where: » Connecting links with the family and the wider world are affirmed and extended Over time and with guidance and encouragement, children become increasingly capable of:

	examples of how children connect come through with gardening skills, or caring for the environment. These types of examples frame a stewardship approach within the relationship constructed between children and nature. The lens of cultural values seems like a motivator behind the connection and caring for the environment.	» Making connections between people, places and things in their world | te waihanga hononga." (Ministry of Education, 2017, p. 24) "relationships | ngā hononga: curriculum and pedagogy recognise that children learn through responsive and reciprocal relationships with people, places and things." (Ministry of Education, 2017, p. 60) "They also stress the notion of multiple relationships between people and across time, places and ideologies and the ability to navigate between familiar and unfamiliar worlds, different Pasifika world views, and Pasifika and non-Pasifika world views." (Ministry of Education, 2017, p. 62) "Learning Goal: Personal and Social Responsibility Strategies for Objective 5: Children become environmentally aware and show respect for the environment. This is evident when children: explore relationships with other living and non-living things, and observe, notice, and respond to change" (DEECD, 2018a, p. 74)

Appendix 5

Te reo Māori: Personal Glossary

Started: April 29, 2022

Creating this document to support my own learning of te reo Māori (language) and Pasifika terms used in the curriculum, resources, and related articles to better understand the context in which it is used. This document includes the glossary provided in *Te Whariki* (Ministry of Education, 2017) and my own additional terms and added context.

whariki: woven mat

'aiga (Samoan): 'whānau' or extended family

āhuatanga ako circumstances of learning

'ā tōna wā': 'in their own time'

aroha: love, compassion, empathy, affection

atua: Māori gods

awa: river

hapū: tribe or subtribe

harakeke: flax also, Pandanus. New Zealand flax, evergreen perennial plant native to ANZ, name given by Māori.

hauora the philosophy of health and well-being that is unique to Māori and Aotearoa New Zealand

hinengaro: intellectual, the mind, also refers to mental health

hūmārie humility, gentleness, peacefulness

iwi extended kinship group, tribe, people (commonly used with hapu)

kaiako teacher(s)

kaitiaki trustee, custodian, guardian, protector

kaitiakitanga guardianship, environmental stewardship

karakia prayer, ritual chant, incantation

kaupapa Māori a Māori approach that assumes the normalcy of being Māori – language, customs, knowledge, principles, ideology, agenda

kōhanga reo Māori-medium early childhood centre with a focus on retaining and revitalising language and culture

kōhungahunga is another term used to describe the early years of a child's life.

kōnakunaku are mokopuna (children) who have progressed to eating solid foods. At this stage they are physically mobile and beginning to communicate verbally.

kōrero conversation, chat, story, news, discussion

kuia elders

kura school

mana the power of being, authority, prestige, spiritual power, authority, status and control

mana atuatanga uniqueness and spiritual connectedness

manaaki show respect, generosity, hospitality and care for others

manaakitanga the process of showing respect, generosity, hospitality and care for othersmarae the complex of buildings and land associated with a pan-tribal group, whānau, hapū or iwi

marae culturally significant, communal or sacred gathering place

mātauranga Māori is the traditional knowledge of the Māori people

maunga mountain

mauri vital essence, life principle, essential quality

moana sea

mokopuna grandchild; in the context of Te Whāriki, mokopuna expresses intergenerational connectedness

noa ordinary, unrestricted

pakeha a white settler

Papatūānuku Earth, Earth mother

pēpi baby

piripoho refers to the act of breastfeeding.

rangatiratanga

raranga weaving

tangata whenua "people of the land"

tapu sacred

te ao Māori the Māori worldview, the perspective of Māori people on the world around them

tipuna ancestors

tinana physical health

tikanga customs and traditions, especially in Māori culture

wairu spiritual health

waiata songs sung in Māori tribal gatherings

whakapapa genealogy, lineage

whanau extended family

whanaungatanga relationships, kinship, sense of family connection

whatumanawa “the all seeing eye of the heart”, emotional balance

whenua the Māori word for land, whenua, also means placenta. All life is seen as being born from the womb of Papatūānuku, under the sea