

Deconstructing Settler Colonialism in Early Childhood: North American Nature-Based Preschool Teachers' Perceptions of Nature

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ABSTRACT

Nature-based early childhood education (NBECE) is a growing field for children aged 3-6 in North America. This growth demands the need for NBECE professionals. Often grounded in personal journey and perceptions, pedagogical practices of NBECE teachers play a vital role in learning experiences and nature-connectedness. This qualitative research delves into North American NBECE professionals' perceptions of nature, their journey into NBECE, and their responses to the pervasive influence of settler-colonial values in education. The data was generated through teacher interviews with four outdoor preschool teachers. Each teacher participated in two interviews. Between the two interviews they wrote a journal entry. At the end of the second interview, I led each participant through a cognitive mapping exercise in which they created a visual representation of their journey with nature. Findings indicated that these teachers have a close connection and history with nature. This often translated into their feelings about NBECE. Framed within settler-colonial studies, I deconstructed teachers' discussions to illuminate examples of resisting a nature-culture divide and human exceptionalism. I identified most teachers exhibiting awareness of settler-colonialism, with more experienced teachers thoroughly exploring their connection to its ongoing influence.

Keywords: early childhood, preschool teachers, teacher perceptions, settler colonialism, human exceptionalism, nature-based education

Nature-based early childhood education (NBECE) is growing tremendously (NAAEE, 2020, 2023) in North America. Teachers play a key role in nature-based education, particularly in preschool. While previous research has explored the views of preservice early childhood educators on outdoor settings (Ernst & Tornabene, 2011) and in-service teachers' perspectives on natural play (Wishart & Rouse, 2018), there is little discussion regarding the beliefs and perceptions of practicing outdoor preschool teachers concerning nature, particularly in the context of settler-colonialism and the separation of nature and culture. Therefore, I argue it is important to examine teachers' perceptions of the natural world in relation to the cultural or 'human' world, what Bang and Marin (2015) refer to as nature-culture relations.

Examining NBECE teachers' perceptions of nature is especially important if we are to find ways to resist dominate settler-colonial constructs of humans and nature as separate (Bang & Marin, 2015), ecological domination and extraction, and human exceptionalism (Nxumalo, 2018). I aim to reveal how teachers counter these constructs, shaping their nature-culture relations and pedagogical beliefs. Guided by the research questions below, my study unpacks teachers' views on nature, nature-culture relationships, and their reflections on settler-colonialism.

1. How do NBECE teachers conceptualize nature and their own nature-connection.
2. What is the perceived role of NBECE teachers in outdoor nature-based learning spaces?

3. In discussing nature and NBECE, how do these teachers perceive settler-colonialism, multispecies interactions, and human exceptionalism in their pedagogical roles?

Key Literature and Conceptual Framework

Nature-based education (NBE) is gaining recognition in education and child development, with expanding literature supporting its significance (Bailie et al., 2023; Blackwell, 2015; Chawla et al., 2014; Ernst et al., 2021). As the field experiences growth and acknowledgment, there arises a demand for more professionals. NBECE teachers occupy a distinctive role in shaping children's school and nature experiences (McClintic & Perry, 2015). Hence, it is imperative to delve into this expanding domain, focusing on teachers' perspectives and pedagogies. The following literature review illustrates the necessity for preschool teachers to recognize the interconnectedness of multiple species and the presence of settler-colonialism within the early childhood education field in conjunction with the standing research on the influence of teacher perception on pedagogical beliefs and practices.

Nature-Connectedness: Responding to Entanglements

In this growth, Nxumalo's work (2017; 2018) is a valuable guide to explore how children and educators respond to what she terms "multispecies entanglements" in which learning takes place within entangled multispecies social and physical worlds. This raises questions about how educators and children relate to non-human entities and acknowledge the *interconnectedness* of humans and more-than-humans. My study responds to these questions by considering a teacher's nature-culture relations, personal development of nature-connectedness, and how this shapes their pedagogical beliefs when working with young children.

Research underscores how outdoor experiences are integral to a child's sense of nature-connectedness (Barrable & Booth, 2020; Pruneau et al., 1999; Robson & Rowe, 2012). Further, strong nature-connectedness can support pro-environmental attitudes and behaviors (Chawla, 1999; Yilmaz-Uysal et al., 2020) and environmental stewardship (Bailie, 2012; Chawla, 1999). This above research establishes that nature-based education not only has a positive influence on child development, but also on a child's ability to bond with the natural world. Coming to intimately know the natural world creates opportunities for reciprocal relationship building and exploring interconnectedness between beings and systems.

When learning with natural systems and multiple species, children and teachers are pushed to collide with complications of entanglements (Houston et al., 2018; Murdock, 2020; Nxumalo & Pacini-Ketchabaw, 2017) and nature-culture relations (Bang et al., 2015). When preschool takes place outdoors, children and teachers *will* encounter multispecies entanglements and must respond. For instance, Fikile Nxumalo (2018) provokes us to consider how this happens as she stories the relations between educators, preschool children, and Western bumblebees. Examining the encounters children have with dead and dying bumble bees, children confront their fears and learn about vulnerability, agricultural practices, pesticides, colonial farming and bee breeding. This inquiry raises questions about how teachers understand their role in these relationships, respond to interspecies entanglements, and consider the impacts of settler-colonialism. Given the growth of nature-based preschools, research is vital to explore these issues, particularly how teachers may challenge dominant settler-colonial views of human exceptionalism and a human-nature divide through their perceptions of and interactions with natural systems and more-than-human species.

Settler-Colonialism and the Environment

While outdoor learning programs offer numerous benefits for young children, increasing implementation brings challenges, particularly in the context of settler colonialism. These challenges are alarmingly evident when we acknowledge the violent disruption that settler colonialism has on the relationship between humans and the environment (Bacon, 2018; Tuck & Yang, 2012; Watts, 2013; Whyte, 2018). Scholars have pointed out that prevailing Western settler-colonial views in the school systems often construct humans as separate from nature, thus impacting teaching practices (Medin & Bang, 2014; Whyte, 2018). These views, rooted in separation and domination, often contradict the cultivation of caring, reciprocal relationships between humans, more-than-humans, and natural

systems, which Indigenous scholars have emphasized as an essential part of human existence, (Kimmerer, 2013; Salmón, 2000).

These settler-colonial constructs create an imbalanced understanding of nature-culture relations. This imbalance can lead to insufficient understandings of natural systems, lack of relationship with nature (Louv, 2008; Orr, 1993), unsustainable practices (Bang & Marin, 2015), and in a broader scope, environmental degradation, and environmental injustices (Makey et al., 2022; Whyte, 2018). Amid the epoch of the Anthropocene (Steffen, 2007), where human activities greatly affect ecosystems and climate (Hodges, 2021; Nxumalo & Pacini-Ketchabaw, 2017), it is essential to examine educators' views of the natural environment. This scrutiny helps address human-nature relational imbalances, especially as more educators embrace NBE. Settler-colonial studies frame the risks of the NBE boom, including reinforcing human exceptionalism, causing environmental harm, and perpetuating a dominant Western approach to nature engagement. Following, I focus on the potential teachers hold to either alleviate or perpetuate these risks.

Teachers: Perception and Influence

Teachers' beliefs have long been known to significantly impact their curriculum choices (Clark & Lampert, 1986; Spodek, 1987) and their responses to information in the classroom (Fang, 1996). Newer research confirms this finding when investigating teachers' attitudes toward outdoor play and nature, revealing barriers and hesitations in facilitating nature engagement with children (McClintic & Perry, 2015; Yalcin and Erden, 2021).

Hesitancy to engage children in nature is troubling when we consider Dowdell et al.'s (2011) finding that for children to connect with nature and effectively partake in outdoor learning, teachers must be enthusiastic and supportive of the outdoor environment. If teachers put up barriers and create division, it impacts curriculum and children's experience. More significantly, it may also reinforce children's alienation from nature in alignment with settler-colonial dualisms. Through exposure of what Pacini-Ketchabaw and Nxumalo (2015) call a "series of situated, small, everyday stories" of children and nature, children can wrestle with the nature-culture divide and experience entanglements.

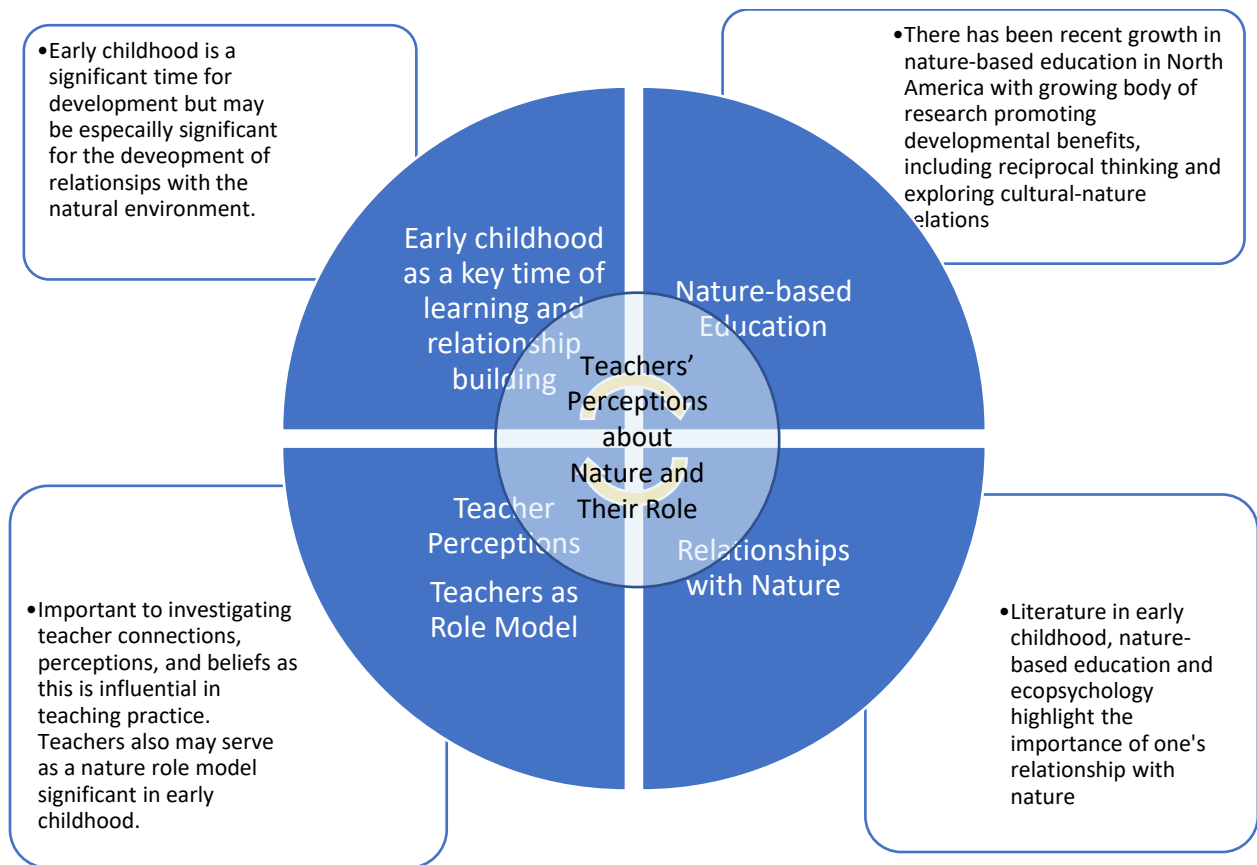
The early years offer immense potential for nature connections (Chawla, 1999; 2007; Robson & Rowe, 2012), impacting future environmental views (Chawla, 1999). Positive nature-engaged role models (Chawla, 2007) like teachers, along with nature experiences (Barrable & Booth, 2020; Chawla, 1999; Robson & Rowe, 2012), are impactful when forming nature-culture connections. Teachers in early learning settings, especially those immersed in nature, can play a pivotal role in fostering balanced nature-culture relations and offering diverse lifeworld perspectives beyond settler-colonial constructs. As such, my study delves into how teachers navigate entanglements, perceive nature-culture relations, and discuss settle-colonialism in their teaching practice.

RESEARCH STRATEGY, DESIGN, AND METHODS

In undertaking this study, I aimed to understand nature-based preschool teachers' perceptions of nature and their role in the outdoor classroom. Through this research I also learned about their journey in becoming nature-based educators and their relationship with nature over time. Within the theoretical framing of settler colonialism, I strove to deconstruct the teacher's perceptions of nature, their own personal journey, and their role in an outdoor classroom.

When researchers deconstruct, they aim to "break apart assumptions" and recognize that individuals are socially conditioned to perceive and interpret the world in particular ways (Bhattacharya, 2017, p. 20). While Western society in the United States has a long history rooted in objectivist ontology linked with empiricism, I am situating this study within settler colonial studies to explore a facet of settler colonialism concerning the separation of nature and culture. In doing so, I assume that individuals, particularly outdoor preschool teachers, are socially conditioned in their understanding of "nature" and in how they conceptualize nature-culture relationships. Since my primary objective is understanding, as per Bhattacharya (2017), it is appropriate to gather relevant information related to the focal experience. Accordingly, I have collected data on teachers' perceptions of nature, their own connection to

nature, and their role in a nature-based classroom through interviews, journal entries, and a cognitive mapping exercise.



Setting and Participants

After securing Institutional Review Board ethical approval, I recruited participants in January 2022 via communication with school directors from two different outdoor preschools. School directors then sent my information to teachers for participation. The setting for this study consists of two nature-based preschools which operate completely outdoors. For the purposes of this research, the names of the school have been removed for privacy and referred to as school A and school B. School A is a large organization with eight locations throughout the WA Puget Sound region. Their programs operate completely outdoors on public land in partnerships with parks departments. The locations of their outdoor classrooms vary greatly from urban centers with a roving exploration model to secluded, forested spaces in a regional wildlife park. The school in which I was able to interview teachers is in a densely populated urban area of the city but the park itself is large and offers a variety of green spaces. School B is a single school model but functions within a larger public institution and in the setting of an expansive public park, surrounded by trees, shrubs, and wildlife. They have three large, dedicated spaces as outdoor classrooms which is the primary location of their activity. They also explore areas throughout the park including ponds, gardens, and wetlands.

Four teachers participated in this study, two from each of the above-described settings. To protect the privacy of each teacher, they are referred to throughout this study by pseudonyms as listed below. All participants identified as white, non-native settlers. Three participants identified as female and one as transgender/non-binary. The below chart sums up their background, experience, and role in the nature-based setting.

| Participant | Setting | Current Role | Brief background |
|---------------------------|-------------|-------------------|--|
| 1 Joyce (she/her) | Preschool B | Lead teacher | Received elementary teaching degree but after graduation, decided not to pursue teaching career. Found way into teaching via the outdoor school model. Currently holds five years of experience working with children outdoors, most of it as a lead teacher in outdoor preschool. |
| 2 Ely (she/her) | Preschool A | Lead teacher | Double majored in psychology and early childhood education (not a teaching track) with no original intent to work as a classroom teacher. Once she discovered outdoor school, felt teaching was a good fit. Currently holds 1.5 years of working in an outdoor preschool setting, the last 6 months as the lead teacher. |
| 3 Catrina (she/her) | Preschool A | Assistant teacher | Holds BA degrees in Spanish and Justice & Peace studies. This is the participant's first year working in an outdoor preschool setting. |
| 4 Layne (they/them) | Preschool B | Lead Teacher | Holds a degree in Sustainability and early childhood education. Had prior experience working in an indoor preschool. Separately, worked with preschool aged children outdoors in other settings (field trips, summer camp) and for an internship. Has held current position (lead outdoor preschool teacher) for 1.5 years at time of interview. |

Data Sources

To build understanding, interviews were the primary mode of inquiry in this research study. Because I am sought to deconstruct our conversations and “dig deep into one’s experiences” (Bhattacharya, 2017, p. 127), I employed the use of in-depth open-ended interviews in addition to journal entries and cognitive maps.

Interviews

All participants engaged in two interviews, one short informal interview which ranged in length of 30-45 minutes, and one formal, semi-structured interview which ranged from 50-75 minutes. All interviews took place over the course of 4-6 weeks. The initial interview consisted of conversational questions to invite a participant-led flow and opportunities for the participants to ask questions, the intent being to build rapport (Bhattacharya, 2017). The later semi-structured interview consisted of 4 to 6 open-ended mostly, descriptive questions to generate authentic conversation around specific themes (Bhattacharya, 2017). In this interview my goal was to probe more deeply and raise some potentially challenging issues for the participants around their personal perception of and connection with nature as well as how they may reflect upon settler-colonialism in nature-based early childhood education. When possible, the interviews were conducted in the teacher’s outdoor classroom.

Journals

After the first interview, I emailed each participant open-ended prompts which consisted of a variety of cues to choose how they would like to engage. (See appendix A for journal prompts.) I asked them to complete one journal entry based on the prompt before our second interview which was generally scheduled for 7-10 days after the first interview. The prompts invited them to reflect deeply (McClintic & Petty, 2015) about their feelings with/towards/about nature. By providing the prompts before the second interview, I hoped to spark some initial thoughts around nature-culture relations.

Cognitive Mapping

I sought to deconstruct the participants' perceptions of nature and visualize their relationship and journey with nature. Expanding beyond the written word, Futch and Fine (2014) have found cognitive maps to aid qualitative inquiry, negotiating ideology and relationships. Since I am concerned with teacher's perception of nature and how their personal relationship with nature developed, I chose to employ this method at the end of the second interview. To visually represent their nature-cultural relationships and journey, I prompted each participant to create a map of their journey with nature.

To move towards a decolonizing methodology (Tuhiwai Smith, 1999) my aim was to build a reciprocal reflective experience in which the participant-researcher roles felt equitable and respectful; one in which we were learning together. To support this, I also went through the journaling practice mentioned above. Additionally, I worked concurrently to create a cognitive map each time the participants went through the exercise of cognitive mapping.

Participants and I used our thoughts from the journals and our cognitive maps to engage in dialogue (Annamma, 2018) about nature-culture relations, our journeys into nature-based education, and how conceptions of and relationships with nature have developed over time. While these experiences (journaling and mapping) may have operated as a change process in which participants' ideas shifted after completing the exercise, the intent of the work was to elicit conversation about their current ideas regarding nature-culture relations and their role in a nature-based setting. It is beyond the scope of this paper to understand how these activities may have created changes in the participants' thoughts.

Data Generation and Analysis

To adhere to the protocols of academic rigor through data triangulation (Falk & Blumenreich, 2005; Glesne, 1999), analysis from multiple data collection methods and sources were used. The purpose of data triangulation is not just to use multiple data sources but to relate the findings in the different kinds of data which in turn, increases credibility (Glesne, 1999). Data collection took place between January 26, 2022, and February 24, 2022. All initial interviews were conducted and recorded via the video conference platform, Zoom, and lasted between 30-45 minutes. Second round interviews were conducted in the outdoor classroom space when possible. Being in person in the outdoor classroom space allowed teachers to directly reference some areas and ideas important to the conversation. It was also helpful to collect additional relevant information pertaining to their perceptions of nature by looking directly at certain areas of the outdoor classroom. When in person, video was recorded via a camcorder and tripod device. When not possible to do an in-person interview (in the case of two participants), Zoom was used for the second interview. The second interviews lasted between 50-75 minutes.

All transcripts from the interviews were stored and organized in the web-based application Dedoose. After data collection, interviews were transcribed using a combination of the automatically generated transcripts via zoom and line-by-line editing by hand in Dedoose. As customary in qualitative research (Miles, Huberman, & Saldaña, 2014), I engaged in analysis process throughout data collection with the use of notes and jottings to record initial impressions and ideas. Memos were used in Dedoose during the transcription process (and later throughout the coding process) to build upon the original jottings.

After transcribing interviews, I used a flexible approach inspired by Saldaña (2013) to set the stage for analysis and conclusions (Miles, Huberman, & Saldaña, 2014). Following a trial run (Saldaña, 2013), I chose descriptive and in vivo coding for subsequent analysis.

The initial coding phase yielded 93 separate codes. Using code mapping, I reorganized these codes into themes by visually categorizing them. Code mapping, part of the auditing process, documents how codes are categorized and conceptualized throughout analysis (Saldaña, 2013). This process resulted in six central themes, three of which (settler-colonialism, teacher's roles, and teacher's perceptions) directly addressed the study's questions and theoretical framework. Three additional themes (responding to entanglements, personal encounters with nature, early childhood development) emerged from participant discussions. These six themes led to the creation of 18

separate codes, which were used in a second round of coding. A code manual was developed for these 18 codes, providing definitions and examples for clarity.

During the interview transcript coding process, cognitive maps and journals were referenced using the 18 codes to provide supporting evidence in relation to ideas found in interview transcripts. I organized evidence from journals and cognitive maps using color-coded highlighters and post-it notes.

In addition to the use of data triangulation, I employed several other strategies to support the validity and reliability of this research study. To address accountability to the interviewees, I have been in touch with them at various points in the research process to conduct internal validity member checks with participants. During the data collection and analysis process, I met with a peer group for peer debriefing in which I was able to hear multiple perspectives on issues relating to reliability and validity (Rose & Johnson, 2020). These meetings also allowed me to reflect upon power and positionality in my research process. Additionally, I explored my own positionality as a researcher, educator, and parent.

Using this process, I analyzed how a) teachers understood their own nature-connectedness, b) their unique role, and c) their perceptions about settler-colonialism and multispecies relations. Next, I describe the findings in detail and then discuss their importance to the early childhood environmental education and significance to scholarship.

FINDINGS

When examining teacher's perception of nature and their role in nature, I am considering the way they interpret knowledge and truth. I believe, this interpretation of knowledge will fundamentally influence how they interpret nature and their role in a NBECE setting. I have brought with me my own personal beliefs, and experiences as a teacher, as a researcher, as a parent of three young children, as a former nature-loving child who sought reprieve outdoors, and as a human living among multiple species, races, cultures, and identities. Acknowledging a researcher's identity and positionality as central to the qualitative research process is necessary for the honesty, rigor, and clear intent of the work (Bhattacharya, 2017; Hampton & Reeping, 2019; Milner, 2007). Important to the work in this study, it must be made clear that I am a non-native settler, socialized into thousands of years of Western philosophy. I have attended 'traditional' public school education in the United States and was raised using mostly the conventional English language of the US. Within the confines of my positionality, my study seeks to understand others' perception of nature but interprets that only within my own perception, which is limited. However, very much acknowledged as a part of this study is that we must recognize this limitation and be open to further interpretations and expressions.

My story is intertwined with and cannot be separated from the story of the participant and is important to name these entanglements. These identities and experiences have shaped how I see the world and how I have interacted and continue to interact with the world, and to some extent, influence how I perceive this research. To attempt to find a balance, I have been reflective throughout the data collection process by maintaining a research journal and seeking peers' and participants' perspectives through member-checks and peer-debriefing sessions.

This research study provided the opportunity to hear how other humans, specifically nature-based early childhood teachers value and understand nature-connectedness, while learning about their journey in arriving at this understanding. I sought to learn about how nature-based preschool teachers may be challenging human exceptionalism and resisting a settler-colonialist narrative around humans and nature as separate which is so deeply woven into our society. What I have learned about their perceptions, their personal stories in building these perceptions, and their classroom practices is presented below. It has proved to be illuminating in understanding the perspective of nature-based teachers yet, it is only one small piece of the on-goings within the world of nature-based early childhood education (NBECE).

Understanding One's Nature-Connection

While there were many commonalities among the four participants, each had their own personal journey in arriving in their NBECE role, developing their own nature-connectedness, and conceptualization of nature. In the following section, I capture three themes weaved throughout this journey and highlight the similarities and divergences.

Finding Something That “Feels Right”

All participants expressed an initial interest in education, but surprisingly, three of the four teachers did not begin their careers as educators. A common sentiment was an “unfit” feeling for traditional teaching. Joyce recalled that tension: *As I started taking more and more courses and getting closer to becoming a teacher, I was like, ‘this doesn't feel good.* Ely also considered various roles in education but said, *When I was thinking about being a classroom teacher it just didn't feel like me.* So, she began searching for other job opportunities. Catrina began in a college program in education, but with similar feelings, switched to peace studies. Eventually, all participants found their way to NBECE, which they unanimously described as joyful and offering a sense of fulfillment.

Nature's Place in NBECE Teacher's Lives

Nature's significance in the lives of the NBECE teachers extended far beyond their work environment. It provided them with affirmative and consoling experiences, acting as both a safe space *and* a catalyst for personal growth and resilience. The teachers described a profound sense of connection, both with nature and with themselves and others.

Layne expressed in their journal entry how being in nature feels like a sense of openness and acceptance. They elaborated on this idea of acceptance during our second interview, stating:

as, like, a gender nonconforming person, a queer person, a disabled person, like there have been a lot of times in my life where I felt very limited by how people received me or judged me, you know? And so, it's, it's nice to be in a space where you're like, I don't have to think about that right now. Nature is not judging.

Through their journal entry and interview, Layne demonstrated that they felt safe to be themselves in nature and experience a feeling of acceptance. Joyce described a similar sentiment:

I spent the majority of my time outside. If I wasn't outside, I was thinking about being outside. Nature was my safe spot. School did not come easy for me. So, when I was feeling frustrated or angry or pretending like I was going to run away from my family, I found myself outside. Nature accepted me and it would calm me down... and I felt like I could be myself there, and I didn't feel like I could be myself in a lot of different places.

This was confirmed in her cognitive map and description of it when she drew hands holding (nature holding her hand) and included the written words “my safe place.” (See exhibit A for Joyce's map). Ely expressed similar ideas to Layne and Joyce of comfort and safety especially during the COVID-19 isolation period describing one of the only places available for “good feelings.”

This comforting experience was evident in the participants' personal lives, but also in their teaching roles. Demonstrating a teaching example, Layne told a story of how the children were talking about an owl, so they took the children out on a walk to view the owl's sitting spot. The owl was present as well as an owl pellet. It had been a rough day, and Layne said they felt relief, stating: “realizing in this moment, all I have to think about, is looking at this amazing owl with my students ... You know, those are the moments that keep me going through all the [hard times] and bring me joy.”

There were plenty of comforting feelings as described above by participants, but they did not shy away from describing challenges. This included dealing with extreme weather, confronting death, being injured, and navigating personal health issues. Specifically, when working outdoors with preschoolers, there was the added challenge of

helping young children through similar hardships. Overcoming these challenges was viewed as a means of building resilience. Illustrated in a personal sense by Layne's statement:

I really love the person I feel like I'm becoming through forest school. Yeah, I feel like I'm becoming more resilient. I'm becoming more flexible. Like, there are a lot of positives in my life right now that have come from this [being an outdoor preschool teacher].

Joyce considered the resilience building opportunities for not only herself but for the preschool group. She described being in an outdoor classroom as helping children figure out what they need to regulate, conducting what she called "therapy sessions" during tough moments in the outdoor preschool classroom. Through these sessions, children were able to overcome challenges together. The experiences in these difficult moments also appeared to contribute to a sense of comradery and collective well-being among the group.

Budding Connections Over a Lifetime

Through the conversations and later analysis, it became evident that the participants' positive messages and connections with nature had developed over their lifetimes. Importantly, this connection was noted as starting in childhood. The reference to childhood specifically came up in two segments of the interviews: 1) when I asked about why they chose this specific profession and 2) to describe a time when they felt connected to nature.

When I asked Joyce to tell me about her decision to work in an NBECE field, she began with, *So I grew up and I was really fortunate enough to grow up with the backyard ... I spent the majority of my time outside.* Leading with this viewpoint signifies that the early connection she made with nature was influential throughout her life and in this instance, influenced her choice to work in NBECE. Ely opened her answer to this same question by quickly identifying that, *It reminded me of my childhood.* Separately, Ely and Layne directly referenced a childhood experience when I asked about a time that they felt connected to nature.

Whether it was in direct response to these questions or in other conversation throughout the interview, all four participants described in detail at least one memory of nature-connectedness from childhood or youth. An excerpt from Layne's journal entry illustrated how the special connections and their understandings of nature built during childhood have stayed with them and continue to influence how they think about and relate to the natural world. They wrote, "Did you know there are tiny mushrooms that only grow on pinecones? The fact that they exist, and I also exist makes me happy. Wonder is real. Magic is real. The books I read as a child maybe didn't have the facts right, but they had the feelings."

During the study, two of the participants mentioned the importance of solitary moments outdoors. However, notably, all the participants mentioned meaningful experiences with others mostly focused on siblings and peers. In addition to similar aged peers, Joyce and Catrina acknowledged the significant impact of having role models who encouraged their love for nature. Joyce's father served as her guiding presence, fostering her appreciation for the natural world and she spoke fondly of her father's guidance and love. For Catrina an important mentor teacher filled that role, and she recalled a transformative hike with this mentor who shared her feelings of nature. These influences are also illustrated in cognitive maps (Exhibits A and B) of both participants. The mentor's role is significant to note since each of these participants are now teachers with the potential to mentor and guide young children through nature experiences. In the next section, I examine participants' perceptions of their teaching roles and explore themes associated with guides or mentors.

Teacher as Nature Guide

Study participants shared common perceptions of their general roles as early childhood nature-based teachers. They highlighted responsibilities like curriculum planning, safety, observing children, and collaborating with families. However, the predominant theme was that of being a guide in their teaching approach. All four participants stressed the significance of guiding children in their educational journey. Additionally, Joyce, Layne, and Ely explicitly stated being a *nature-guide* when they were discussing their role.

During a discussion of her role, Ely highlighted her commitment to supporting children's understanding of humans' environmental impacts. She recounted leading student through an "environmental impact review" aimed at assessing environmental harm. She later expanded on this, stressing the obligation to illuminate humans' place within the broader context of their environment.

Joyce's perspective placed a strong emphasis on fostering children's presence and connections with the natural world rather than environmental impacts. When discussing her role as a nature-based teacher, she provided examples of how she facilitates meaningful experiences for children. Joyce recalled a moment when she and a child were near small rocks, in which she silently demonstrated rearranging the rocks and soon the child joined in. She highlighted these moments of connection with nature, emphasizing the value of outdoor exploration and loose parts for children. Before discussing her role, Joyce described times when she modeled a deep appreciation for nature, such as lying down in the forest, encouraging the children to observe the trees, and sparking conversations about their observations.

Layne shared instances from their day in the forest where the children actively engaged with nature, and Layne, as the teacher, played a guiding role in facilitating these experiences. They recounted a scenario where the children observed a chipmunk, tracking its movements with curiosity. Layne described their responsibility as teacher to ensure children's safety, while encouraging their chipmunk interest. The owl encounter, previously mentioned, provided children another opportunity to connect with nature. Layne, in this instance, modeled a sense of wonder by exploring owl pellets with the children, and emphasizing observation and inquiry.

With such interactions between children and more-than-human others in the outdoor preschool environment, NB teachers continuously navigate with children through the movement of multispecies entanglements. Ongoing encounters provide unique spaces to question human exceptionalism and resist a human-nature divide. These valuable opportunities, which are less accessible in indoor classrooms, make NBE spaces a crucial setting for exploring the concept of human exceptionalism. I was eager to learn how these teachers were challenging the prevailing settler-colonial views of human exceptionalism and the separation between humans and nature, while also similarly guiding children. What I learned is presented next.

Relating to Lifeworlds: Resisting the Human-Nature Divide

Interviews with the four teachers revealed that outdoor preschool experiences offered children ample opportunities to engage with nature, as seen in examples above. These examples illustrate the unique role of outdoor preschools in facilitating meaningful interactions between children and nature. While these interactions indeed can hold meaning, Pacini-Ketchabaw (2013) emphasizes that mere exposure to nature is insufficient. It is when children recognize what she calls "frictions in the forest," and are pushed to think critically that they can contemplate its intricate histories and entanglements. I reviewed the participant data to determine how they may (or may not) have found that friction in the forest.

Ely contemplated the nature-culture divide with her preschoolers, "because our classrooms exist in such a diverse array of natural settings and sort of like I'm always like interrogating that question of like what is nature.... So that's something that like we definitely talk about with our kids." She lightly suggested a challenge to human-nature divide, acknowledging frictions and uncomfortable realities of settler-colonialism. However, at times, she suggested a contrary mindset, such as designating certain areas as off limits and upholding strict guidelines about human's place within nature, emphasizing human harm to the environment while neglecting reciprocal aspects.

Joyce, on the other hand, directly discussed the connection and reciprocal-relational aspects of humans and nature. The deep connections and nature-awareness suggested that she may resist the idea of the human-nature divide, but her descriptions fell short of explicitly addressing the issue of human exceptionalism or settler-colonialism. She mentioned that living in a city can create a perceived disconnect from nature, signaling that Joyce perceived a tension or friction, but she attributed it to city life without exploring the deep-rooted settler-colonialist paradigm.

Layne provided a strong example of a teacher who addressed settler-colonial constructs, including human-exceptionalism while mindfully reflecting on the interconnections among children, teachers, and nature. Layne clearly articulated a friction in the presence of human exceptionalism: “Lots of times people view nature as like the resources we can get from it, like what commodities we can make from it. Even sometimes with education, people view nature as like the next curriculum set, you know, the next thing we have to teach about.” To illustrate their point, Layne shared an example of a college experience where a friend’s thesis on an endangered plant was devalued due to its perceived lack of human utility. Layne clearly saw this tension of human exceptionalism stating: “but it’s a living thing. It has a use to its ecosystem and beyond that, does it need a use to exist?” They then linked this perspective directly to settler-colonialism:

I mean, honestly, I think a lot of it stems from colonialism. And just this idea that like, we can possess the space that we’re in and all of that, those things that are there, like if we show up, we can just take them. I think it’s pretty sad. But yeah, I think just the impact of colonialism on our view of nature, I think are expensive and pretty heavy.

Layne also said they discuss the history of the land, connect experiences to Indigenous practices and highlight the effects of settler-colonialism with the children. Layne’s example illustrated how a teacher resists the human-nature divide and directly addresses settler-colonialism’s impacts exposing the “friction in the forest” while fostering a child-nature connection. I now delve into a discussion and consider scholarly implications of this study.

DISCUSSION AND SCHOLARLY SIGNIFICANCE

This study explored how outdoor preschool teachers perceived nature and showed resistance to the nature-culture divide prescribed by settler-colonialism. Findings revealed deep journeys and strong bonds with nature, influencing participants’ nature-culture relations and pedagogies, which is significant for both practice and research in the field of early childhood environmental education.

A Teacher’s Journey

Teachers’ journeys with nature and their work in NBECE were tied to their own experiences in nature, with an emphasis in childhood. This confirms findings from earlier research about the influence of children’s outdoor experiences on nature-connectedness leading to their relationship with nature (Chawla, 1999; Barrable & Booth, 2020; Yilmaz-Uysal, et al., 2020), stewardship (Bailie, 2012), and involvement in environmental fields (Chawla, 1999; Palmer & Suggate, 1998). In addition to general outdoor experiences, some research (Chawla, 2007; Sobel, 2008) indicates having a role model during nature engagement can develop and maintain a healthy child-nature relationship. This was demonstrated by Joyce when she talked about her father as her nature guide and by Catrina when she reflected on meaningful experiences with her mentor. For both participants, it seemed to have had a big impact on why they chose to be an outdoor preschool teacher and their journey.

These conclusions are significant since research on NBECE career motivations is lacking. Given that this is a new field, it not surprising that I was unable to locate research on the career motivations of NBECE teachers specifically. However, the findings of this study align with broader insights into educators’ career choices. Manuel and Hughes (2006) identified three primary factors motivating teachers’ career choices: a personal desire to work with children or youth, engagement with the subject matter, and a sense of fulfilment in doing meaningful work. The participants in this study demonstrated a strong affinity for the outdoors and a deep appreciation for nature, drawing them to nature-based education. These findings also indicated that the participants sought meaningful engagement with the subject (nature) as a key aspect of their career motivation. Additionally, their commitment to both children and nature aligns with Manuel and Hughes’ (2006) concept of doing work they genuinely care about.

Another significant factor in these teachers’ journeys towards becoming NBECE teachers was their recognition of the benefits of outdoor experiences. All participants highlighted the advantages of outdoor activities both for themselves and the children with whom they worked, including slowing down, being present and connected, building resilience, problem-solving skills, emotional regulation, and learning about nature. This resonates with

established research on the benefits of outdoor and nature experiences for adults (Bowler et al., 2010; Bratman et al., 2015; Schertz & Berman, 2019) and children (Blackwell, 2020; Chawla, 2015; Chawla et al., 2014; Carr et al., 2017; Triguero-Mas et al., 2015). Notably, my present study revealed that these benefits played a pivotal role in motivating the teachers to pursue a career in nature-based education. Acknowledging and deliberately integrating these nature-related benefits into the recruitment, training, and ongoing support of NBECE educators could prove valuable for their professional development, job satisfaction, and teacher retention, potentially benefiting the overall nature-based preschool learning environments.

The Unique Role of NBECE Teachers

While the field of NBECE is growing significantly, working with preschool children in nature-based and outdoor settings is still a unique position which comes with unique challenges, such as defining roles and responsibilities. The still-emerging definition was evident in this study. While some common responsibilities align with general preschool teaching, such as curriculum planning and safety monitoring, this research explored how these teachers perceive their roles in connection with nature. To think more specifically about how the teachers are fulfilling the role of nature-based teacher, my study paired a teacher's understanding of their role in conjunction with their perception of nature. This pairing is important because, as found by Clark and Peterson (1986) and Spodek (1988), teachers' beliefs will influence their decisions around curriculum and planning. In line with that research, I found that the participating teachers expressed beliefs about the importance of children's connection with nature and therefore it was a critical part of their described pedagogy.

A unifying theme was the role of being a guide, which all participants emphasized. Commonly, preschool teachers acknowledge themselves as guides for things such as conflict management and social-emotional development (Gartrell, 2017; Sanchez, Steece-Doran & Jablon, 2013) and the participants reconfirmed this. However, a significant novel theme emerged in this research: *teachers as facilitators of children's nature connection*. This approach is unique to NBE settings, where teachers scaffold children's understandings of the broader narrative about their natural surroundings, model appreciation, guide critical thinking through nature experiences while fostering wonder, curiosity, and notions of entanglement. As one participant described, it is about "wanting children to understand the bigger narrative of the space we are in," which include the interconnection of multispecies and natural systems, acknowledging the impact of settler-colonialism on the land and human relationships, and appreciating the history of the land itself. These findings extend the discourse on what it means to have a guide or role model facilitating nature experiences during early childhood and what that could look like in an outdoor preschool setting.

Catrina's was the only participant who did not emphasize the role of nature-guide or facilitating nature-connections. This was unexpected given her own reflections on the significance of nature and mentorship in her life. Research suggests that such personal experiences typically contribute to a sense of nature-connectedness and beliefs about nature-based experiences (Barrable & Booth, 2020; Pruneau, et al., 1999; Robson & Rowe, 2012). Considering that teachers' thoughts and beliefs are known to influence their teaching (Clark & Peterson, 1986; Spodek, 1988) and pedagogy (Fang, 1996), it could be expected Catrina would extend her beliefs to her teaching practice. Catrina's status as an assistant teacher in her first year in an outdoor setting, compared to the other participants who were experienced lead teachers, may in part explain this difference. It's possible that her limited experience and the learning curve associated with novice teaching led her to focus on more immediate needs such as safety (Feiman-Nemser, 2003) which she did emphasize as important in her outdoor teaching role. McClintic and Petty's (2015) research provides another lens, as they found that a teacher's outdoor experience influences the value they place on outdoor engagement, *but* their desire to reduce safety risks and lack of experience can create a philosophy-reality conflict in which they hold one theoretical grounding but enact a different reality. This suggests the potential for a transformative shift in perspective as Catarina gains more experience and confidence in her nature-based setting.

Resisting a Settler-Colonial Narrative

In the analysis of this research, I explored participants settler-colonial perspectives. I was inspired by scholars like Bang and Marin's (2014), Kyle Whyte (2018), and Tuck and Yang (2012), who explored how settler-colonialism perpetuates environmental injustices, namely by separating human relationships from the environment.

Demonstrating an awareness of Whyte's (2018) argument that colonialism has fundamentally altered the way humans perceive and interact with nature, the participant, Layne thoroughly acknowledged the destructive impacts of colonialism on nature as discussed above.

Whyte (2018) elaborates on how the violent disruption takes place by working “strategically to undermine Indigenous peoples’ social resilience as self-determining collectives... [and] disrupting eco-social relationships” (p. 125). Teacher Ely demonstrated that she was thinking about similar issues in explaining her antiracist curriculum, including contributions from local Indigenous peoples and the history of the land. Specifically, she noted using the Since Time Immemorial curriculum (OSPI, n.d.) to facilitate a discussion of about how a local river had changed over time and in turn shifted relationships between people and land. She also discussed with children language loss among the local Indigenous communities while teaching words in Indigenous languages. Working with her preschoolers through the Antibias education (Derman-Sparks & Edwards, 2019) and Since Time Immemorial curricula(OSPI, n.d.) required consideration of Indigenous peoples’ social resilience and self-determination, alongside conversations about ecological (in)justices.

Tuck and Yang (2012) note specifically “how settler colonialism has shaped schooling and educational research in the United States and other settler colonial nation-states” (p3). Bang and Marin’s (2014) findings of a notable separation between humans and nature in science curricula concurs with that notion. Given that formal schooling systems often demonstrate these dominant settler-colonial narratives of nature and humans as separate, hearing how some of the participants in this study were confronting and resisting settler colonialism and human exceptionalism adds a valuable dimension to what Bang and Marin (2014) describe as “desettling” normative time-space and nature–culture relations in schooling.

By examining NBECE teacher’s perception of nature and perceived classroom role, this study has shed light on how some educators are resisting settler-colonialism and its separation of humans from nature, offering insights into the broader discourse on these issues in early childhood environmental education. Given that only two of the four teachers directly confronted settler-colonialism, the findings also suggest the need for additional training in NBECE to directly address settler-colonialism and contemplate human exceptionalism.

LIMITATIONS AND FUTURE DIRECTIONS

This study, while offering promising insights into how nature-based preschool teachers connect with nature and address settler-colonialism, should not be over-generalized. The data heavily relies on self-reported information from teachers. The inability to conduct on-site observations due to strict visitor COVID-19 protocols hindered my knowledge of how these ideas manifested in practice.

Beyond the scope of this article is how teachers define 'nature' and what this definition means in the context of modern life and associated stressors or feelings of alienation. Some teachers in this study described nature as a “safe space” and a place to “be myself,” but these statements lack context. Future investigation of “safe space” could yield insights into the relationship between personal definitions of nature and broader societal experiences.

Another valuable research avenue involves direct observations of teachers and children in outdoor preschool settings, offering a more comprehensive understanding of how teachers' understandings regarding nature influence their pedagogical practices and the daily experiences with children in these environments.

CONCLUSION

In conclusion, this research delves into the perceptions of teachers within the emerging field of nature-based outdoor preschools, examining their views on nature and their roles in outdoor classrooms. The study revealed how some teachers recognize the influence of settler-colonialism on human-nature perceptions. Additionally, it reaffirmed previous research findings regarding the formative impact of childhood experiences on environmental stewardship, nature appreciation, activism, and career choices.

One noteworthy aspect arising from this study revolves around the role of an outdoor nature-based teacher, specifically their role in facilitating children's interactions, critical perspectives, and connections with nature. Inconsistencies emerged among participants, particularly regarding their roles as nature guides. These inconsistencies suggest a need to further define teacher expectations and enhance training in this evolving profession. Beyond that, supporting NBECE teachers to contemplate the influence of settler-colonialism and human exceptionalism would aid in growth and cohesion across various nature-based practices, research, and teacher preparation. Overall, this study offers valuable insights into nature-based preschool teachers' perceptions on nature-culture relations and their own nature-connectedness while reinforcing the need to continue investigation supporting this growing field.

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