Learning From Indigenous Perspectives: Wellbeing in the Early Years

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Abstract

This three-year qualitative research study examined the knowledge and experiences of 20 early years educators while introducing Indigenous perspectives and pedagogies on Land-Based Learning in 10 urban childcare centers. Educators were introduced to Indigenous perspectives and pedagogies through workshops with Indigenous speakers and Indigenous-authored picture books. These perspectives included the importance of supporting children to develop responsive and caring relationships to the Land for their own wellbeing and for the wellbeing of all their fellow creatures. Supported by their educators, the children increased their sense of belonging in the world, expressed gratitude for their fellow creatures, and recognized and enacted their responsibility to care for nature.

Introduction

Despite the growing body of research on the mental and physical health, developmental, and learning benefits for children's wellbeing of active outdoor play (e.g., Brussoni et. al, 2015; CPS, 2012; WHO, 2020), many young children in urban mainstream early learning centers have limited access to natural outdoor spaces to play and learn. Urban playgrounds are often paved and fenced with few trees, plants, or natural surfaces. Furthermore, early years educators typically receive little training in nature-based pedagogy. Outdoor play pedagogy is often characterized by educators observing children as they play on climbing frames, play with plastic toys, or ride wheeled vehicles.

Indigenous perspectives on Land-Based Learning offer alternative ways to promote children's wellbeing, and the wellbeing of educators, through learning with and from traditional teachings. These include greeting and expressing gratitude for the gifts of nature; recognizing human interconnectedness with the natural world; and building reciprocal relationships with, and showing care and responsibility for, nature. This paper reports on a three-year qualitative research study (2020–2023) exploring the impact on early years educators' knowledge, perspectives, and pedagogies when introduced to Indigenous perspectives on Land-Based Learning in 10 urban preschool urban early learning centers (ages 2.5–4 years). The families and staff at the centers in the study reflected the demographics of the city of Toronto. That is, they were a mixture of people from a large range of countries, cultures, and religions who spoke a range of languages. Many of the families in the centers were low-income. All but one of the sites offered subsidized spots for low-income families. In eight out of 10 of the sites, between 75% and 100% of the families were on partial or full subsidy, another site had 20% of families on subsidy, and the final site did not offer subsidized spots.

The research team was mostly non-Indigenous. We were grateful to learn from our advisor and team member Lori Budge, who is an Indigenous faculty member at George Brown College, as well as from our workshop speakers who brought teachings from different First Nations: Lori Budge (Ojibwe and Odawa teachings), Dr. Hopi Martin (Ojibwe teachings), Carolyn Crawley (Mi'Kmaw teachings), Natasha Bascevan (Anishinaabe and Metis teachings), and Emma Greenfield (Mohawk teachings). Throughout the project our understanding of Indigenous Knowledge regarding cosmology, pharmacology, environmental science, spirituality, and education evolved through our weekly gratitude circles, and through listening, reading, viewing, discussing, and consulting with Indigenous writers, educators, and Knowledge Keepers (e.g., Anderson et al., 2017; Bell et al., 2010; Courchene, 2016; Kimmerer, 2013; Martin, 2022; Restoule, n.d.). We also learned from the children as they developed relationships with the natural world around them. We shared our learning and provided resources for busy working early years educators; this new learning informed the way they spoke and acted with the children outdoors, and the way we understood what we were seeing and hearing in the centers. We hope our work contributes to decolonizing early years education and to reconciliation through centering Indigenous Worldviews, teachings, and pedagogies, and through aligning our methodology with Indigenous research methods.

Literature Review

Recent research has focused increased concern for the wellbeing of children in light of both the COVID-19 pandemic and climate change, highlighting children's fear, worry, sadness, anger, and anxiety (e.g., Burke & Moore, 2021; Lawrence et al, 2022; Pickett et al, 2022). Nature-based and place-based education have been shown to support children's mental health and wellbeing and provide a buffer in times of stress (e.g., Chawla, 2015; Chawla 2020; Tillman et al., 2018; Hernandez Gonzalez, 2023). Within the research on the benefits of nature-based education, it has been found that knowledge about nature alone is less effective than developing relationships with nature while learning (Otto & Pensini, 2017). A close relationship with nature is a much stronger predictor of ecological behavior than academic learning alone, but fostering this type of relationship is not common in educational settings. It is more common to learn about nature than develop relationships with nature (Otto & Pensini, 2017).

Despite the reported benefits of nature-based and place-based approaches, they have been criticized for "persistent colonialist and capitalist values that continue to permeate popularized early childhood environmental education frameworks in North America" (Nelson et al., 2018, p. 5). Nelson et al. (2018) argue that in these approaches, nature is objectified as a resource to support children's development, and that Indigenous peoples who were displaced for colonial purposes are disregarded.

Indigenous Worldviews, perspectives, and pedagogies offer ways to rethink how young children's well--being can be supported through developing their relationship to the Land. However, the distinctiveness of Indigenous Worldviews needs to be acknowledged and respected in education (Little Bear, 2000). Elder Albert Marshall's concept of Two-Eyed Seeing teaches that we need to respect the value and contribution of both Indigenous and Western worldviews: "Two-Eyed Seeing refers to learning to see from one eye with the strengths of Indigenous ways of knowing and from the other eye with the strengths of Western ways of knowing and to using both of these eyes together for the benefit of all"

(Barlett et al., 2012, p. 335). Indigenous Worldviews include developing relationships of gratitude, reciprocity, and care with the Land (Kimmerer, 2013) and have been largely missing from early childhood education programs in Canada with their focus on developmentalism (Callaghan & Taylor-Leonhardi, 2018). Their inclusion in early years programs can not only support children's wellbeing, but also contribute to the decolonization of education (Absolon, 2019; Tuck & Yang, 2012) and serve as progress towards fulfilling The Truth and Reconciliation Commission's Calls to Action (TRC, 2015) regarding the inclusion of culturally relevant programming and connecting with our responsibilities to the Land (TRC, 2015). Chawla (2020) noted that there is little research on children's connections with nature in the early years, and very little that explores the topic from Indigenous or other non-Western perspectives. This research explores how early years educators in mainstream urban settings can learn with and from Indigenous perspectives on Land-Based Learning to support the wellbeing of the young children in their care.

Methodology

This paper reports on a three-year study of 10 preschool classrooms in Toronto, Ontario, as they learned about, from, and with Land-Based Learning from Indigenous perspectives. The learning experiences occurred mostly outdoors in the playgrounds, but also in the classrooms. All classrooms had two educators. The educators, Registered Early Childhood Educators (RECEs), Ontario Certified Teachers (OCTs), and early learning assistants were all interviewed individually before the study began (Fall 2020) to document their knowledge, experience, and comfort level with Indigenous perspectives and pedagogies. They were interviewed individually again in the spring of 2021, 2022, and 2023 to explore any changes in attitudes, knowledge, perspectives, and pedagogies. The educators also attended two virtual workshops per year (six in total) during which they were asked to present stories and photos of the ways they and their children were learning about, with, and from Land-Based Learning. The interviews were recorded and transcribed, and detailed notes were taken during the workshops. Playgrounds were observed bi-weekly using participant observation. Research team members also worked with small groups of children during these bi-weekly visits to support them in their engagement with the natural world.

The research approach was primarily qualitative, as defined by Merriam (2009) and Punch (2009), but some quantitative data was collected. It involved a small sample of teachers who were studied in depth, the interview sessions were largely open-ended, and the themes emerged as the study progressed. The transcripts and observation data were read several times to identify themes or "codes" related to the research questions, using an inductive approach (Thomas, 2006). The educators were interviewed at the beginning of the study about their perspectives and practices regarding outdoor play, nature-based learning, and Indigenous perspectives and pedagogy.

This research was initially undertaken with little understanding that Indigenous Land-Based Learning encompasses a completely different worldview and pedagogies than Western environmental learning. Through weekly research meetings in which we discussed Indigenous-authored articles and videos, as well as observations of children and educators engaged with Indigenous Knowledges, Worldviews, and perspectives, our understanding was transformed by Lori Budge's Indigenous lens. This process helped

us to understand more about what Indigenous Land-Based Learning is, how it differs from conventional ideas of outdoor and nature play, and how it can be incorporated into early years education. These conversations also shifted how we understood the research process, how we engaged with the participants, and how we understood what we were learning.

We aspired to enact Two-Eyed Seeing (Barlett et al., 2012) in our research approach by engaging with both Western and Indigenous methodologies. Our methods aligned with some key Indigenous research principles as outlined by Indigenous scholars Tuhiwai Smith (2012) and Kovach (2017). We sought to center Indigenous Worldviews (Tuhiwai Smith, 2012) and acknowledge Indigenous Knowledges and philosophies throughout the process (Kovach, 2017). In addition, the research was anchored in Indigenous teachings (Kovach, 2017) and grounded in relationships with the community of participants (Tuhiwai Smith, 2012). As a primarily non-Indigenous research team, we approached this work with humility and open hearts (Kovach, 2017; Tuhiwai Smith, 2012). Throughout the three-year project, we centered Indigenous voices and perspectives through Indigenous workshop speakers, and Indigenous-authored picture books, articles, videos, and websites.

Findings

We have divided the findings section into four themes based on Indigenous teachings: engaging with the senses and the heart, belonging, gratitude, and reciprocity. It is important to note that the themes are intertwined and unfolded in tandem over the course of three years as the educators learned about and engaged with Indigenous perspectives on Land-Based Learning. All four themes were introduced in the first year of the project through workshop speakers, newsletters that included Indigenous-authored videos and articles, as well as Indigenous-authored picture books. The themes were reinforced throughout the three years of the project by subsequent workshops and resources, and through regular opportunities for the teachers to share what they were learning and practicing with others in the project.

Engaging with the Senses and the Heart

As a research team, we were very moved by a video that we shared with the participants entitled, "What is Land-Based Learning? A Digital Forum" (Brass et al., 2020). In it, Willie Ermine, a Cree Elder, Knowledge Keeper and Ceremonialist from Sturgeon Lake First Nation, Saskatchewan, speaks about introducing young children, aged 2 to 5 years, to Land-Based Learning. Elder Willie Ermine encourages adults to respect children's perspectives and responses to the natural world, and to resist imposing adult perspectives. After they bring children out to a natural area, he recommends that adults:

1) Encourage children to observe nature closely: Ask them, "What do you see?"
2) Encourage children to connect emotionally with nature: Ask them, "How do you feel?"
3) Encourage children to engage with all their senses playfully, and follow their lead.
4) Value children's intuition.
5) Learn from the children. (Brass et al., 2020)

Over the course of the three years of the project, educators reported new perspectives and approaches to witnessing and supporting children as they engaged with the Land through close observation, tactile exploration, emotional connections, and playful engagement. The first interviews with the educators occurred before the project began but after the centers had been spending the majority of their time outdoors in the spring and summer of 2020 due to pandemic restrictions designed to control the spread of infection. In addition to spending far more time outdoors than was typical, the restrictions also meant that the children were using fewer commercial toys and resources and their days were less structured. The educators had not yet been introduced to the Indigenous-authored resources in the project, nor were they modeling or encouraging engagement with the natural world, but they saw the social and emotional benefits for the children from being outdoors. As this educator put it,

> Sometimes when the children are outside, they express how they feel. It helps them emotionally and socially. They learn to share, they learn to take turns, and they love to incorporate everything in their imaginative, creative play. So, I think that outside is a very good play area for them to come out of their boxes. (Early years educator, Fall 2020)

Although the early months of the pandemic were a very stressful time, some educators noted that they were feeling less stressed than usual at work since most of their day was being spent outdoors. They attributed this to the children being calmer outside, but also to the effect of being out in nature themselves. One educator explained, "I associate [being outside] as a way to decompress and de-stress for sure. I find that nature does that for me." (Early years educator, Fall 2020).

Noticing and Valuing Nature-Based Play

By the end of the first academic year of the project, the educators reported a new awareness regarding how children were engaging with the natural world, and they were more inclined to follow their lead rather than turn their engagement into a "lesson." They were supporting children to engage playfully and recognizing the holistic nature of that playful engagement. One educator put it this way:

> The children recognize different things [outside]. They recognize the birds. They recognize the sky. They recognize small aspects of the environment that we normally don't pay attention to. So, they're using it to support their play in all different aspects. The building aspect, creating stories about different things in their pretend play. It's really supporting the children to just kind of deep dive into their minds, their body, their senses, all of it into their play. (Early years educator, Spring 2021)

Fig. 1: Children observing the sunset from their playground.

The educators noted that the children hadn't changed over the course of the first year. It was the educators themselves who had changed. They had begun to take more notice of children's interest in and interactions with the natural world, and to value and support them differently. Whereas at the beginning of the study they noted the social, emotional, and playful learning benefits of simply being out in the playground, by the end of the first year, they recognized how much the children gained by playing with and learning about the natural world.

Sensory and Heart-Based Learning

The educators' interviews at the end of the second year illustrated that there had been a shift from considering nature as a resource that could benefit children, and adults, to responding to the natural world with empathy. The educators reported that it was the children who led the way in this shift. As one educator explained, "It's a constant learning opportunity. They come to us with these ideas, and sometimes we had never thought of them, and pretty profound ones as well. What's important, too, is their understanding and empathy for animals" (Early years educator, Spring 2022). By the end of the second year, the educators were recognizing that children's sensory engagement can build an emotional connection with nature. As one educator explained:

> I think the more they are allowed to touch and taste and feel and they're not redirected, not told, "No, you can't do that. No, you can't do this," the better. It's positive, right? So, it builds their self-esteem and I think they naturally will like the environment more if they're allowed to touch it. (Early years educator, Spring 2022)

Fig. 2: Children playing in a puddle realize they can see their reflection.

In response to their growing awareness of the value of sensory and emotional engagements with the natural world, the educators described how they were shifting their pedagogical practices. Their understanding of the value of children's direct contact with nature, in context, led them to a greater focus on outdoor learning, even after the pandemic restrictions had been lifted, as this educator explained:

> At the beginning of the study, we looked at nature the way we learned how to implement it in daycares—bring the outside inside. Now, it's the opposite. Now, we go outside, and we set up outside and we give the children the opportunity to be connected with nature by playing directly with the Land, with the soil, with the sand, with grass, with water, and observe how nature changes. (Early years educator, Spring 2022)

Furthermore, the educators recognized that Indigenous perspectives on Land-Based Learning had led to new understandings and practices in their own lives. One educator explained it this way:

> Things that, you know, you never gave a second glance over are becoming more meaningful to you … I'm literally stopping to take time to share what's around me. I'm looking at the changes that are unfolding and then trying to see it also through the children's eyes. So yeah, there's more of me standing still and taking time to appreciate …. So it gives me a broader perspective of nature and how much more I'm aware of and in tune with it. (Early years educator, Spring 2022).

Deeper Appreciation and Empathy

By the end of the third and final year of the project, the educators reported that the children were more curious, more engaged, and were forming a deeper appreciation of nature. One educator put it this way: "So, it's just a deeper appreciation and understanding. Like, that connection in terms of emotional and spiritual connection to the Land and how we treat it. I think it's really important and that children are being mindful of that" (Early years educator, Spring 2023).

When asked about the benefits of outdoor play and nature-based play at the beginning of the study, most educators mentioned the physical, mental, and learning benefits for children. By the end of the third year of learning about Indigenous Knowledge through listening to Indigenous speakers, reading picture books

by Indigenous authors, and observing and supporting the children outside, this list had expanded to include awareness and empathy for humans and non-humans in the environment. Here's how one educator described it:

> I mean, being outside is, as we all know, a great benefit—the exercise, the fresh air. But, also the awareness, being aware of others. And it starts with being aware of the grass you walk on, the air you breathe, and the water you drink. Really brings a whole sense of self, the need to become aware of other people and what your impact on the world is, right? (Early years educator, Spring 2023)

The approach to engagement with the natural world that Elder Willie Ermine teaches, grounded in a deep respect for children's perspectives, provides a very different picture of wellbeing than Western approaches to nature-based curriculum. By emphasizing the importance of emotional and intuitive connections to the Land, as well as physical and cognitive engagements, it offers a more holistic approach. Children can integrate their whole selves and provide leadership to the adults in their lives.

Belonging—All My Relations

> "All my relations" is the English equivalent of a phrase familiar to most Native peoples of North America. It may begin or end a prayer or speech or a story, and, while each nation has its own way of expressing this sentiment in its own language, the meaning is the same. "All my relations" is at first a reminder of who we are and of our relationship with both our family and our relatives. It also reminds us of the extended relationship we share with all human beings. But the relationships that Native people see go further, the web of kinship to animals, to the birds, to the fish, to the plants, to all the animate and inanimate forms that can be seen or imagined. More than that, "all my relations" is an encouragement for us to accept the responsibilities we have within the universal family by living our lives in a harmonious and moral manner (a common admonishment is to say of someone that they act as if they had no relations). (King, n.d.)

Over the course of the project, educators and children grew in their understanding of the Indigenous principle that humans belong to an inter-connected web with other creatures in nature, both human and non-human, and they have a responsibility to live in a moral manner with all their relations. At the beginning of the project, a few educators who had had some professional learning on Indigenous perspectives had a sense of this principle, but most did not. A few others spoke of the importance of empathy and of understanding how elements of nature are connected, but they viewed humans as separate and superior beings.

Bugs Have Mommies Too

At the end of the first year, the educators discussed how the children recognized other non-human living beings in the playground and saw connections between them and their own lives. This was evident in many playgrounds as the children interacted with insects, worms, squirrels, and birds. This had become a focus for the children, as one educator explained:

> Their focus right now—it's a lot with insects and bugs and the animals outside. That's a lot where their connection is. I don't know if the connection maybe has something to do with seeing them as another living thing that physically moves around. (Early years educator, Spring 2021)

As the children began to feel a sense of connection with their non-human relatives in the playground, they began to identify with how they would feel in similar circumstances. This often took the form of wondering where their family members were or if they were missing their mothers, as this quote exemplifies, "When we took the fly outside, they were like, 'Oh is it going to be OK out there? Is it missing its mommy?' So, we started talking about different potential reasons that this poor fly would be sad" (Early years educator, Spring 2021).

The educators reported a change in how both they and the children were more focused on their connections with nature and their desire to care, as described by this educator:

> It's just part of our learning process—how much more devoted we've been to nature and taking care of what we see and having a better understanding of how to connect as adults outside. I can see the change, you know? And then with the children, I definitely see where they just want to see so much more outdoors and are not scared of the bugs but wanting to touch them gently. (Early years educator, Spring 2021)

Belonging and Interdependence

In the year two interviews, the educators talked less about the benefits of nature for children, and more about how children (and adults) are connected to nature and have a responsibility to act morally towards all creatures. One educator put it this way:

> But now I talk more about, you know, we thank the ant because it helps bring food to its family and then the birds eat the ants, and more. It's not just, "Don't step on the ants," but more of what's happening in the ecosystem. (Early years educator, Spring 2022)

They also recognized that with this understanding of interdependence, comes a sense of belonging, "I believe Indigenous principles usually stress that sense of belonging, right, and we can definitely facilitate that. Through Indigenous teaching and being reciprocal with the Land—we take care of the Land, the Land takes care of us" (Early years educator, Spring 2022).

The educators in the study found the concept of All My Relations particularly powerful. It gave them a new perspective on their relationships and responsibilities to the Land, as educators and as people. In the following quote, one of the educators echoed Dr. Leroy Little Bear's (2015) cautions about the need to respect the narrow set of natural circumstances on which all life depends:

> If you think deeply about nature, it gives us everything, not only food. Nature is everything. Any imbalance in nature will lead to disaster, right? So, we have to take care of nature and connect with nature, to animals, to everything around us because we all need to live in harmony. And we have to respect that, and we have to work on that. And really, I've changed my concept of nature. (Early years educator, Spring 2022)

Fig. 3: A child creates a house for a squirrel with snow, sticks, pinecones, and rocks.

Deeper Connection, Love, and Respect

At the beginning of the project, the educators spoke very little about their own views and relationships with nature. However, by the end of the third year, many spoke of a deepened sense of connection, respect, and love for the natural world, as this educator explained:

> I think it's really important to understand nature and connect with nature ... So, don't take it for granted as something that is around us that we can just use …. Land-Based Learning amplifies, I would say, some things that we were doing before, like recycling, but it was just a human approach. Now we know that we should be taking care of nature. But it's more than that. There is now a more emotional connection with nature. (Early years educator, Spring 2023)

The educators understood that they had developed new perspectives and connections with the Land over the course of the project. One of the big learnings was a change in the way they viewed the position of humans in the world:

> When we step outside and when we immerse ourselves in nature, it is a reminder and it really places us in this vast web of life in which we are not in control, in which we follow. We are made by that system. It wasn't made by us. So, I think it re-positions us in a really important way that can evoke both awe, and connection, and in the right way, humility. (Early years educator, Spring 2023)

The Indigenous principle of All My Relations emphasizes that humans are not alone. We are part of a network of relations who care for us and in turn need our care. These connections provide a sense of comfort and belonging that can lead to a feeling of wellbeing. This is absent from Western approaches to nature-based learning that typically position humans as separate and superior.

Gratitude

> We are thankful to our Mother the Earth, for she gives us everything that we need for life. She supports our feet as we walk about upon her. It gives us joy that she still continues to care for us, just as she has from the beginning of time. To our Mother, we send thanksgiving, love, and respect. Now our minds are one. (Kimmerer, 2013, p. 108)

In this retelling of part of the Thanksgiving Address of the Haudenosaunee Confederacy, Robin Wall Kimmerer (2013) shares the teaching of gratitude to Mother Earth for all we have been given. This teaching was shared early in the first year of the project and was the Indigenous perspective that seemed to first capture the imagination of both the children and adults in the project. As we have seen in the previous educators' quotes, gratitude was often mentioned when talking about engagement with the senses and the heart, and about belonging and connection. Gratitude was both a result of holistic engagement and a sense of belonging, and an impetus to further engage and connect with the natural world.

Appreciation Turns to Gratitude

The project began with only a few educators speaking of appreciating that their playground had some trees and bushes—a distanced, cognitive response. By the end of the first year, educators were reporting that they and the children were showing appreciation *to* nature for the gifts they were receiving—a more emotional, personal response:

> We've definitely taken more of an appreciation towards nature, things that we may have taken for granted before. We're showing appreciation and we're actually giving or feeling appreciation for what the tree provides, for the warmth that the sun provides, just for all of those things. (Early years educator, Spring 2021)

Fig. 4: Children hugging a tree in gratitude after learning that it provides pine cones for the squirrels.

Expressing gratitude became an integral part of the day in many programs. One educator explained how they thanked the rain rather than talking about "bad weather" as they would have done before the project began:

> When it's raining, we go outside to a little hut in our playground, and we stand there, and we say "Thank you" to the rain. "Thank you for feeding the grass, thank you for feeding our fruits and vegetables so we can eat, thank you for washing our cars!" [laughing] "Thank you for letting us splash in the puddles!" (Early years educator, Spring 2021).

The educators mentioned that the sense of gratitude that they were feeling went beyond their professional roles as educators, and extended into their personal lives, as one educator reported:

> Whenever I take a little walk or jog or explore nature on my own, I take a little time to—you know, if I see a beautiful tree or walk through a forest, I say thank you. I express thanks to nature, the Land, the trees, the water. I'm learning why this is important. So, I should do that myself. I also try to teach my own children, my 21-year-old at home, too [laughing]. (Early years educator, Spring 2021)

Gratitude Comes with Responsibility

By the end of the second year, the educators reported that the children were spontaneously expressing gratitude to the natural world around them, as this story illustrates:

> For me, the gratitude piece has just been really what we sort of latched onto. So, one day we came outside, and the snow had melted, and it had made this huge water pile. They were so excited to have this hands-on experience with the water and they thought that it had rained, so one of them threw their hands up at the beginning and said, "Thank you rain." And then it was like this snowball thing and everybody who was at this puddle was like, "Thank you sky" and, "Thank you clouds for bringing rain." (Early years educator, Spring 2022)

Through the Indigenous perspectives shared in the project, educators also became aware that it was not enough to express gratitude for the gifts of nature. Gratitude needs to be accompanied by responsible behavior, as one educator explained:

> People say, "Well I'm so grateful that I have this grass in front of my house and beautiful flowers." But then we have to be very careful not to behave in a way that will destroy that. It's not something people are thinking of. Children have to understand not to take nature for granted. We really have to focus on, you know, taking care of the water, taking care of the Land. This is something that I think is great, it's amazing. (Early years educator, Spring 2022)

Gratitude Leads to Changes in Practice

At the end of the third year, the educators explained that they and the children had changed many practices as a result of what they were learning about Indigenous perspectives on gratitude. Out of gratitude for the gifts of the Land, they and the children were trying to conserve water, use fewer paper towels, care for the insects, birds, and animals who shared their playgrounds, and pay more attention to the changes that occur in nature over the seasons. Understanding what nature provides led to children, and adults, paying more attention. This, in turn, led to respect and gratitude for what they had received,

which led to a desire to care and give back. This educator explained how she saw this operating in her preschool class:

> We do understand what trees do for us, we do understand why we're going to take care and clean up litter in our park, and we do understand why we're going to leave those leaves there so the squirrels can take them and use them for their nests. So, I think that gratitude piece has been one of the biggest highlights in this program for me and for the children in just having that respect level that we never really talked about before. We never really talked about how it gives back to us. We talked a lot about what we do, but we never talked about why we're doing the things that we're doing. (Early years educator, Spring 2023)

Gratitude to the Land is rarely mentioned in non-Indigenous approaches to nature-based learning. An Indigenous approach to gratitude positions all of nature, including humans, as a benevolent collection of gift givers. Children, as well as adults, are worthy recipients of bountiful gifts—a very affirming view that could enhance wellbeing.

Reciprocity

> We are responsible to all things around us, not out of superiority to them, but because we are part of them, and cannot be safely disconnected from them. Our lives need to be an expression of this truth: whenever we take something—and we are always taking something—something should be given back. (Anderson et al., 2017, p. 134)

In the interviews before the study began, none of the educators referred to a responsibility to give back to the natural world. Some educators spoke of gardening as an academic concept, that is, to help children understand the process of growing food. No educators referred to reciprocity in their own lives. By the end of the first year, however, many educators were reporting that the children were moving beyond learning about gardening to recognizing their connection and responsibility towards their gardens, as this educator explained, "It's not just looking. But it's now more of the involvement, being something sacred in the sense that plants—the importance of plants—the responsibility that follows in actually planting" (Early years educator, Spring 2021).

Fig. 5: A child collecting rainwater to water the plants in their playground.

Fig. 6: A child watering the garden they helped to plant.

This sense of responsibility extended beyond gardening to all aspects of the natural world. Children began to be concerned about what the birds, animals, and insects in their playgrounds ate, where they lived, and how they felt. They wanted to care for them by making homes in the snow or soil and by feeding them. This principled approach to the world is part of Traditional Indigenous Education that Indigenous children learned historically (Hansen & Antsanen, 2018).

In one center in the project, an educator described a dramatic change in how the children responded to birds. Before being exposed to Indigenous perspectives, the children used to yell at and chase the birds who came into the playground. Afterwards, they began to show concern for the birds and want to feed them, as this educator explained:

> The children will take a handful each [of birdseed] and they will throw it and say that this is our way of helping the birds to eat, to grow, and to be strong. It is our way of giving back to nature. (Early years educator, Spring 2021)

Understanding Give and Take

By the end of the second year, the educators reported a clear understanding that they were the recipients of gifts from the natural world, and that they had a responsibility to care in return. After two years in the project, the educators had come to a new understanding of their relationships and responsibilities to nature, and how that could be enacted in an early years setting:

> Before I thought it's just play … Land-Based is how we play in the playground. But now it's incorporating nature and taking care of nature. What we have we are giving back to nature as well. Before it's just taking everything to ourselves. Now it's time for us to give back to nature instead of taking everything. (Early years educator, Spring 2022)

From Objects to Subjects

By the end of the third year, it was evident that the children and the educators had moved from considering natural items as resources, to considering what they owe to their non-human relatives. The educators commented that the children were taking greater leadership to care for, and give back to, the plants and animals in their playgrounds. One educator described how this was happening in her playground:

> I think the children grasp it more and they demonstrate it. They choose it, they hug the trees. It's spring, so we have been bringing out our plants. And for example, if a child would climb on it or step on it, the other children would say, "Don't hurt them. We don't hurt the plants." (Early years educator, Spring 2023)

As was seen in the previous themes, feeling connected and grateful to the Land led children to express empathy and care for the plants, animals, and insects around them and to seek to give back by saying "thank you," and trying to understand what plants and animals need and providing it. The children recognized their responsibilities and took on the role of caring for their fellow creatures. This reciprocal relationship gave the children a sense of purpose and agency that can lead to enhanced wellbeing.

Land-Based Wellbeing

The findings from this study suggest that developing and enacting reciprocal relationships of gratitude, respect, and care with the Land enhanced the holistic wellbeing of both the children and the educators. The sense of belonging, of being cared for by the Land, and of having a responsibility to care in return led to feelings of peace, joy, contentment, purpose, agency, a reduction in stress, and overall wellbeing, according to their educators. Over the course of the project, the educators witnessed the children developing many aspects of overall wellbeing as they introduced Indigenous perspectives and pedagogies on Land-Based Learning into their preschool urban programs. They discussed that a sense of belonging, connection, meaning, and support emerge from a strong relationship between humans and non-humans, and leads to overall health, as one educator explained:

> It's in that human/non-human relationship, it's in this place that we belong and are part of that we are healthy, that we find home, and that we can start to live with a kind of sense of what matters and what really supports us. And I think that is part of what kids will get if we have them developing their memories and their relationships with the outside world. (Early years educator, Spring 2023)

Another educator pointed out that children have increased self-esteem and sense of purpose when they enact their responsibility towards nature, "Because if you're caring for nature, you feel good about yourself and about, you know, you're productive" (Early years educator, Spring 2023). Relationships with nature lead to physical health as well as a sense of belonging; according to one educator, "That relationship connection with nature—they feel a sense of belonging. Physically, the children jump here and there, and it's healthier, to connect with fresh air. And all these elements come together" (Early years educator, Spring 2023).

Resilience was also highlighted as a result of connecting to the Land:

> I think around that gratitude piece, and I think understanding a little bit more about what the earth gives to us, and I think—which I didn't really appreciate before this project—that resilience piece too, about being able to connect and contribute, has been a really important piece. (Early years educator, Spring 2023)

The Worldview represented in the four Indigenous teachings explored in this project—holistic engagement with the Land, connection with All My Relations, gratitude for the gifts of the Land, and reciprocity—strengthens connections with others and with the environment. It offers a view in which the child is connected and belongs in a web of gifts givers and receivers and has a responsibility to contribute to the wellbeing of others. This responsibility and role as both recipient and contributor give a sense of agency, purpose, identity, and wellbeing. These are all aspects of Traditional Indigenous Education (Brokenleg, 2015).

Before the study began, the educators already had a sense that being outdoors was good for children's physical and mental wellbeing. However, through learning about and learning to enact Indigenous perspectives and pedagogies on Land-Based Learning, they grew to recognize a broader sense of wellbeing for the children, themselves, and the world around them. They began considering humans as part of a web of interdependency with other aspects of the natural world, and realized the power of responding to the Land with the heart and spirit as well as mind and body.

Western perspectives on wellbeing focus on human wellbeing, and typically the wellbeing of individual humans. However, from Indigenous perspectives, the wellbeing of individual humans cannot be separated from the wellbeing of all human and non-human beings. Humans can't ensure their own wellbeing without ensuring the wellbeing of the environment. In this way, Indigenous perspectives can lead to systemic change in how we relate to one another and the world around us. This is a transformative approach to wellbeing that looks beyond the individual and links it to the wellbeing of others, both human and more than human.

Conclusion

There is an urgent need for Canadian educational programs at all levels to include Indigenous histories, Knowledges, perspectives, and pedagogies, and for educational research to include Indigenous methodologies. This project contributes to decolonizing research in early education and care, the professional learning of early years educators, and curriculum and pedagogy for young children, by centering Indigenous Worldviews, Knowledges, pedagogies, and research methods. The research team and the educators evolved in their understandings of Indigenous Knowledges, perspectives, and pedagogies. Early on we realized how colonized our thinking and methods were. What we learned gave us the tools to unpack our assumptions and begin to move to new ways of thinking and being. This happened through engaging with Indigenous-created practices and resources. These included gratitude circles, observation strategies based on the Medicine Wheel (Martin, 2022), and ongoing learning and reflection through workshops and newsletters.

During gratitude circles in the early learning programs, children shared their experiences which reflected three main Indigenous principles of sustainability, reciprocity, and connection to the natural world. Adopting the lens of Medicine Wheel teachings (e.g., Martin, 2022) enabled educators to shift how they characterized children's learning and relationships with the natural world. The shift was away from a Eurocentric view of children as being disconnected from the rest of nature to a view that is aligned with an Indigenous view that all things including humans are interrelated (All My Relations). Through workshops and newsletters, we shared our ongoing learning with the participants, which began a process of decolonizing our thinking and practices. All this learning was mediated by our team member Lori Budge who continually informed our shifting paradigm and deepened our understanding of Indigenous cultural ways of knowing and being. These practices embodied the Two-Eyed Seeing perspective (Barlett et al., 2012) by increasing our understanding of how non-Indigenous educators understand Indigenous perspectives on Land-Based Learning, and how they can benefit from both Indigenous Knowledges and pedagogies and Western knowledges and pedagogies in early years programs.

Indigenous histories, cultures, and Knowledges have been ignored or misrepresented in Canadian culture and education for too long. This research will help educators, children, and their families learn about treaty obligations and our need to respond to the Truth and Reconciliation Calls to Action. Furthermore, it will highlight the important contribution Indigenous Knowledge and perspectives can play in learning, holistic wellness, and the creation of a more sustainable approach to the environment.

References

Absolon, K. (2019). Decolonizing education and educators' decolonization. *Intersectionalities: A Global Journal of Social Work Analysis, Research, Polity, and Practice,* 7(1), 9–28.

Anderson, D., Chiarotto, L., & Comay, J. (2017). *Natural curiosity: A resource for educators: The importance of Indigenous perspectives in children's environmental inquiry*. Laboratory School, Dr. Eric Jackman Institute of Child Study, Ontario Institute for Studies in Education, University of Toronto.

Bartlett, C., Marshall, M., & Marshall, A. (2012). Two-eyed seeing and other lessons learned within a co-learning journey of bringing together Indigenous and mainstream knowledges and ways of knowing. *Journal of Environmental Studies and Sciences*, 2, 331–340.

Bell, N., Conroy, E., Wheatley, K., Michaud, B., Maracle, C., Pelletier, J., Filion, B., & Johnson, B. (2010). *The Ways of Knowing Guide*. Toronto Zoo. https://www.torontozoo.com/pdfs/tic/Stewardship_Guide.pdf

Brass, D., Ermine, W., & Michano-Courchene, L. (2020, January 8). *What is land-based learning? A digital forum* [Video]. YouTube. https://www.youtube.com/watch?v=tOUBbsNswLY

Brokenleg, M. (2015, October 26). *First Nations principles of learning: An Introduction* [Video]. YouTube. https://www.youtube.com/watch?v=0PgrfCVCt_A

Brussoni, M., Chabot, G., Herrington, S., Janssen, I., Pickett, W., Power, M., Stanger, N., Sampson, M., & Tremblay, M. S. (2015). What is the relationship between outdoor time and physical activity, sedentary behaviour, and physical fitness in children? A systematic review. *International Journal of Environmental Research and Public Health, 12(*6), 6455–6474. https://doi.org/10.3390/ijerph120606455

Burke, A., & Moore, S. (2021). Children's wellness: Outdoor learning during Covid-19 in Canada. *Education in the North*, 28(2), 24–45.

Callaghan, H., & Taylor-Leonhardi, L. (2018). Decolonizing and co-constructing contexts that welcome Indigenous practices and knowledges in early childhood education. *Association of Early Childhood Educators Ontario (AECEO)*, 2, 17–26.

Canadian Pediatric Society (CPS). (April 1, 2012). *Healthy active living: Physical activity guidelines for children and adolescents*. https://www.cps.ca/en/documents/position/physical-activity-guidelines

Chawla, L. (2015). Benefits of Nature Contact for Children. *Journal of Planning Literature, 30*(4), 433–452. https://doi.org/10.1177/0885412215595441

Chawla, L. (2020). Childhood nature connection and constructive hope: A review of research on connecting with nature and coping with environmental loss. *People and Nature,* 2(3), 619–642. https://doi.org/10.1002/pan3.10128

Courchene, D. (2016, Dec 8). *Manitou Api: Where the sun rises—The seven sacred laws* [Video]. YouTube. https://www.youtube.com/watch?v=icDxjMh7Xng

Hansen, J. G., & Antsanen, R. (2018). What can traditional Indigenous Knowledge teach us about changing our approach to human activity and environmental stewardship in order to reduce the severity of climate change? *The International Indigenous Policy Journal*, 9(3). https://doi.org/10.18584/iipj.2018.9.3.6

Hernandez Gonzalez, F. (2023). Exploring the affordances of place-based education for advancing sustainability education: The role of cognitive, socio-emotional and behavioural learning. *Education Sciences*, *13*(7), 676. MDPI AG. http://dx.doi.org/10.3390/educsci13070676

Kimmerer, R. W. (2013). *Braiding sweetgrass: Indigenous wisdom, scientific knowledge, and the teachings of plants*. Milkweed Editions.

King, T. (n.d.). *Walking together: First Nations, Metis, and Inuit perspectives in curriculum*. Government of Alberta. https://www.learnalberta.ca/content/aswt/well_being/documents/all_my_relations.pdf

Kovach, M. (2017). Doing Indigenous methodologies. *The SAGE handbook of qualitative research*, 214–234.

Lawrence, E., Jennings, N., Kioupi, V., Thompson, R., Diffey, J., & Vercammen, A. (2022). Psychological responses, mental health, and sense of agency for the dual challenges of climate change and the COVID-19 pandemic in young people in the UK: An online survey study. *The Lancet,* 6 (9), E726–E738.

Little Bear, L. (2015, January 14). *Indigenous Knowledge and Western science: Contrasts and similarities* [Video]. YouTube. https://www.youtube.com/watch?v=gJSJ28eEUjI

Little Bear, L. (2000). Jagged worldviews colliding. *Reclaiming Indigenous voice and vision*, 77, 85–108.

Martin, H. (2022). *A seasonal pedagogy*. Edge of the bush: Where worldviews meet. https://edgeofthebush.ca

Merriam, S. (2009). *Qualitative research: A guide to design and implementation*. Jossey-Bass.

Nelson, N., Pacini-Ketchabaw, V., & Nxumalo, F. (2018, Spring). Rethinking nature-based approaches in early childhood education: Common worlding practices. *Journal of Childhood Studies,* 43(1), 4–14.

Otto, S., & Pensini, P. (2017). Nature-based environmental education of children: Environmental knowledge and connectedness to nature, together, are related to ecological behaviour. *Global Environmental Change,* 47, 88–94.

Pickett, K., Yassaman, V., Mathai, M., & Small, N. (2022). The social determinants of child health and the inequalities in child health. *Paediatrics and Child Health,* 32(3), 88–94.

Punch, K. (2009). *Introduction to research methods in education*. Sage.

Restoule, J. (n.d.). *We are all treaty people*. University of Toronto. https://www.oise.utoronto.ca/abed101/we-are-all-treaty-people/

Thomas, D. R. (2006). A general inductive approach for analyzing qualitative evaluation data. *American Journal of Evaluation*, 27(2), 237–246.

Tillmann, S., Tobin, D., & Avison W. (2018). Mental health benefits of interactions with nature in children and teenagers: A systematic review. *Journal of Epidemiology & Community Health,* 72, 958–966.

Truth and Reconciliation Commission of Canada (TRC). (2015). *Calls to Action*. trc.ca/websites/trcinstitution/File/2015/Findings/Calls_to_Action_English2.pdf

Tuck, E., & Yang, K. (2012). Decolonization is not a metaphor. *Decolonization: Indigeneity, Education & Society,*1(1), 1–40.

Tuhiwai Smith, L. (2012). *Decolonizing methodologies: Research and Indigenous peoples (2nd ed.)*. Zed Books.

World Health Organization (WHO). (2020). *Physical activity*. https://www.who.int/news-room/fact-sheets/detail/physical-activity

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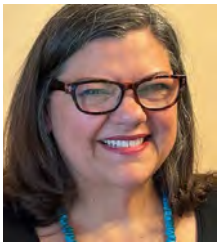
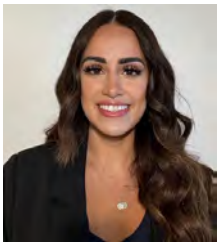


Lori Budge played a key role in establishing Indigenous Education and Services at George Brown College. She served as its first coordinator from 1991 to 2022, where she led the establishment of two Indigenous students centers and secured the necessary funding for a Knowledge & Wisdom Keeper. Lori provided assistance to other Indigenous Education and Services staff, served on numerous internal and external boards and committees, and designed and taught the general education elective Introduction to Indigenous Studies. She is now a full-time professor in Liberal Arts & Sciences. Lori is a member of the Wikwemikong Unceded First Nation and an advisor and guide on the project "Designing and Implementing Environmental Inquiry Strategies in Urban Early Years Programs in Canada" (2020–2024).



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