Engaged Scholar Journal
Community-Engaged Research, Teaching and Learning

We are the Salmon Family: Inviting Reciprocal and Respectful Pedagogical Encounters with the Land

Cher Hill, Neva Whintors et Rick Bailey

Volume 8, numéro 4, automne 2022

URI : https://id.erudit.org/iderudit/1099632ar
DOI : https://doi.org/10.15402/esj.v8i4.70802

Aller au sommaire du numéro

Éditeur(s)

University of Saskatchewan

ISSN

2369-1190 (imprimé)
2368-416X (numérique)

Découvrir la revue

Citer cet article

Hill, C., Whintors, N. & Bailey, R. (2022). We are the Salmon Family: Inviting Reciprocal and Respectful Pedagogical Encounters with the Land. *Engaged Scholar Journal*, *8*(4), 1–22. https://doi.org/10.15402/esj.v8i4.70802

Résumé de l'article

Through this action research project, we endeavour to reconfigure pedagogical encounters involving children and the natural world to be more reciprocal and respectful, as well as responsive to the ecological crisis. The goal of our research is to advance understandings of how to educate children to become good relatives to all the beings on these Lands. We are guided by the question: How can we educate children to live like Salmon People (those Indigenous to this place), which is the sacred responsibility of all those residing on the Coast Salish territories? Practices that contributed to shifting relationship between people and the Land and moved our community beyond our human-centric engagement were participatory and embodied. They included acts to care for Salmon and other beings as relatives, as well as experiencing Land as agential and existing independently of human desire. We see our research as a site for what Kari Grain calls “critical hope.”

We are the Salmon Family: Inviting Reciprocal and Respectful Pedagogical Encounters with the Land

Cher Hill, Neva Whintors, Rick Bailey

Abstract Through this action-based research project, we endeavoured to reconfigure pedagogical encounters involving children (ages 8-9) and the natural world to be more reciprocal and respectful, while simultaneously responding to the crisis on the Fraser River in which Salmon runs have reached unprecedented lows. Informed by posthuman and Indigenous perspectives, we joined with our students in a creative practice of world-making during weekly visits to the forest, as well as various field trips to care for Salmon. Practices that moved our community beyond human-centric engagement with the Land were participatory and embodied, and included experiences in which the Land was understood as sacred, agential, and existing independently of the human gaze and desire. As guided by Elders, children advocated for Salmon from within, by caring for them as Family, and engaged in placemaking with the world. While our learning was embedded within specific relational fields, this research contributes to the scholarship on how we might educate for post-colonial futures, providing five signposts that may guide the work of other educators. We see our research as a site for what Kari Grain calls "critical hope."

KeyWords posthumanism, ecological education, Indigenous education, non-human agency, caring for Salmon

In recent years, Salmon runs in the Fraser Basin Watershed in unceded Indigenous territories on the west coast of Canada have reached unprecedented lows, and multiple species are deemed threatened or at risk of extinction (Government of Canada, 2019; 2020). This drastic decrease in Salmon, a keystone species, signals a pending environmental disaster. Further, it threatens food security, as well as traditional and spiritual practices of Indigenous communities who have harvested Salmon in sustainable ways on these Lands since time immemorial, perpetuating colonial legacies. Despite ongoing efforts, practices that put Salmon at risk continue, such as development, deforestation, and overfishing. Further, due to global warming, the temperature of the Fraser has been steadily increasing, creating conditions that are progressively lethal for Salmon (Hinch et al., 2011). Such concerns point to an urgent need for immediate action to care for Salmon and their habitats, while simultaneously developing empirically informed pedagogical models to educate communities to respond differently to the crisis on the Fraser.

Through this action-based research project, we endeavour to reconfigure pedagogical encounters involving children (ages 8-9) and the natural world to be more reciprocal and respectful, as well as responsive to the ecological crises unfolding within our watershed, as well as the climate emergency (IPCC, 2022). The goal of our research is to advance understandings of how to educate children to become good relatives to all the beings on these Lands, as well as good ancestors to this place (Heath Justice, 2018). We are guided by the question: *How can we educate children to live like Salmon People*[1] *(those Indigenous to this place) and develop more reciprocal and respectful relationships with Land and place?* This, we believe, is the sacred responsibility of all those residing on the Coast Salish territories.

Theoretical Framework

Our project is informed by Indigenous and posthuman scholarship, which provides a promising theoretical approach for ecological education. These philosophies have the potential to reconfigure mainstream relationships between people and the natural world, pushing them beyond the typical western human-centric framing. Posthuman scholarship provides a non-dualist relational approach that disrupts binaries between humans and more-than-humans, and illuminates the entangled, dynamic, and co-constitutive nature of reality (Barad, 2007; Braidotti, 2013). As Dr. Karen Barad (2007) explains, "existence is not an individual affair" (p. 336)—it emerges through relationships. Boundaries between humans and nonhumans are understood as elastic (Datta, 2016), leaky (Ingold, 2011), and slip-slidy (Bennett, 2010). While some post human scholars address ethical responsibility as inseparable from ontology and epistemology (see Barad, 2007), relational ethics is more fundamental, pervasive, and advanced within Indigenous worldviews (Rosiek et al., 2020). In this regard, post human scholarship has much to learn from Indigenous perspectives (Rosiek et al., 2020).

Indigenous scholarship is characterized by a similar relational ontology (Cajete, 1995; Kimmerer, 2014) in which knowledge is "formed by relationships within a specific context" (Wilson, 2008, p. 123). Ways of coming to know and be in the world are situated within webs of interconnectedness and interdependency. All beings are understood as active participants in these relationships. As Lummi scholar Dr. Michael Marker[2] (2011) explains, "epistemologies, founded on relationships with a *sentient* Landscape, shape a pedagogy of place, giving local knowledge a pre-eminence over imported, abstract and techno-globalized knowledge" (emphasis in original) (p. 199). Land-centred learning is inseparable from considerations of spirituality, as well as a desire to connect with more-than-human beings (Marker, 2011).

Our work is informed in particular by local Indigenous worldviews, especially those related to Salmon and Salmon-beings (eagles, bears, and trees that are sustained by Salmon). The Lower Fraser Fisheries Alliance (LLFA) (n.d.) has articulated guiding principles for Indigenous

1 Living like Salmon People does not include the appropriation of sacred Indigenous cultural traditions or practices but rather a shared stewardship of the Land, as well as a focus on enacting ethical commitments to all beings.

2 In efforts to make Indigenous scholarship and the scholarship of other Racialized Peoples more visible, we have included cultural affiliations where such information is available when authors are mentioned by name

governance in our area based on ancestral knowledge and teachings, drawing from over 200 sources including Elders' teachings and other documented stories. These principles underlie an intricate set of overarching responsibilities that local Indigenous Peoples have to these Lands, including "an inherent reciprocal responsibility to take care of everything that belongs to them" and "a reciprocal responsibility to treat cultural keystone fish species as relatives" (p. 21). Maintaining the life cycles of fish, caring for their habitat, and creating opportunities to learn from them are core responsibilities articulated by the LLFA. These teachings are carried by Rick Bailey (co-author) and guide our work.

Within Indigenous and posthuman scholarship, there are many commonalities, including understanding the relationship between humans and other beings as non-hierarchical and recognizing non-human agency (Rosiek et al., 2020). It is important to acknowledge, however, that Western understandings of the sentient nature of Land have been greatly informed by Indigenous knowledge systems, and that these influences are not always recognized, at times rendering them invisible (Todd, 2016). As Rosiek and colleagues (2020) contend,

> it should be understood that Indigenous thinkers and scholars developed ideas about non-human agency thousands of years earlier than contemporary philosophers of science. That being said, different communities may come to similar understandings of the world through different conceptual paths. (p. 332)

In our work, we endeavour to bring together these two lines of scholarship in respectful and mutually informative ways to guide our practice of educating children for a post-colonial world.

While there is much philosophical and conceptual scholarship about posthuman ecological education (Affifi, 2017; Carvalho et al., 2020; Lloro-Bidart, 2018; Lloro-Bidart, 2017; Lindgren & Öhman, 2019; Piotrowski, 2020; Ross, 2020; Stables, 2020; Strongoli, 2019; Verlie, 2020), less is written about the applications of such perspectives. As settler scholar of colour Dr. Ranjan Datta (2016) asserts, *practices* of posthumanism are often absent in the literature. Indigenous scholarship (Cajete, 1994; Wildcat & Deloria, 2001) does, however, provide insight into Land-centred pedagogies that invite understandings of non-human agency and relational ethics. Anishinaabe scholar Dr. Deborah MacGregor (2004), for example, writes about the use of creation stories to examine relationships to all beings. While incredibly insightful, some of these pedagogies might not be culturally appropriate for non-Indigenous educators to introduce to learners. Further, when applied outside of Indigenous knowledge systems, such pedagogies may favour only the aspects of Traditional Ecological Knowledge that are most compatible with Western ecological philosophies (MacGregor, 2004). While all educators have a responsibility for decolonizing education and incorporating Indigenous knowledges, we carry this work in different ways based on our positionality and our experiences (McDermott et al., 2021).

This research involves translating theoretical and conceptual knowledge into everyday teaching and learning practices, as well as theorizing pedagogical experiences. In this regard, it contributes to both the scholarship of application and the scholarship of discovery (Ream et al., 2015). As educators and researchers, we worked closely with one another, as well as with other Elders

and knowledge keepers, to enliven post human and Indigenous/ist philosophies (Wilson, 2008) within children's learning. It is challenging to put ideologies into practice (Stenhouse, 1968); it is a scholarly act in and of itself. This paper outlines what we have learned as we experimented with pedagogical practices that we hoped would support children in developing more reciprocal and responsible relationships with Land and place, while simultaneously caring for Salmon.

Our Worldviews

Rick Bailey is a member of qʔíc̓əy̓ (Katzie) First Nation and is currently serving as the Councillor of First Nations Title and Rights, Fish and Wildlife, Treaties, and Justice. Rick grew up listening to his grandparents' stories, which have been passed down in his family since time immemorial. He carries deep knowledge of his territories, having learned to fish and hunt from his grandfather as a young child. At the same time, he works within Western systems to educate and collaborate with settlers. Rick walks in two worlds, and says, "I tell my stories but sometimes I need to tell them in a different way."

Neva Whintors is a teacher-researcher at a public elementary school located on the territories of the qʔíc̓əy̓, qʷaːnƛ̓ən̓, and seʔmyaʔme Nations (Surrey, BC). She has Scottish and Icelandic ancestry. The learning she has done over the past year with Rick as well as other Elders and knowledge keepers has impacted not only how she cares for the Land, but how she views herself in relation to the Land. This work has changed her life.

In the sacred language of the territories where she lives as an uninvited guest, Cher Hill is a xʷəniṯəm—a white person, a "hungry one." She was brought up with values predominant in Western worldviews, including independence, individualism, and acquisitiveness. As an Assistant Professor in a Faculty of Education and a mother of three, she has been on a personal and professional journey over the past six years to educate herself about Indigenous knowledge systems and worldviews in order to decolonize her teaching and research, and to live in ways that are not so hungry.

Through this project we endeavour to work respectfully and collaboratively as Indigenous and non-Indigenous people across knowledge systems to contribute to post-colonial ecological pedagogies that are urgently needed to support communities in responding to the crises on the Fraser and the climate emergency, while simultaneously supporting children to develop more caring and connected relationships with the beings of this place.

Methodology

This action-based research is guided by post human and Indigenous methodologies. Through our process we endeavoured to transform our ways of being with place and one another, while learning about how to teach for post-colonial futures. Like Heron and Reason (1997), "we believe that what we learn about our world will be richer and deeper if … descriptive knowledge is incidental to a primary intention to develop practical skills to change the world" (p. 281). Viewed through a post human lens, we understand action research as a creative practice of world-making (Beyes & Steyaert, 2011). In this regard, our work is as much ontological as epistemological. As researchers, we see ourselves as participating ongoingly in the dynamic reconfiguration of the

world (Barad, 2007), and we constantly considered what worlds were being brought forth within the complex relationships between the children, ourselves, and the Land[3].

Although there are distinct differences between action research and Indigenous methodologies, there is also much overlap, including the importance of empowering community members as researchers, valuing local knowledge, ensuring relational accountability, and centring the project on a focus that is important to local communities (Stagg et al., 2016; Wilson, 2008). As Opaskwayak Cree scholar Dr. Sean Wilson (2008) asserts, both Indigenous and action research seek to "improve the reality of the people you are working with" (p. 115), to which we would add the intention to improve the reality of the natural world.

The project was reviewed by both school and university ethics boards. Consent was received from parents for their children to participate in the research, and assent was sought from children on a regular basis. We received explicit approval from families to include photos in which children are identifiable within this publication. As we traversed through iterative cycles of "action" (or what we called "worldmaking") and reflection, we continuously discussed what we were observing, how the Land was guiding us, and how to best support the children pedagogically. We documented the dynamic, relational exchanges that occurred when the children were in wild spaces or helping Salmon through field notes, photos, time-lapse videos, and drone footage to understand the learning from a variety of perspectives. Neva also collected work samples from her students and documented how the experiences on the Land flowed back into the classroom. We kept journals and regularly reflected on our observations, and these reflections informed subsequent pedagogical approaches. Our analysis involved reviewing our data sources and fieldnotes, as well as our text messages to one another throughout the year to identify key moments that held energy, affected us, or marked a change that occurred in the community. Through dialogue, we organized these key moments thematically and reflected on the pedagogical practices and occurrences that contributed to these shifts.

Context and Background

The research was conducted within a Canadian elementary school, located on the unceded territories of the qʔićəy̓, qʷaːnƛ̓ən̓, and sc̓mya̓me Nations, which backs on to a wild space (commonly used as a dumping ground) and is adjacent to a polluted creek. This community school is home to over 500 children and their families. The principal works within complex institutional structures, which often are antithetical to change, to support staff to enact their pedagogical visions, focusing on "what if?" rather than "yeah but." For eight months, we worked with children ages 8-9, many of whom did not go outside regularly with their families prior to the start of the project.

While caring for Salmon was a focus throughout our learning, we also aimed to cultivate broader reciprocal relationships with the natural world, as all beings are connected. Our learning was cyclical and flowed through various interrelated themes related to Salmon, the watershed, and the forest. We took children out weekly into a wild space to learn with and from the Land

3 We use the term "Land" to refer to all beings that make up wild spaces, including water.

based on Indigenous principles of ethical relationality, including relationality, respect, reciprocity, reverence, responsibility, and generosity (Doiron Koller & Rasmussen, 2021; Kimmerer, 2014; Parent, 2021). We endeavoured to develop a regular practice of giving and receiving in the forest and learning with and from the natural world (Blenkinsop & Beeman, 2010).

The project began when Rick met with the children and encouraged them to "care for Salmon like family." The qíc̓əy̓ people come from the sockeye, as Swaneset, one of the original ancestors, married a Salmon wife (Elder Simon Pierre, as documented in Stuttles & Jenness, 1979). The Elder shared with the children that everyone has a responsibility to help:

> When I say "our" Salmon I'm talking about the world. It is not my Salmon or your Salmon but our Salmon. And when something is yours, you need to take care of it. So everybody needs to help. Even if you're just one person, you can make a difference. So please help our Salmon.

In particular, Rick encouraged children to plant trees along creeks to create more shade for Salmon and in hopes of offsetting the impact of global warming, which is creating lethal conditions for Salmon.

During the school year the children engaged in various participatory learning activities to care for Salmon, including cleaning up creeks and surrounding areas, welcoming home the Salmon as they returned to a local creek to spawn, painting fish on drains to discourage the dumping of toxic substances into fish-bearing streams, testing local water for pollutants, and participating in a fry release to return Salmon that were raised in a hatchery to the creek. While field trips to care for Salmon were typically more structured, during our time in the forest, we invited place and the children to direct the learning. As the children became familiar with the wild space behind the school, and the place became familiar with the children, particular areas

Figure 1. The gathering place near XYZ where the clearing formed us into the shape of a heart

held different energies and encouraged us to engage with the Land in different ways. A place the children called "the Meadow" is a space void of trees. This space encouraged group gatherings and creative reflection. The children often painted here. Some mentioned that they felt safer in this area compared to more heavily treed areas in the forest. Another area that gathered the children is the creek, which runs adjacent to the school. It was always changing and called in the children as it turned to ice in the winter, bred bugs in the spring, and nurtured cattails and tall grasses in the summer. During our time there, it was a place of discovery and learning—some children engaged in a water inquiry in this location and others taught themselves to weave with cattail leaves in this place.

In some areas, the creek was full of garbage, and the discovery of a jeep stuck in the mud was particularly shocking to the students. To get to the pond, which is on the other side of the creek, the children built a bridge (first out of sticks, which collapsed, and later with an old pallet they found). Like the creek, the pond drew in the children, and they were enchanted by mysterious items partly visible under the murky water and delighted with the arrival of the tadpoles in the spring. "Bugcity"[4] was an area full of activity, with many decaying logs and an abundance of worms and wood bugs, which initially attracted the children because of the liveliness of the place. Children played with bugs and built structures for them here. "XYZ" was a place full of sticks and "hay" (long grass) where children did a lot of building (shelters, "survival tools," "fires"), as well as some tree climbing. The children found sticks that looked like letters here, which is why they called it XYZ. Adjacent to XYZ is a bit of a clearing where we often gathered (see Figure 1). It is in this place where the drumming log called out to the children, and they began to hear the songs coming from the Land.

Typically, there were three place-based groups within the wild space, with an adult facilitator in each area. Children were encouraged to go to the place that held the most energy for them. Certain activities and the learning that resulted, such as painting, building shelters, or looking for bugs, were often associated with particular areas within the forest, and these evolved over time. This is consistent with Indigenous understandings that particular places make "certain kinds of understanding possible" (Rosiek et al., 2020, p. 337). We rarely structured the learning but had a wagon full of items including art-supplies, tarps, sit mats, clip boards, pencils, jewellers' loupes, and drums, and the children helped themselves to what they needed. While place and the children guided the learning, we attempted to nudge, inspire, and/or intervene in the children's intra-actions (Barad, 2007) with the Land in small ways to encourage more caring and respectful relationships. This nudging involved facilitating conversations about ways of being with the Land, introducing everyday rituals and protocols (such as land acknowledgments and practices of gratitude), sharing powerful examples of caring for the Land that we witnessed with the full group, asking questions, and introducing perspectives from beyond our learning community (for example, reading books or inviting guest speakers). Neva, children's teacher worked to connect the learning that was occurring in the forest with the formal curriculum and invite this learning back into the classroom.

4 "Bugcity" was a name introduced by Cher, who instantly regretted it as it reified the children's goal to build human-inspired structures for the bugs.

Living like Salmon People

As we reflected on our experiences educating children to live like Salmon People and develop more reciprocal and respectful relationships with Land and place, we identified five signposts that continue to guide how we work with children. These include: 1) experiencing Land as sacred and deserving of gratitude, 2) recognizing the gifts and responsibilities of all beings, 3) placemaking *with* the world, 4) becoming family to Salmon, and 5) appreciating the interconnectedness of all beings. These signposts are discussed below, followed by a discussion of some of the challenges we encountered working across worldviews.

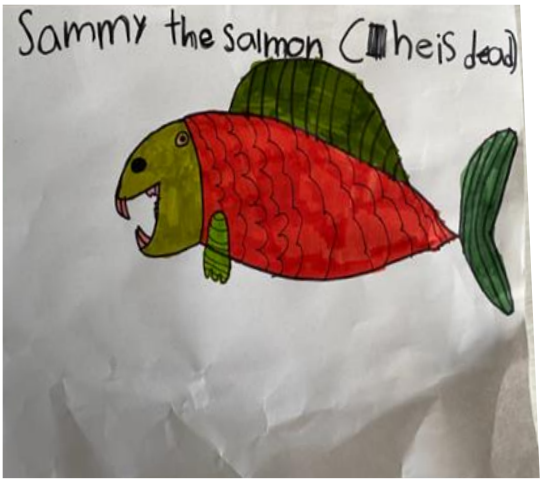
We want to clarify that we do not see learning as a linear and static, but rather we understand it as a complex process that unfolds within unique relational fields, producing different practices, identities, and knowledge (Smythe et al., 2017). In this regard, changes are never permanent. Learning is always an act in the making that requires ongoing participation in the worlds unfolding (Barad, 2007). Consistent with Indigenous and posthuman perspectives, this process of coming to know is as important (or even more important) as the knowledge itself and is inseparable from the context of the learning. As Dr. MacGregor (2004) explains, Indigenous ways of knowing are situated within dynamic relationships with the Land.

> In conventional Eurocentric definitions of Indigenous Knowledge, it is presented as a noun, a thing, knowledge; but to Indigenous people, is it is much more than knowledge. Indigenous Knowledge cannot be separated from the people who hold and practice it, nor can it be separated from the Land/environment/Creation. (MacGregor, 2004, p. 390)

Learning, therefore, is as much ontological as epistemological and involves becoming and knowing with place during the moment of contact. For us, learning to live like Salmon People is an ongoing practice that we continue to hone with our students.

Experiencing Land as sacred and deserving of gratitude

In the beginning, we observed that only a few children appeared to have a strong connection with Land, and most children were not particularly knowledgeable about the natural world, deeply connected with place, or engaged in respectful land-centred practices. The majority of encounters we observed between children and the natural world produced predominantly colonial and human-centric relations. Children marked "their" territory in the forest—sometimes with flags. They claimed that they "discovered" ponds, puddles, and the like—as if the world came into being only though their gaze. They tended to impose names on birds, bugs, and fish, such as glibly calling a dead spawning Salmon "Sammy," without any reverence or respect for this creature and the incredible journey it had undertaken (see Figure 2a). They played with wood bugs and worms in a way that served their own interests (see Figure 2b). For example, they built "bug hotels" complete with swimming pools, with no consideration of the needs of the actual inhabitants. Their creative practices in the forest were largely disconnected from the world around them. They loved to sing and paint in the forest, but their renderings



Student: We made a bug hotel. I made a little baby room and there's a little thing on top for like a crib. I moved it a bit and I said "rock-a-bye-baby on the treetop" (singing) because it is a baby's room where the baby can sleep and it can chill. I really want to make a pool there. Then they can have a pool party!

Cher: Perfect. So it's gonna be interesting to think about what we want for the bugs and what the bugs might want for themselves. Amazing. Thank you.

Figure 2. a) "Sammy the salmon (he is dead)" and
b) conversation between a student and Cher about building a bug hotel

had little or no relationship to place. They painted tropical scenes including palm trees (we live in a West Coast Rain Forest) and sang songs that were popular in the movies or on the radio.

Two practices introduced early on by the children's teacher (Neva) appeared to have a substantial impact on the children's relationships with the natural world. One involved beginning each forest visit with a Land acknowledgement in the hən̓q̓əmin̓əm̓ language[5], thanking the Nations, and recognizing the Land as theirs and, importantly, as sacred. Over time, we observed children shifted from claiming ownership of the forest and possession of parcels of Land to understanding that "you can't claim stuff out in the forest because it is q̓íc̓əy̓ Nation's already" or because "the Land belongs to the forest."

Inviting practices of gratitude also contributed to shifting relationships with the Land and facilitated communication with the more-than-human. How to talk with the forest was a mystery for some students, particularly in the beginning. As one child said, "I don't even know how to talk to the forest cause it doesn't even talk." Communicating with nature, however, was straightforward for others. As one girl said, "you just *talk*." One child, who is Indigenous, was a community leader in this regard. She sang to the forest, offered up words of care and love to the Land, and left leaves all along the trail through the forest as an act of gratitude. As Potawatomi scholar Dr. Wall Kimmerer (2013) contends, gratitude is a "powerful medicine" that "propels the recognition of the personhood of all beings and challenges the fallacy of human exceptionalism—the idea that we are somehow better, more deserving of the wealth and services of the Earth than other species" (para 17). Developing a regular practice of gratitude contributed to more joyful and responsive relationships with the Land.

5 The hən̓q̓əmin̓əm̓ words included in this paper come to us from Clayton Maitland, and his teacher, sesmélət Fern Gabriel, from q̓ʷa:n̓ƛ̓ən̓ Nation.

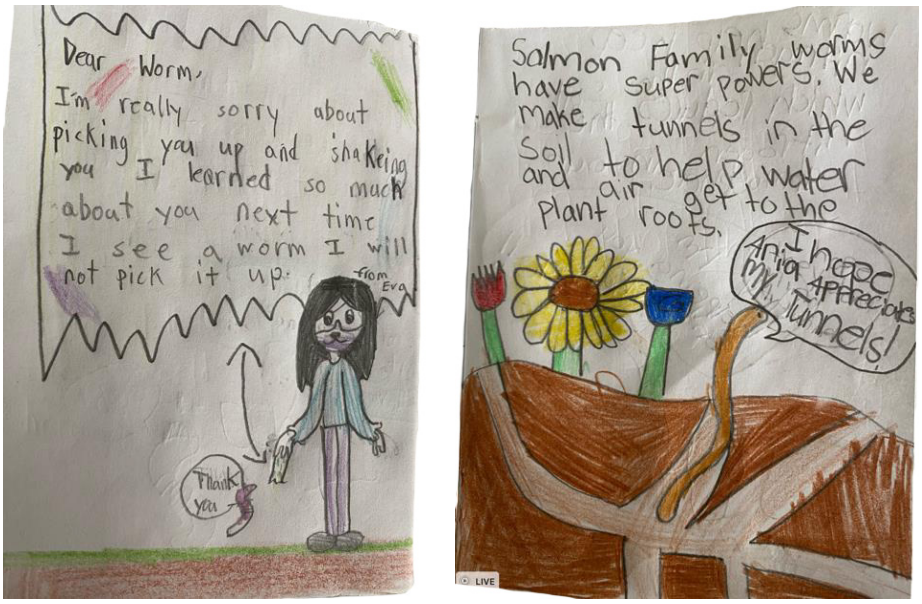


Figure 3. a) Apologizing to worms, and b) Learning about worms' superpowers and their contributions to the ecosystem

A group of children created concoctions of mud and plants, which they gifted to the animals. They referred to themselves as "priests" and performed the gifting in what they described as a "ceremony." This was an activity that was repeated on numerous occasions. It moved gratitude beyond a physical practice to a spiritual offering. Here the focus of the children's activity shifted from the product (what they were making) to their relationship with the beings of this place. The adults involved in the project did not introduce or facilitate ceremonial practice with the children. They developed this practice on their own (although it could have been, in part, inspired by a video shared by the teacher that included a water ceremony).

Recognizing the gifts and responsibilities of all beings

Community, individual strengths, and interdependencies were also emphasized by Neva (who holds much expertise in social-emotional learning), as she worked to support the children to recognize their own gifts and appreciate the gifts of others. We drew upon the Lil'wat pedagogical principle of Celhcelh (which literally translates to "hard working") as articulated by Elder Dr. Lorna Williams:

> Celhcelh suggests that each person is responsible for his or her own learning, for finding and taking advantages of all opportunities to learn, and maintaining openness to learn. Each person must find their place in the community, and offer what knowledge and expertise they have to benefit the communal work being carried out. (cited in Stanford et al., 2012, p. 24)

The practice of recognizing gifts and understanding the role of each being in the community, inspired by the concept of Celhcelh, grew to include the more-than-human. Neva introduced a series of books by Elise Gravel all about bugs and how they care for the Land and contribute to ecosystems. We continuously discussed our unique "superpowers" and the need to respect and acknowledge what each friend in the classroom and in the forest contributes. The children developed a newfound respect for bugs in their own right and stopped using them as a source of their entertainment (see Figure 3).

Placemaking with the world

Over time we began to observe more instances of children engaging in placemaking *with* the world (Pyyry, 2017), rather than imposing their visions, needs, and desires on the Land. Here the ecologies of place, including the Salmon, the plants, the sticks, the grasses, and the water awakened a connection and became the teacher. Within these encounters, the act of creating was located in the spaces between the child and place. For example, children were encouraged to paint *with* the Land, and they began painting with sticks, leaves, and mud. They experimented making paint from grass, blueberries, and other things they found in the forest. Over time the art became more abstract, emotive, and locally inspired (e.g., a rendering of "the Meadow"), and less disconnected with place (e.g., images of palm trees or cartoon drawings of dogs). It is through these types of responsive practices of collaboration and meaning making that "space" becomes "place" (Johnson, 2021). Practices that encourage placemaking *with* the world (Pyyry, 2017) are significant as the stories that we tell about Land impact ways of knowing and being. As Delaware and Cherokee scholar and geographer Dr. Jay Johnson (2012) asserts, "the Landscape we carry within us, continually remembered and retold; the Landscape which has played a part in our education, alters how we see the world around us and how we engage in the social production of knowledge" (p. 832).

One of the most profound examples of placemaking with the world (Pyyry, 2017) was the evolving practice of drumming within our community. One day a boy began drumming with sticks and on logs. His actions seemed intuitive as he hit sticks together in a rhythmic beat (see Figure 4). Students were moved by the sound and others came to watch or to participate, finding their own sticks. Cher shared an Indigenous teaching that songs and stories come from the Land (Cariou, 2018; Styres, 2019). The children embraced this idea and began listening carefully to place. Drumming became a powerful method of connecting us with the Land and closing the spaces between us all (Wilson,

Figure 4. Children drumming, clapping, stomping, and shaking grass in unison

Figure 5. Singing the Water Song for tadpoles

2008) (see Figure 4). We brought in some Indigenous hand drums, and we invited local Indigenous community members to guide us in our learning.[6] Drumming was not part of our initial vision, but it arose from the Land through the students and created an opportunity for us to connect this learning to local, and later global, communities. The children learned to drum and sing public Indigenous songs and community songs that were gifted from Elders, as well as local Indigenous drumming protocols. We identified the drums as Indigenous cultural items and prioritized their use for students with Indigenous ancestry, while providing all children with a chance to learn. As drumming, however, is ubiquitous across cultures, we began to collect drums from other places and encouraged all students to learn about their ancestral connection to the drum. As Métis and Anishinaabe scholar Dr. Vicki Kelly (2013) teaches, two-eyed seeing (Bartlett et al., 2012) is a "pathway to manyeyed" seeing or seeing through "multiple eyes" (p. 18). Currently we are working to represent all children's cultural heritage through drums.

Drumming became a new way for children to relate to Land and one another. Although drumming was typically an organized community event, children began taking the drums to different areas in the forest and drummed in small groups or individually. Children also began to sing as acts of care for other members of the wider community. For example, a group of children sang the Water song for the tadpoles in the pond (see Figure 5). A boy named Daniel[7] (who was not Indigenous) practiced the Woman's Warrior song[8] until he perfected it and created a video recording of the song to honour his Indigenous Auntie. In this regard, practices of care were materially choreographed across various bodies (Haraway, 1991) as the beat vibrated from the skin of the drum radiating outwards, permeating the bodies of other beings. Here, again, the focus was on the relationship as much as the activity.

Becoming family to Salmon

Understanding Salmon as family, in the way taught by Rick, was incredibly impactful and continued to reverberate throughout the children's learning during the school year. As documented in the Neva's journal entry, this encounter lived on in the bodies of the children, long after Rick's visit.

6 Those stories are not included here as they are not ours to tell.

7 Name and story shared with permission.

8 The Women's Warrior Song, created by Martina Pierre of the Líl̓wat Nation, is sung to lift up the voices of Indigenous women and girls and honour and remember those who have experienced gender and racialized violence.

> Rick is an Indigenous story teller. His passion, connection, and love of the Land enveloped each and every word he spoke. His words were alive with šxʷqʷéləwən (inner mind, feelings). He came to our school and spoke outside on a cold fall day. . . . and shared how his life experience and connection with the Land created connection with Salmon where he saw Salmon as his brothers and sisters. He spoke for about two hours, sharing the decline of Salmon over the years in the Fraser River, the impact on him, the qʔíc̓əy̓ culture, and on us, the students and families of our school community. . . . (H)is words and spirit filled our soul, and he was magical to our students. After he left, we debriefed around his presentation. The students decided we wanted to call ourselves the Salmon Family. Rick's visit was more than I imagined. He was our first Indigenous teacher. He lives in balance and harmony with the Land and his knowledge, words, and being was alive within us. (Neva's Inquiry Journal, June, 2022)

As evident in this account, it was not only Rick's message but the way that he shared his teachings in such a wholistic and heartfelt way that was impactful. His words "were alive," affective, and continued to live within the children.

Throughout the year, the children identified Salmon as their brothers and sisters and one child referred to herself as a "salmon girl" (see Figure 6a). These identities were pervasive outside of the structures of schooling. For example, one child bought his personal journal to school to show his teacher his entry about how he was a steward and a brother of Salmon. This connection with Salmon was incredibly powerful and moved children to become passionate advocates. Without the involvement of the adults, they organized themselves to monitor storm drains on the school property and became extremely distressed when there was garbage in the drain, an abundance of rocks, or a lack of water, which they believed would harm the Salmon (see Figure 6b). The children immediately took action and went directly to the school principal with their concern. During one lunch hour they recruited children with small hands that could fit

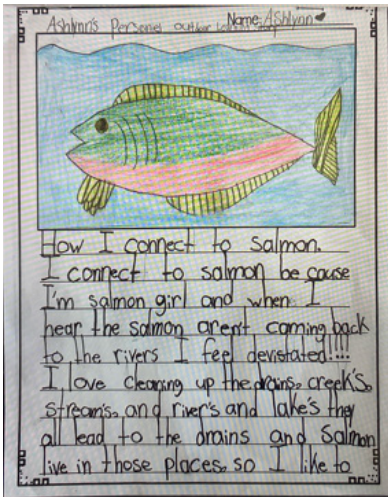


Figure 6. a) Becoming Family with Salmon and b) Advocating from within: Caring for Salmon as Family

through the grate to try to remove the pebbles from a drain, and when that failed, they found a strong friend who could lift up the grate so the rocks could be removed.[9]

Children's understanding of themselves as Salmon brothers and sisters was both conceptual and embodied. After learning about the life cycles of Salmon, for example, two children made yolk sacks and requested that Neva film them as they joyfully moved their bodies like Salmon and ate from their yolk sac (see Figure 7). Within this embodiment of "becoming-other" (Green, 2015), the usual boundaries between human and fish were dissolved.

Appreciating the interconnectedness of all beings

Neva mapped much of the learning about Salmon and the forest to the connectedness of all things through water.[10] The class read the book The Water Protector by Anishinaabe *Métis* author Carole Lindstrom and watched videos about the life-giving force of water that brings us all into being. The children learned that there is only one body of water on earth and the same water moves about throughout the world. The teacher said, "It could be here today and tomorrow that water could be evaporated and turned into something else and could be living in another space. The water that is in my drinking glass could have been the water that Salmon swam in." The children explored maps of the watershed and traced where the water goes when it rains at their school. They investigated how water moves through their body when they drink it and how it gets recycled. The class went outside in the rain, hail, and fog, and talked about where they saw water, what its stage was in the cycle, and how it provided life. All these learnings connected with an Indigenous Water song, which we drummed with Elders. Of all the songs we learned, the Water song was one song that the children returned to time and time again. At the end of the school year, Rick shared the teaching that "the River knows what it needs," and we came to appreciate bodies of water as entities that must be acknowledged and respected beyond their function as a lifegiving source (also see Rosiek et al., 2020, p. 339). These teachings will be more prominent in our future work with students.

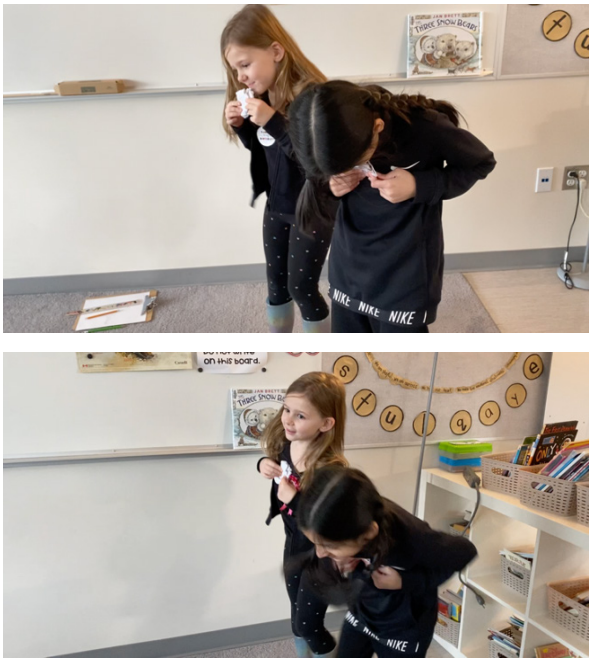


Figure 7. a) Becoming Salmon. b) Alvin swimming and eating from their yolk sac

The entangled complexity of human and nature relationships became evident

9 As a result, we purchased garbage grabbers for them.

10 The water cycle is part of the grade 2 curriculum.

Figure 8. Children's drawings of interconnectedness with place

in the children's drawings and their writing. For example, when asked how they are a part of nature, one child wrote,

> I blend into the leaves because when a leaf falls to the ground, some insects and worms would come out and eat the leaf and poop it out. And their poop will enrich the dirt and it will turn into soil and the soil will help grow fruit and vegetables that the humans will eat. The vegetables and the fruit that helps our bodies and hair grow.

The children drew powerful depictions of how they are part of the natural world, and the natural world is part of them (see Figure 8).

Working Across Worldviews

During the project we experienced several complexities that countered our work to support children in developing caring, reciprocal relationships with the natural world. One stemmed from our provincial curriculum. Although the curriculum for grades 2 and 3 includes First Peoples' knowledge, stories, perspectives, and practices, including stewardship, conservation, and sustainability, it also structures relationships with Land through the science of discovery (questioning, predicting, collecting data, analyzing), as well as through practices of Land management and resource extraction. When mapping the children's learning on to the curriculum, at times there was a felt tension between these opposing ideologies. For example, one winter day the children were delighted to discover that ice had formed on the top of the creek. They extracted chunks of ice to perform experiments trying to melt it with metal, as well as to use it to make a refrigerator for their shelter. Neva's caution that the water was needed in the creek for the animals was ignored by the students. The children's learning in this regard was consistent with multiple aspects of the British Columbia curriculum; however, it was inconsistent with ethical

relationality. In this moment, Cher felt torn between the exuberant joy of the discovery as well as the pull of the "teachable moment" that seamlessly met the multiple curricular goals, and the desire to learn with place while acting responsibly and living in balance with the natural world. As Kimmerer (2014) asserts, scientific and Indigenous knowledge systems can complement each other, but it requires ongoing work to harmonize these worldviews. We have found that working across knowledge systems we must continuously consider "to whom are we are giving voice and agency, and at whose expense?" (Datta, 2016, p. 57).

Our learning, as guided by place, was emergent and unfolded in a circular fashion. We engaged in cyclical explorations, spiraling deeper and deeper into themes of Salmon, water, Land, and community, which connected us with all things. The curriculum, however, is predominantly organized to unfold in a linear, lock-step fashion, with predetermined, age-based learning goals. While there is much pressure for educators to demonstrate learning that looks impressive on paper, the deep and complex learning and reflection that supports students in connecting with the Land, where it becomes a part of us and we become part of it, cannot always be planned and does not wrap up quickly in a pretty worksheet. As K-12 teachers, we are commonly taught to utilize "backwards design"[11] when developing curricula, use instructional strategies, and preplan quality assessment. But how do we plan curricula and instructional strategies that create lessons to support students to learn, connect, and build relations with the Land in a meaningful way? How can we preplan a lesson in which each individual student authentically creates wholistic connections to living things, when in reality, each is called to the Land in their own way? How do we plan for assessment of learning when we cannot predict what teachings the Land will offer? These tensions were deeply felt.

Another complexity resulted from the municipal Land-use polices. The fish-bearing creek adjacent to the school was full of garbage and surrounded by invasive species. The children were very upset by the extent of garbage in the creek and worried about its impact on fish. As one child wrote in his journal, "We cannot believe that people are doing this a lot." We were all very keen to work to restore the creek to care for the Salmon and had access to knowledgeable experts to guide the work. We were unable, however, to care for the creek, as the area is zoned as "unimproved park land" and will only be restored when (and if) the Land is rezoned. This process would be completed under the direction and management of the park staff. While we appreciate the need for safety considerations and the importance of ensuring that any restoration work is guided by knowledgeable experts, it was incredibly frustrating. We could see that the Land was hurting, yet we could not care for it. Elders have instilled within our community that we have a *responsibility* to care for the Land. As Kapyrka and Dockstator (2012) explain, within Indigenous worldviews,

> people must concern themselves with the health and well-being of everything in the cosmos just as they concern themselves with their families and communities (Miller, 2008). There is an inherent responsibility attached to this way of thinking about oneself in relation to the entire cosmos, grounded in relationships, and how one relates to all of Creation. (pp. 99-100)

11 Backwards design involves pre-determining desired learning outcomes and then "working backwards" to identify lessons and scaffolds that support students in working towards these goals.

Within neoliberal Western knowledge systems, the personal responsibility to care for Land is grossly outweighed by concerns about risk management and liability, as well as the conservation of wild spaces in ways that often can preclude human connection with place (Kapryka & Dockstator, 2012). This type of hierarchical management of Land reduces opportunities for locals to develop reciprocal caring relationships with the places they inhabit.

The municipality encouraged us to consider other options for creek restoration, which involved bussing children to another part of the city to work for a few hours to care for a creek where they had no connection with the Land or any expectation of returning to this place. While this alternative would address our vision to care for Salmon through creek restoration, it was not sustainable and likely would not contribute in substantial ways to building ongoing relationships with Land. It would be another "one-off" activity within children's already very busy and over-scheduled lives. If we are serious about disrupting colonial practices of schooling and lifting up Indigenous worldviews and pedagogies within the curriculum, city planners and municipalities must prioritize access to green spaces near schools and reduce their mediation of community members' relationships with the more-than-human wherever possible. In other work (Hill et al., 2021), we have questioned, what is the right of the Land to receive care? In our current project we extend this question: what is the right of the children to have regular access to wild spaces and to care for the place that they love when they see that this place is hurting?

Concluding Thoughts

Through this action-based research, we worked to reconfigure pedagogical encounters involving children and the natural world to be more reciprocal and respectful, as well as responsive to the ecological crises. While this learning was embedded within specific relational fields, this research contributes to the scholarship on *how* we might educate for post-colonial futures. Pedagogies that contributed to more respectful relationships with Land included participatory, responsive, and wholistic encounters that engaged learners in mind, body, and soul. Experiences in which the Land was understood as sacred, agential, and existing independently of the human gaze and desire moved us beyond human-centric exchanges. Having regular access to a green space that was predominantly wild was paramount in contributing to developing deep and joyful relationships with Land. This is an important consideration for urban planning, as well as for public access to wild spaces. Working with young children was an ideal starting place, as they had less "unlearning" (Hill et al., paper in progress) to do and it was relatively easily to normalize communicating with more-than-human friends.

Within the context of our research, sustained acts to care for Salmon and other beings from a standpoint of interconnectedness (brothers and sisters) was particularly powerful. Often times, stewardship programs, although well intentioned, reify hierarchical relationships between humans and other beings, constituting humans, unlike the natural world, as agential, knowing, and independent. Within this project, informed by Indigenous knowledge, children were advocating *from within* by caring for Salmon *as Family*. Rick's teachings were instrumental in creating space for children to care for Land and place from a relational perspective. We have come to understand that how teachings are offered is as important as the teachings themselves.

Learning that is embodied or that "comes alive" for students, through the materiality of bodily stirring, soul-filling, and magic, continues to live within our hearts, and calls us to care for Land and place. This learning signals the importance of ensuring that Indigenous-informed content is taught through Indigenous-informed pedagogies, as well as the importance of Indigenous teachers with diverse expertise to carry this work.

Experiences that illuminated the Land as an agential being contributed to the students' shifting world views about their relationship with place. Importantly, Indigenous understandings of Land as a source of teachings, creativity, songs, and stories (Cariou, 2018; Styres, 2019) shifted our world-making. When learning unfolds within the space between the Land and the children, understandings become embodied within relational contexts, producing new possibilities for knowing and being. This intra-active play involves placemaking *with* the world (Pyyry, 2017), disrupting human-centric relationships with Land. In this regard, our research is as much ontological as epistemological, as it inspires new everyday practices of relationality. Increasingly, students began to engage in physical, spiritual, and emotional acts of care, gratitude, and reciprocity with human and more-than-human friends that permeated across the spaces in between bodies. They no longer saw learning as something they do with paper and pen, but rather something connected to the innate pull of passions within place, a transformation of their being, an awaking of something deep within themselves that engages them with this world.

We see our work as a site for "critical hope" (Grain, 2022). While we are mindful of the ongoing impact of colonization, systemic racism, and human-centrism on these Lands, we also believe that transformative change is possible. Observing children passionately advocating for Salmon and caring for them like family brings us much joy and optimism for the future. It is the accumulation of these collective moments in which we are living in balance and harmony with the Land that become significant. As Dr. Kari Grain (2022) asserts, transformative change is more likely to result from "relentless incrementalism" (p. 49)—the small, deliberate, and regular actions by a critical mass of people. We invite everyone to join us in contributing to this change by experimenting with your own practices to develop more reciprocal and respectful relationships with Land in the places where you live. We encourage you to start small by focusing on a very specific issue that is of great importance locally and to work collaboratively with Indigenous communities in the creative practice of world-making (Beyes & Steyaert, 2011). We have found that by focusing on an issue that profoundly affected us, being open to the magic, miracles, and mysteries all around us, and listening closely to the stories of the Land, our project spiraled outwards and drew in more and more people. Caring for Salmon like family took us on an amazing journey that profoundly connected us with place and community.

About the Authors

Rick Bailey is currently serving his sixth term as the qʔíc̓əy̓ Councillor of First Nations Title and Rights, Fish and Wildlife, Treaties, and Justice. He is a respected Leader and the Fisheries Manager within qʔíc̓əy̓ First Nations. Rick works tirelessly to encourage communities to care for Salmon, and has been hunting and fishing nearly all his life, learning these skills from his father, grandfather, and Elders.

Cher Hill *(corresponding author)* is an Assistant Professor and a Teacher Educator in the Faculty of Education at Simon Fraser University. Her current research aims to develop empirically informed understandings of posthuman ecological education, while taking immediate action to care for Salmon. She is a passionate supporter of participatory learning and community-based educative initiatives. Email: chill@sfu.ca

Neva Whintors is a primary teacher with 22 years of experience. She is passionate about lifting up the gifts of students, particularly the strengths of her most vulnerable learners. She loves learning with and through the Land, by following the lead of place, as well as her students' interests, and building emergent curricular connections.

References

Affifi, R. (2017). The metabolic core of environmental education. *Studies in Philosophy & Education, 36*(3), 315-33. https://doi.org/10.1007/s11217-016-9555-y

Barad, K. (2007). *Meeting the universe halfway: Quantum physics and the entanglement of matter and meaning.* Duke University Press.

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. https://link.springer.com/article/10.1007/s13412-012-0086-8

Bennett, J. (2010). *Vibrant matter: A political ecology of things.* Duke University Press.

Beyes, T. & Steyaert, C. (2011). The ontological politics of artistic interventions: Implications for performing action research. *Action Research, 9*(1), 100–115. http://dx.doi.org/10.1177/1476750310396944

Blenkinsop, S., & Beeman, C. (2010). The world as co-teacher: Learning to work with a peerless colleague. *Trumpeter, 26*(3), 27-39. https://trumpeter.athabascau.ca/index.php/trumpet/article/view/1197

Braidotti, R. (2013). *The posthuman.* Polity Press.

Cajete, G. (1994). *Look to the mountain: An ecology of Indigenous education.* Kivaki Press.

Cajete, G. (1995). *Native science: Natural laws of interdependence.* Clearlight Books.

Cariou, W. (2018). Sweetgrass stories: Listening for animate Land. *Cambridge Journal of Postcolonial Literary Inquiry, 5*(3), 38–352. https://doi.org/10.1017/pli.2018.10

Carvalho, I. C. M, Steil, C. A., & Gonzaga, F. A. (2020). Learning from a more-than-human perspective. Plants as teachers. *Journal of Environmental Education, 51*(2), 144-155. https://doi.org/10.1080/00958964.2020.1726266

Doiron Koller, K. & Rasmussen, K. (2021). Generative learning and the making of ethical space: Indigenizing forest school teacher training in Wabanakik. *Engaged Scholar Journal: Community-Engaged Research, Teaching and Learning, 7*(1), 219-229. https://doi.org/10.15402/esj.v7i1.70065

Datta, R. (2016). How to practice posthumanism in environmental learning: Experiences with North American and South Asian Indigenous communities. *IAFOR Journal of Education, 4*(1), 52-67. https://doi.org/10.22492/ije.4.1.03

Government of Canada (2020). 2020 Fraser River Chinook Salmon management measures. https://www.canada.ca/en/fisheries-oceans/news/2020/06/2020-fraser-river-chinookSalmon-management-measures.html

Government of Canada (2019). Species search. https://speciesregistry.canada.ca/indexen.html#/

Grain, K. (2022). *Critical hope: How to grapple with complexity, lead with purpose, and cultivate transformative social change.* Penguin Random House Canada.

Green, B. (2015). Thinking bodies: Practice theory, Deleuze, and professional education. In B. Green & N. Hopwood (Eds.), *The body in professional practice, learning and education* (pp. 121-136). Springer.

Haraway, D. (1991). *Simians, cyborgs, and women: The reinvention of nature.* Routledge.

Heath Justice, D. (2018). *Why Indigenous literatures matter.* Wilfrid Laurier University Press.

Heron, J. & Reason, P. (1997). A participatory inquiry paradigm. *Qualitative Inquiry, 3*(3), 274-294. https://doi.org/10.1177/107780049700300302

Hill, C., Bailey, R., Power, C., & McKenzie, N. (2021). Supporting communities in caring for Salmon and each other: Creek Restoration as a site for multi-system change and wholistic re/conciliation. *Canadian Journal of Action Research* (Special Edition - Action Research & Indigenous Ways of Knowing), 21(3), 72-94. https://doi.org/10.33524/cjar.v21i3.479

Hill, C., Rosehart, P., Roze des Ordons, D., Aileen, K., & Blenkinsop, S. (in progress). Nature-based teacher education as beyond "getting outside:" Relational attunement, attending to the unnoticed, and ethical response-ability.

Hinch, E., & Martins, S. G., & Patterson, D. A. (2011). Effects of river temperature and climate warming on stock-specific survival of adult migrating Fraser River sockeye salmon (Oncorhynchus nerka). *Global Change Biology, 17*(1), 99-14. https://doi-org.cyber.usask.ca/10.1111/j.1365-2486.2010.02241.x

Ingold, T. (2011). *Being alive: Essays on movement, knowledge and description.* Routledge.

Intergovernmental Panel on Climate Change (IPCC). (2022). *Climate change 2022: Impacts, adaptation and vulnerability.* https://www.ipcc.ch/report/ar6/wg2/

Johnson, J. (2021). Place-based learning and knowing: Critical pedagogies grounded in Indigeneity. *Geojournal, 77*(1), 829–836. https://doi.org/10.1007/s10708-010-9379-1

Kapyrka, J., & Dockstator, M. (2012). Indigenous knowledges and Western knowledges in environmental education: Acknowledging the tensions for the benefits of a "Two-Worlds" approach. *Canadian Journal of Environmental Education on Decolonizing +Indigenizing: Moving Environmental Education Towards Reconciliation, 17*, 97-112. https://doi.org/10.1007/s13412-012-0086-8

Kelly, V. (2013). Integrating Indigenous pedagogical practices. One World in Dialogue. *Social Studies Council Journal, 2*(2), 17-27. https://ssc.teachers.ab.ca/SiteCollectionDocuments/OneWorldInDialogue/OneWorld%20inDialogue2013Vol2No2.pdf

Kimmerer, R. W. (2014). *Braiding sweetgrass: Indigenous wisdom, scientific knowledge, and the teachings of plants.* Milkweed.

Kimmerer, R. W. (2013, Oct. 1). Returning the gift. *Humans and nature.* https://humansandnature.org/earth-ethic-robin-kimmerer/

Koller, K. E., & Rasmussen, K. (2021). Generative learning and the making of ethical space: Indigenizing forest school teacher training in Wabanakik. *Engaged Scholar Journal: Community-Engaged Research, Teaching, and Learning, 7*(1), 219-229. https://doi.org/10.15402/esj.v7i1.70065

Lindgren, N., & Öhman, J. (2019). A posthuman approach to human-animal relationships: Advocating critical pluralism. *Environmental Education Research, 25*(8), 1200-1215. https://doi.org/10.1080/13504622.2018.1450848

Lloro-Bidart, T. (2018). A feminist posthumanist ecopedagogy in/for/with animalScapes. *Journal of Environmental Education, 49*(2), 152-163. https://doi.org/10.1080/13504622.2018.1450848

Lloro-Bidart, T. (2017). A feminist posthumanist multispecies ethnography for educational studies. *Educational Studies, 54*(3), 253–270. https://doi.org/10.1080/00131946.2017.1413370

Lower Fraser Fisheries Alliance (LLFA) (n.d.). Revitalizing Indigenous Law within the Lower Fraser Fisheries Alliance. Legal traditions of the Peoples of the Lower Fraser. Summary Report. https://www.lffa.ca/initiatives/relaw

MacGregor, D. (2004). Coming full circle: Indigenous knowledge, environment, and our future. *American Indian Quarterly, 28*(3/4), 385-410. https://doi.org/10.1353/aiq.2004.0101

Marker, M. (2011). Sacred mountains and ivory towers: Indigenous pedagogies of place and invasions from modernity. *Counterpoints: Indigenous Philosophies and Critical Education: A READER, 379*, 197-211. https://www.jstor.org/stable/42980896

McDermott, M., MacDonald, J., Markides, J., & Holden, M. (2021). Uncovering the experiences of engaging Indigenous knowledges in colonial structures of schooling and research. *Engaged Scholar Journal: Community-Engaged Research, Teaching, and Learning, 7*(1), 25-44. https://doi.org/10.15402/esj.v7i1.69957

Parent, A. (2021). Land as teacher: Understanding Indigenous Land-based education. *Canadian Commission for UNESCO.* https://en.ccunesco.ca/idealab/indigenous-Land-basededucation

Piotrowski, M. (2020). "An atmosphere, an air, a life:" Deleuze, elemental media, and more-environmental subjectification and education. *Environmental Education Research, 26*, 1341-1352. https://doi.org/10.1080/13504622.2018.1485134

Pyyry, N. (2017). Thinking with broken glass: making pedagogical spaces of enchantment in the city. *Environmental Education Research, 23*(10), 1391–1401. https://doi.org/10.1080/13504622.2017.1325448

Ream, T., Braxton, J. M., Boyer, E. L, & Moser, D. (2015). *Scholarship reconsidered: Priorities of the professoriate.* Jossey-Bass.

Reason, P., & Canney, S. (2015). Action research and ecological practice. In H. Bradbury (Ed.), *The SAGE handbook of action research* (3rd ed) (pp. 553-563). SAGE.

Rosiek, J. L., Snyder, J., & Pratt, S. L. (2020). The new materialisms and Indigenous theories of non-human agency: Making the case for respectful anti-colonial engagement. *Qualitative Inquiry, 26*(3-4) 331–346. https://doi.org/10.1177/1077800419830135

Ross, N. (2020). Anthropocentric tendencies in environmental education: A critical discourse analysis of nature-based learning. *Ethics & Education, 15*(3) 355-370. https://doi.org/10.1080/17449642.2020.1780550

Smythe, S., Hill, C., MacDonald, M., Dagenais, D., Sinclair, N., & Toohey. K. (2017). *Disrupting boundaries in education and research.* Cambridge University Press.

Strongoli, R. C. (2019). The body and corporeity in the context of environmental education with an ecological orientation. *Studi sulla Formazione, 22*, 465-479. https://doi.org/10.13128/ssf-10817

Stables, A. (2020). Environmental ethics and ontologies: Humanist or posthumanist? The case for constrained pluralism. *Journal of Philosophy of Education, 54*(4), 888-899. https://doi.org/10.1111/1467-9752.12464

Stagg Peterson, S. Horton, L., & Restoule, J. P. (2016). Toward a shift in expectations and values: What we've learned from collaborative action research in Northern Indigenous communities. *Canadian Journal of Action Research, 17*(2), 19-32. https://doi.org/10.33524/cjar.v17i2.260

Stanford, K., Williams, L., Hopper, T., & McGregor, C. (2012). Indigenous principles decolonizing teacher education. *In Education, 18*(2), 18-34. https://doi.org/10.37119/ojs2012.v18i2.61

Stenhouse, L. (1968). The humanities curriculum project. *Journal of Curriculum Studies 1*(1), 26–33. https://www.tandfonline.com/doi/abs/10.1080/0022027680010103

Stuttles, W., & Jenness, D. (1979). *Katzie ethnographic notes & the faith of a Coast Salish Indian.* Province of British Columbia.

Styres, S. (2019). Literacies of Land: Decolonizing narratives, storying and literature. In L. Tuhiwai Smith, E. Tuck & K. W. Yang (Eds.), *Indigenous and decolonizing studies in Education: Mapping the long view* (pp. 24-37). Routledge.

Todd, Z. (2016). An Indigenous feminist's take on the ontological turn: 'Ontology' is just another word for colonialism. *Journal of Historical Sociology, 29*(1), 4–22. https://doi.org/10.1111/johs.12124

Verlie, B. (2020). From action to intra-action? Agency, identity and "goals" in a relational approach to climate change education. *Environmental Education Research, 26*(9/10), 1266-1280. https://doi.org/10.1080/13504622.2018.1497147

Wildcat, D., & Deloria, V. (2001). *Power and place.* Fulcrum.

Wilson, S. (2008). *Research is ceremony: Indigenous research methods.* Fernwood Publishing.