

Two-Eyed Seeing into Environmental Education: Revealing its “Natural” Readiness to Indigenize

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Abstract

Recent visions for environmental education now include a foundational acknowledgement that the well-being of humans and the environment are inseparable. This vision of environmental education, with a focus on interconnectedness as well as concepts of transformation, holism, caring, and responsibility, rooted in experiences of nature, community, and land and communicated through storytelling, has been the domain and foundation of Indigenous education models for millennia. It is time for the environmental education field to turn to Indigenous education to enrich, renew, and re-focus its goals and core concepts. Using Two-Eyed Seeing as an integrative framework, this paper argues that current pivotal ideas in environmental education such as systems theory, ecological literacy, biophilia, and place-based education can benefit from and connect to foundational values of Indigenous education.

Résumé

Les conceptions récentes de l'éducation environnementale sont dorénavant fondées sur le principe que le bien-être des humains et l'environnement sont indissociables. Ce point de vue de l'éducation environnementale, qui met l'accent sur les liens réciproques ainsi que les concepts de la transformation, le holisme, la bienveillance et la responsabilisation, qui tient son origine dans les expériences mettant en jeu la nature, la collectivité et la terre, et qui a été transmis par le récit oral, a constitué le domaine et la base des modèles d'éducation autochtones pendant des millénaires. L'heure est venue d'aligner l'éducation environnementale sur l'éducation autochtone afin d'en enrichir, renouveler et réorienter les objectifs et les concepts fondamentaux. Ayant pour schéma global l'Etuaptmumk, soit l'« apprentissage dualiste », le présent article avance que les idées fondamentales circulant actuellement en éducation environnementale, telles que la théorie des systèmes, la maîtrise des notions environnementales, la biophilie et l'éducation locale, peuvent profiter des valeurs de l'éducation autochtone et y tisser des liens

Keywords: Indigenous education, holistic education, interconnection, story-telling, ecological literacy

It is a critically important and pivotal time to be involved in environmental education. Since its inception in the late 1960s, the field has undergone great diversification and growth, expanding from its original grounding in nature study, supported by the late nineteenth-century work of Rousseau (1762), Agassiz

(Kohlstedt, 2005) and Dewey (1916), to an issues-based approach that emerged as a result of Carson's *Silent Spring* (1962) and the foundational work by Stapp (1969) (Tasar, 2009). During the last two decades, environmental education has broadened to include social, political, cultural, economic, and aesthetic dimensions of environmental issues, and a recognition that achieving environmental changes can only occur with societal and cultural changes (González-Gaudiano & Peters, 2008; Palmer, 1997). Similarly, advocates and educators for social justice are awakening to the deep importance of environmental education to their work. Particularly within this era of global climate change, unrelenting ecological degradation, and unrestrained consumption of finite resources, there is a growing understanding that the health of the environment worldwide will be a defining factor in all aspects of global society (Lewis, 2009). The result is an increasing scope and mandate of environmental education and an increasing diversity of participants, perspectives, and research within the field (McKenzie, Hart, Bai, & Jickling, 2009; Zandvliet, 2009).

The depth and urgency of the global ecological crisis and the resulting need for radical and widespread cultural change will define the future of environmental education (Orr, 1994; Seymour, 2004). I contend that the failures of environmental education in this crisis are not failures of practice, but of vision or story. Environmental education needs to step outside of its historical roots within the Western worldview and look to the diversity of Indigenous cultures for new directions and visionaries (cf. Davis, 2009). Concurrently, in their work to develop Indigenous education theories, Indigenous educators and scholars offer the hope that ideas from these theories can provide “an important conceptual base for the development of a new genus of environmental curriculum capable of addressing the ecological challenges of the twenty-first century” (Cajete, 1999, p. 189). It is a synergistic moment when the field of environmental education can benefit enormously from the accumulated wisdom, research, and inspiration of Indigenous education through the indigenizing of environmental education. With caution against a Western tendency to essentialize tribal cultures, many Indigenous scholars recognize “that there are some similarities in the epistemologies and ontologies of culturally different tribal peoples” (Brayboy & Castagno, 2008, p. 732) and have worked to create common visions for education. For example, Pueblo scholar Cajete (1994) produced one of the first comprehensive models of Indigenous education, which includes:

the recognition of interdependence; the use of linguistic metaphors, art, and myth; a focus on local knowledge and direct experience with nature; orientation to place; and the discovery of ‘face, heart, and foundation’ in the context of key social and environmental relationships. (p. 189)

Within Indigenous understandings of interconnectedness and wholeness, students learn to care for the self and their relations—family, relatives, Elders, community, animals, and the land—as part of their own health, and that this

care-taking must include the physical, intellectual, spiritual, and emotional health of their relations (Archibald, 2008, Armstrong, 2000). Rather than being based on a set of prescribed learning outcomes, Indigenous education has as its purpose to nourish and guide the learning spirit (Battiste, 2010) and is transformational teaching based on learner readiness (Cajete, 1994). Teaching through stories allows for intergenerational transfer and interpretation of “how to live fully through reflection on, or participation in, the uniquely human cultural expressions of community, art, religion and adaption to a natural environment” (Cajete, 1994, p. 116). Generally speaking, Indigenous education is a land/place-based, environmentally respectful education in and through community and nature, and is centred in a spiritual connection and responsibility to all relations (Benham, 2008; Brayboy & Maughn, 2009; Graveline, 1998; Hampton, 1995; LaDuke, 1999; McGregor, 2004).

As educators venturing to indigenize environmental education, we will have to “assume some responsibility for laying out our own guides” (Jickling, 2005, p. 104): guides for navigating through very different kinds of knowledge in ways that are respectful, reciprocally beneficial, and that do not replicate patterns of colonization (Cajete & Pueblo, 2010; Graveline, 1998; Kovach, 2009). An appropriate guide would provide tools for this navigation and explore meeting points of Indigenous and non-Indigenous, as is laid out in the conceptual framework of Two-Eyed Seeing (Bartlett, Marshall, Marshall, & Iwama, in press). What follows is my vision for such a guide, using the Two-Eyed Seeing model of weaving knowledges from my perspective as a non-Indigenous environmental educator. I use themes of Indigenous knowledge and points of educational theory as a framework into which to extend concepts by non-Indigenous environmental education scholars. Weaving between systems of knowledge, I focus on the core concepts of environmental education that can be enriched by Indigenous understandings of story-telling, interconnectedness, wholeness (holism), nature/land experience, caring/care-taking, relationships, transformational change, and lands/place.

In particular, I consider environmental education programming within mainstream settings that would usually include both non-Indigenous and Indigenous students. As illustrated by Friedel (2011) and Lowan (2009), programs targeting Indigenous youth should be designed and delivered with and by Indigenous peoples, using Indigenous worldview as method and content. In the context of this paper, I use the term “Indigenous” primarily to refer to Indigenous people and culture, and I use the terms “First Nations,” “Aboriginal,” or “Native people/culture” where it is topical, as per the example of Cree scholar Kovach (2009).

I am among those in a movement of non-Indigenous environmental education scholars and practitioners who are “attracted to Indigenous approaches... [as part of] a generation seeking ways to understand the world without harming it” (Kovach, 2009, p. 11). I am also seeking ways to deepen the meaning and impact of my environmental education programming for *all* students. My journey

towards Indigenous ways of being and educating is echoed in the broader Newfoundland community in which I live: the Qalipu Mi'kmaq First Nation Band, with formal establishment in 2011 as a band without reserve land. This band has seen its over 20,000 members becoming a large portion of the residents of Western and Central Newfoundland (Qalipu, 2011/2012), as well as a critical number of students in these schools. My journey is also graced both by emerging richness in Indigenous education scholarship and the powerful examples of non-Indigenous authors such as Berry (2000) and Seymour (2004), who have modeled an inter-weaving of worldview and practice. I have also been fortunate to journey through the theory and practice of the outdoor environmental education program that I coordinate, through which a Mi'kmaq Elder and I have been gradually integrating Indigenous teachings.

A Program Example of Indigenizing Environmental Education: What Makes This Place Special?

“This place is special because to me it feels like home...” “...because of the people and animals,” “...the beautiful mountain,” “...all the wonderful trees,” “...Mother Earth....”. (students in the Western School District Outdoor Education Program, 2012)

What does it look like to respectfully bring together Indigenous education and an outdoor environmental education program offered to “everyone”? The school district outdoor education program that I coordinate is a curriculum-focused program with participation from every student in the district and delivered in partnership with Parks Canada staff. A few years ago, Mi'kmaq Elder Kevin Barnes came to be the key park interpreter for the interpreter-led sessions in the program. Together, we have been slowly weaving Indigenous teachings into parts of our program, from starting and ending with Mi'kmaq songs of welcome and thanks to the development of a session about the Circle of Life.

Elder Kevin Barnes found his voice in a session that was to represent Indigenous perspectives and, initially, to bring a touch-smell-listen session to the overall environmental education program. After a few years, the session has become more story-telling and less activity-based. He starts the program by touching the ground and asking, “What is this? Moss? Ground? Guys, it's the Earth. Aboriginal peoples call this Mother Earth. What pops in your mind when you say the word mother? What does your mom do for you? What does Mother Earth do for us?” He speaks to the specialness of what Mother Earth does for us (for free) and asks if we treat Mother Earth the way she should be treated. Through stories, he tells of the Mi'kmaq history of the area, the importance of taking only what we need, and about knowing how to spend time on the land respectfully. The session is grounded in an understanding of interconnection, of place/land and of caring-taking, and it asks students to treat Mother Earth the way she should be treated for all of us and our children's children. Students are

encouraged to take away their own messages about transformational changes in lifestyle or attitudes from these stories or teachings.

In our program closing, after Elder Kevin Barnes has led the Mi'kmaq song of thanks, we ask the students what made their experiences of this place special. Their answers vary from “the mountains” to “the people we are with,” but inevitably students respond that “Mother Earth” makes this place special. Students, teachers, and parent volunteers have a special respect for the contribution of Elder Kevin Barnes and the perspective he brings to their relationship with the earth, living beings, and each other. They remember and repeat his stories and what meanings they took from his teachings throughout their visit, and many teachers invite him into their school classrooms.

Our region is a community that is awakening to its deep Indigeneity through the establishment of the Qalipu First Nations Band, a heritage that has been buried or hidden in families and community. Many of our students are of Mi'kmaq ancestry and for many of them, this school-based environmental education program is their first encounter with Indigenous cultural/spiritual heritage. The Indigenous worldview and teachings bring an unquestionable strength to our environmental education program and a deeply powerful message of respect that we are committed to continuing through the Indigenous Knowledge integration.

Toward Integrative Programming

In this article I will demonstrate, through an overview of leading environmental education scholarship, emerging common ground between significant movements of environmental education scholarship and Indigenous ways of understanding, with the recognition that this common ground demonstrates a starting place (Battiste, 2002) and readiness for indigenizing environmental education. Already representing a place and opportunity of greater closeness between Western and Indigenous traditions in epistemology and methodology, environmental education as a discipline is a natural place to extend the model of coming together represented by Two-Eyed Seeing. An Indigenous perspective will challenge, enrich, strengthen, and unite these following leading ideas in environmental education:

- *story*, as connected to Berry's (2000) Universe Story,
- *interconnectedness*, as connected to systems theory (Capra, 1994, 1996, 2005),
- *wholeness or holistic approaches*, as seen with ecological literacy (Orr, 1992, 1994), loving relations, and spiritual connection (Seymour, 2004),
- *land/nature experience*, as connected to Nature Deficit Disorder (Louv, 2008) and biophilia (Orr, 1994; Sobel, 2008),
- *land/community education*, which is place- and community-based learning (Gruenewald, 2003; Gruenewald & Smith, 2008; Orr, 1994; Smith & Sobel, 2010),

- *care-taking*, as connected to community actions projects (Noddings, 2005), and
- *change-making*, as related to the radical nature of environmental education (Kincheloe & Steinberg, 2008).

These similarities of ideas, having different histories and coming from distinct worldviews, are in some places imperfect and contradictory, though strong enough to show starting places for Two-Eyed Seeing and the appropriateness of indigenizing environmental education.

Two-Eyed Seeing

Indigenizing environmental education will require a willingness by Western environmental educators to engage in “open communication and creative dialogue which challenges the “‘tacit infrastructure’ of ideas” (Cajete & Pueblo, 2010, p. 1128) and the reductionist orientation of a Western worldview. Reagan (2005) describes the ethnocentrism of Westerners as “a tendency to view one’s own cultural group as superior” (p. 4), while Cajete and Pueblo (2010) recognize the Western-centric epistemology of desiring absolute and knowable truths, and a resistance to the relational orientation of Indigenous knowledge. To better understand and negotiate the two cultures in which he lives, Mi’kmaq Elder Albert Marshall developed the idea of Two-Eyed Seeing, which is:

learning to see from one eye with the strengths of Indigenous knowledges and ways of knowing, and from the other eye with the strengths of Western knowledges and ways of knowing, and to using both these eyes together, for the benefit of all. (Bartlett et al., in press)

Within Two-Eyed Seeing, a co-learning journey means participants “need to be able to place the actions, values, and knowledges of their own culture out in front of themselves like an object, to take ownership over them, and to be able to say ‘that’s me’” (Bartlett et al., in press). Within the creation of this “ethical space” and through the use of the “healing tense,” participants learn to “see how to weave back and forth between our cultures’ actions, values, and knowledges as circumstances require” (Bartlett et al., in press). Unlike critical pedagogy’s border crossing from Giroux (1993), which seem more concerned with “unweaving nature’s patterns...to cognitively reconstruct them” (Bartlett et al., in press), Two-Eyed Seeing is about moving beyond borders to connectiveness, to accept the “interdependency of one with the other and with all of creation” (Marshall, Marshall, & Iwama, 2010, p. 174).

Non-Indigenous environmental educators also work and live between worlds, between the mainstream consumer-materialistic world—a world in which “individual alienation, despair, ennui and destructiveness has continued

to spread with a deteriorating sense of communal ties or ethical responsibility to natural or human worlds” (Tucker, 2009, p. 23)—and the alternate world we create through the stories we present in our teaching. Teaching and learning through stories is key because they “embed acknowledgement of the agency within our knowledges” (Bartlett et al., in press).

Story

Personal and communal narratives about the relationship between humanity and the earth form one of the central conversations of our time. Cherokee scholar King (2005) captures the central role of stories with his statement, “the truth about stories is that’s all we are” (p. 2). Everything humans do and experience revolves around some kind of story. Story is the way humans contextualize information and experience to make it meaningful, and is at the heart of Indigenous understandings of culture and education; story is the way that “we remember to remember who we are and where we have come from and where we can go as we enter the twenty-first century” (Cajete, 2010, p xii).

Berry, an ecological theologian whose work underlies much of today’s environmental education, speaks to our current global crisis as a crisis of cultural story rather than primarily of knowledge. With the assumption that when one’s worldview shifts, one’s ethical action shifts as well, Berry (2000) proposes a “New Story” to replace the dominant myths of Western civilization (characterized by the exaltation of the human over the rest of the universe and absence of any ethical obligations towards the nonhuman world) with a new vision of the Earth community. In the tradition of Two-Eyed Seeing, Berry weaves together emerging science with sacred understandings from many cultural perspectives, and, in particular, Indigenous worldviews, to build a creation story that exhorts human evolution as having the same source as other living beings. Thanks to this common origin, our well-beings are linked, the sacredness in human life is reaffirmed, as is the sacredness in all the universe that is our origin. Similarly, all of nature is sacred along with the creative process or the “wildness” that has brought into being our existence and that of all other living beings. Echoing many Indigenous and environmental educators, Berry speaks to the transformational importance of mystic or sacred experience through intimate encounters with nature, of intimately knowing a place, and of knowing the earth and human story. Cajete and Pueblo (2010) affirm Berry’s work because it “mirrors what might be termed a contemporized exposition of the Indigenous education processes of tribal societies,” even expressing that “it is exactly within the light of such a vision that this story must unfold for native and non-native alike” (p. 1129).

Story-telling is the what and how of Indigenous education—especially for teaching moral responsibilities as caretakers of community and land and for making “hearts, minds, bodies and spirits work together” (Archibald, 2008, p. 12). As explored by Eder and Holyan (2010), within Indigenous cultural traditions, storytelling is grounded in protocol such that some stories are told

only at certain times of the year or in certain places, or when a learner is at a certain readiness. They may also be attached to the sight of a certain rock or animal. Archibald (2008) describes how oral story-telling traditions hold sacred and vital roles in Indigenous cultures and considers if and how non-Indigenous teachers can tell Indigenous stories. She concludes that “without basic cultural sensitivity training among teachers, appropriation and disrespectful use of stories are more likely to occur” (p. 150) and for this learning process to be respectful, it must be guided by local Indigenous educators who possess the appropriate cultural knowledge. The key to respecting Indigenous knowledge are the implicit ideas of relationships and interconnectedness as full circle for wholeness or holism.

Interconnection

Seymour (2004) recognizes that the recent scientific understanding of interconnection, represented in Capra’s (1994, 1996, 2005) systems theory and Lovelock’s (1979) Gaia hypothesis, is an affirmation of the “picture of unified reality [seen] in our perennial wisdom traditions” (p. 13). Through these ideas in modern science we are coming full circle, back to the Indigenous understanding of the interdependence and interconnection of all things. It is a return to a way of thinking that enabled tribal peoples to sustain themselves for thousands of years (Capra, 2005).

With the explorations of the subatomic particle, scientists have come to understand that reality is actually a network of relationships. In so doing, they have shown that “the worldview of Newton mechanics, which portrays a world of separate objects, has fundamentally changed” (Seymour, 2004, p. 13). Systems theory shows the world as nested systems: in which every living organism is a system, and that parts of living systems as well as communities of organisms, including ecosystems and human social systems, are also living systems (Capra, 2005). This understanding of the interconnectedness of all living beings and the inseparability of human and other-than-human systems forms the basis of education for sustainability and underlies most views of environmental education, particularly those of Seymour (2004), Stone/Center for Ecoliteracy (2009), and Sobel (2008). Within this view, the way to achieve sustainability is to use ecosystems—in which life creates conditions that sustain life and there is no waste—as models for all levels of social or human systems. The goal is to have the human community designed “its ways of life, businesses, economy, physical structures, and technologies respect, honor, and cooperate with nature’s inherent ability to sustain life” (Capra & Stone, 2010).

Our studies of environment and science have been heavily weighted to consider what our world is made of—substance—rather than relationships, patterns, and networks. Systems theory prescribes that we use our understandings of basic principles of ecology—recycling, partnership, flexibility, diversity, interdependence, and interconnection—to guide education and societal change

toward sustainability (Capra, 1994). In a study exploring children's concepts of nature as including humans, children showed an intuitive recognition of an interconnectedness of living things (Mortari, 1997). This is a concept that is key to Indigenous knowledge, educated out of us through Western culture and Eurocentric schooling, but which is returning full circle as a key understanding in transformative scientific discoveries and shifts of paradigms.

Wholeness

Following from the knowledge of interconnection of living things are Indigenous understandings of education for wholeness, holism, and the whole child. Since the self is interconnected with family, community, and the land, Indigenous models of holistic education teach children how to maintain balance and health of all these aspects of their selves (CCL, 2007). In educating for healthy children as part of healthy communities, an educator will attend to the physical, intellectual, spiritual, and emotional aspects of the self, as well as the interconnection between them (Armstrong, 2000). This understanding is echoed in environmental education writings. Sauv  (2008), for example, describes three intersecting core dimensions (relation to oneself, other humans, and environment), that our psychosocial and ecological identities are interwoven, and that our ecological self, as part of a broader sense of self, is formed through our experiences in and with the living environment.

The broadly relied upon concept of ecological literacy also reflects a holistic approach of educating for the intellectual, emotional, physical, and spiritual. Intellectually speaking, ecological literacy gives students tools to question learnings and includes the knowledge and practical skills to live well in a place: "a broad understanding of how people and societies relate to each other and to natural systems, and how they might do so sustainably" (Orr, 1992, p. 92). Yet, sustainability can only operate if emotion is at the core of environmental education, as "we can be ethical only in relation to something we can see, feel, understand, love, or otherwise have faith in" (Leopold, 1949, p. 251). Education that attends to children's affective self is vital for students' own joy and happiness, for the value they hold for the world around them and, and for their physical health, since those who do not know the land/place "miss one of the elements of good thinking which is the capacity to distinguish between health and disease in natural systems and their relation to health and disease in human ones" (Orr, 1992, p. 86).

While many environmental education theorists may use words other than spirituality, they are commonly speaking to the importance of transformational experiences in nature. Sobel (2008) describes the naturalness with which young children come to experience a "sense of deep connectedness, of being saturated with nature" (p. 13), a sense he refers to as nature mysticism. In Seymour's (2004) view, "beneath the cultural crisis lies a spiritual crisis that might be described as a loss of attunement with, and respect of, nature"

(p. 135). The solution for this crisis lies in the adoption of a new worldview that is defined by a holistic reverence for life where the subject/self is embedded in this multidimensional experience of the world.

Nature (Land) Experience

For Indigenous people around the world, education in Nature is life... [it is a] sacred pathway of knowledge, of learning and teaching the nature of being truly human, truly alive. (Cajete, 1994, pp. 87-88)

Feelings of love, connectedness, or spirituality with nature/land/environment that are identified within both Indigenous and environmental education discourses can only develop from quality time spent in nature or on the land. Most people who describe themselves as environmentalists can point to experiences in the natural world at a very early age and the positive influence of an older role model (Orr, 1992). More generally, research has shown that time spent in nature in childhood is positively associated with environmental behaviours in adulthood (Wells & Lekies, 2006). Through this connection to and love of the natural world, learners become open to learning and interested in seeking out knowledge about nature and sustainability.

Childhood experience in nature is not just important in growing environmentally conscious citizens, it is vital to the development and lifelong health of all people. This relationship is described by Louv's (2008) *Nature Deficit Disorder*, his seminal idea that has spawned widespread child-in-nature movements and initiatives such as the groundbreaking American policy, *No Child Left Inside Act* (NCLI Coalition, 2011).

"Biophilia" is a term first used by prominent scientist Wilson (1984). Wilson suggested that, similar to Louv's theory of *Nature Deficit Disorder*, humans have an innate need to connect with other forms of life, and that developing and nurturing this connection is important to our physical, mental, and psychological health. Opposite of biophilia, biophobia "ranges from discomfort in 'natural' places to active scorn for whatever is not manmade" (Orr, 1994, p. 131). Sobel (2008) extends this idea to include a condition in which the "overwhelmingness of environmental problems can breed a sense of ennui and helplessness" (p. 146). This is a criticism of issues-based environmental education that, as Gruenewald (2003) suggests, is too much characterized by trauma and disaster. In its place, Gruenewald emphasizes that students need to learn to love nature before being asked to care for or repair human-made wounds.

Within the Western worldview, nature and culture are traditionally seen as polarized, often opposing entities. Yet, from an Indigenous perspective and for those in Western environmental philosophy, there is an understanding that it is problematic to isolate nature experience, and there is a need to end this dualistic thinking (Berry, 2000; Colwell, 1997; Marshall et al., 2010). Nonetheless, I have included nature experience and place/land-based education as separate topics, despite this obvious connection.

Land/ Place-Based

The basic framework for Indigenous education is an intimate and complex set of inner and outer environmental relationships. This is not only a physical place with sun, wind, rain, water, lakes, rivers, and streams, but a spiritual place, a place of being and understanding. (Cajete, 1999, p. 193)

Gruenewald and Smith (2008) describe place-based education as part of a broader social movement of localism that is a response to the negative effects on local communities perpetrated by economic globalization, and is concerned with “conserving and creating patterns of connectedness and mutuality that are the foundations of community wellbeing” (p. xvi). Mainstream schooling, heavily weighted towards mandated national and regional curricula and standardized testing, has undergone a similar disconnection from tangible experience and the understandings of local places where students live (Orr, 1994; Smith & Sobel, 2010). In contrast, similar to Indigenous understanding of land-based education, place-based education is about learning how to live well in a place (land), and “introduces children and youth to the skills and dispositions needed to regenerate and sustain communities” (Gruenewald & Smith, 2008, p. xvi). This is not just education about place and community, but education in a place. Place-based education sees students learning from direct experience in nature (as described in the previous section) and in the community. Community-centred experiences answer the question of disconnect raised by Dewey in the late nineteenth century about the unrelatedness of children’s school lives to their home and neighbourhood lives, and the resulting lack of engagement from this neglect to acknowledge experiences and interests (Smith, 2002).

As a contrast, the Western understanding of place as local (Smith & Sobel, 2010) differs from the more fluid Indigenous concept of land which includes a community of *all* relations and a deep spirituality that underlies Indigenous way of being (LaDuke, 1999; McGregor, 2004). This is a depth that would be increased through indigenizing environmental education.

Care-Taking

In an Indigenous worldview, the understanding of Self-In-Relation (Graveline, 1998) is foundational. Accordingly, the purpose of education is to create a sense of connection and understanding of how to care for the various parts of a person, these being the self, family, community, and land, and that to have this knowledge is to have a responsibility to care for each of these (Armstrong, 2000). While it may lack this key spiritual understanding that learning-equals-caretaking, care and service are deeply present within environmental education (Gruenewald, 2003; Orr, 1992; Sobel, 2008). Noddings (2005) suggests that “caring is the very bedrock of all successful education and that contemporary schooling can be revitalized in its light” (p. 27). Environmental education is an

education that is caring and empowering for learners themselves, and one that incites love and care-taking directed at other humans and living beings through nature experience and experience in the community, including community service projects. Jickling (2005) describes how building ethical understanding relies on our ability to develop emotional understanding, which in turn develops through real relationships and “real contact with other people, social groups, societies and more-than-human living beings” (p. 108). Giving students a chance to engage with the community through service projects, including environmental action projects, is a gift for both the community and for students: “one of the great drawbacks in the way public schools sequester young people from the lives of their loved ones and other community members is that children have so few opportunities to give back to others in ways that validate their own existence” (Smith, 2002, p. 593). In this way, educating for care-taking should also be about change-making through experiences that give a sense of empowerment, beauty, and wonder about the world, with caution to avoid the biophobic reactions that can result from some issues-based education.

The Indigenous understanding of care-taking as Self-In-Relation is fundamentally more powerful than Noddings’ term of caring. Environmental education would benefit from this important depth. Rather than trivialize or romanticize notions of Indian-ness, integrative programming must acknowledge and represent this depth accurately and appropriately (Friedel, 2011; Lowan, 2009).

Change-Making

Two-Eyed Seeing adamantly, respectfully, and passionately asks that we bring together our different ways of knowing to motivate people, Aboriginal and non-Aboriginal alike, to use all our understandings so we can leave the world a better place and not compromise the opportunities for our youth (in the sense of Seven Generations) through our own inaction. (Bartlett et al., 2012, p. 11)

Indigenous education continues to be about personal transformation—journeying towards wisdom (Cajete, 2010)—and is now defined by some Indigenous scholars as an opposition to dominant Eurocentric education (Graveline, 1998). Just as Indigenous education and reclamation of Indigenous knowledge are political acts, so too is environmental education. As Sauvé (2009) asserts in her introduction to the 5th World Environmental Education Congress, “this 5th Congress becomes a political act” (para. 11). Both the study of environmental education and the delivery of environmental education are political acts because they are acts of change and transformation that should impact social relationships involving authority or power. Even nature study itself can be a radical act (Pyle, 2008), because it has the potential to incite caring and care-taking, with care-taking becoming a departure from mainstream Western ways of valuing and acting. An Indigenized environmental education is more radical and more powerful, because Indigenous knowledge is a bountiful social resource for any justice

connected attempts to bring about social change (Freire & Faundez, 1989), and change is desperately needed “to counter Western science’s destruction of the earth” (Kincheloe & Steinberg, 2008, p. 137).

Conclusion

We need to cultivate thinking that comprehends complex systems, perspectives that widen empathy and nurture mindfulness, better techniques for gathering and sharing information, and new modes of cooperation ... We need to get beyond the thinking that puts humanity outside nature ... to see the hidden patterns that connect human activity to the larger flow of nature. (Goleman, 2009, p. vi)

The severity of the global ecological crisis requires a radical departure from current global Western-dominated knowledge and education models. The question of “what would the change called for by Goleman look like?” can be answered clearly and cohesively from ancient wisdoms (Davis, 2009), Indigenous Knowledge understandings, and within Indigenous worldviews. Indigenizing environmental education benefits Indigenous students participating in mainstream education programs by teaching and acknowledging their worldview, as well as benefitting non-Indigenous students by introducing them to these important and foundational perspectives to life (Cajete & Pueblo, 2010). I believe that if we in the Western tradition of environmental education are to really know and teach about the places which form our home landscapes, we must create an education that includes the stories of those whose lands these are: the Indigenous peoples’.

Environmental education is about re-storying our lives, the land, and our relationship to it. Through Two-Eyed Seeing it can also become focused on interconnection: between peoples, between ways of thought, between human beings and the natural world. It is a celebration of the magic and beauty of this world. An indigenized environmental education speaks for education that tells a new, holistic creation story. It is education that includes the interconnection of interactions with the natural world and all peoples that is based on love and care-taking rather than fear or ownership. It is teaching children to understand Self-In-Relation whereby “all things and all people, though we have our own individual gifts and special place, are dependent on and share in the work of everything and everyone else” (Graveline, 1998, p. 55) and “no more is taken than will be returned” (p. 56) to the earth and all our relations.

Notes on Contributor

Margaret McKeon coordinates and teaches outdoor education programs with the Western School District in Corner Brook, Newfoundland. She has appreciated being able to combine theory and reflection from recent graduate studies

with the practice of this position. She is also actively involved in local and provincial environmental education networks. **Contact:** margaret.mckeon@gmail.com

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