

The Terrain of Place-Based Education: A Primer for Teacher Education in Canada



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Abstract

The trajectory of place-based education (PBE) is laid out by drawing on literature from outdoor, experiential, environmental, critical, and land-based education to map key intersections and influences. Directions for PBE with respect to decolonization and reinhabitation—and the meaningful acknowledgement of Indigenous knowledge systems—are explored. Implications for teacher education are addressed.

Keywords: place-based education, teacher education, land-based education, Indigenous Knowledges

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In an effort to provide a heuristic introduction to the topic of place-based education (PBE), influential literature that highlights key characteristics of the field is explored and commentary is provided to connect major themes and issues of the field. Emerging from the authors' experiences as teacher educators, this paper locates PBE within outdoor, experiential, environmental, critical, and Indigenous education approaches. The paper explores literature related to social and environmental justice, the consequences of settler colonialism, as well as the integration of localized approaches to education into practice. The authors' perspectives emerge from settler, Eurocentric traditions with developing awareness of the cultural and ecological loss and change experienced on the prairies of Western Canada. Both lived experience and research initiatives suggest that place-based approaches are being embraced by educators across the country (McVittie & Webber, 2018; Miller et al., 2018); however, discussions about place, land, and settler identities are limited within the field of teacher education generally, and there is little discourse in Canadian teacher education literature exploring the connection between PBE and pre-service teacher education (Webber & Miller, 2016).

Some practitioners may feel that PBE is a re-packaging of established trends, serving as a collection of various progressive pedagogical and assessment approaches. Therefore, we believe it is crucial to explore the ways that PBE draws upon established approaches to education, as well as to highlight how PBE has the potential to become an innovative nexus to address issues facing teacher educators. Importantly, whether/how PBE integrates Indigenous Knowledges (IK) into curricular approaches is a timely conversation. The inclusion of place-based learning by some individual teachers as a means to engage students and meet curricular objectives, paired with the stated desire to include IK within curriculum reform, warrants that the relationship between PBE and IK is further conceptualized for teachers and teacher education programs in Canada.

We offer nuanced understandings of PBE and call for greater support for individual faculty members who have taken it up in their work with pre-service and in-service teachers. Key understandings of PBE are discussed and scholarly influences are examined to better understand the genesis of and assumptions embedded in PBE approaches. The relationship between place-based and land-based education is investigated. Possible directions for the field are explored related to environmental, experiential, and linguistic considerations. We conclude by acknowledging the potential (and pitfalls) for PBE as it relates to integrating IK within curriculum in Canada.

Place-Based Education

Smith and Sobel (2010) noted that the first time the term PBE appeared in a book title, it was associated with environmental education: *Stories in the Land: A Place-Based Environmental*

Education Anthology (Elder, 1998). In the same year, another book took up the term “place” in connection with rural education: *Place Value: An Educator’s Guide to Good Literature on Rural Lifeways, Environments, and Purposes of Education* (Nachtigal & Haas, 1998). Shortly thereafter, Smith and Sobel observed that the Rural Trust invested in PBE as a method for revitalizing rural communities. In this way, PBE came to be associated with rural schools, before being taken up in other locales.

PBE evolved as a community-based approach to connect young people to their natural and built environments. Early conceptualizations of PBE revolved around service-learning and localizing education (Curtiss & Theobald, 2000). PBE developed after, and did not replace, environmental education, although teaching about and for the environment is a prominent feature of PBE. Smith (2002) offered an overview of PBE and identified several approaches for developing PBE curriculum in schools: cultural studies, nature studies, real-world problem solving, internships and entrepreneurial opportunities, and induction to community processes (pp. 587–593). Linking PBE to Dewey’s progressive philosophy as well as to other educational programming, Smith (2002) believed that this strand of education remains more the exception than the rule in classrooms.

Expanding on many of Smith’s (2002) ideas, David Sobel’s (2004) book *Place-Based Education: Connecting Classrooms and Communities* offered an introduction to the field of PBE. Sobel (2004) defined PBE as:

the process of using the local community and environment as a starting point to teach concepts in language arts, mathematics, social studies, science, and other subjects across the curriculum. Emphasizing hands-on, real-world learning experiences, this approach to education increases academic achievement, helps students develop stronger ties to their community, enhances students’ appreciation for the natural world, and creates a heightened commitment to serving as active, contributing citizens. Community vitality and environmental quality are improved through the active engagement of local citizens, community organizations, and environmental resources in the life of the school. (p. 7)

Sobel offered PBE as a reconceptualization of the environmental movement with the aim to promote a more inclusive understanding of both natural and built environments (see also Stevenson, 2007). Sobel drew from environmental scholars (Lieberman & Hoody, 1998) to highlight how emphasizing ecological and social relationships promotes achievement in schools. In doing so, Sobel solidified PBE as a means of conjoining innovative education practices through localizing education: “to bring all of these strands together in a common framework for curriculum thinking and school design aimed at deepening students’ connection to their communities in ways that make those communities better places to live” (p. 21).

Gruenewald and Smith's (2008) *Place-Based Education in the Global Age* stands as a landmark anthology of PBE. The book is divided into three parts: models for place-based learning, reclaiming broader meanings of education, and global visions of the local in higher education. Indigenous knowledge, environmental justice, diversity issues, nature study, leadership formation, and teacher education are topics that the chapters addressed, revealing the far-reaching scope that PBE scholars were exploring at the time of publication. The growing problems of mass pollution, climate change, and environmental degradation linked education with the need for exploring alternative ways of thinking and living.

International authors offer reflections upon PBE literature to reveal insights about the development of the field over the past decade (for an earlier treatise, see Woodhouse & Knapp, 2000). Waite (2013) identified how school-based and community-oriented approaches within North American literature (Gruenewald & Smith, 2008; Sobel, 2004; Smith & Sobel, 2010) differ from Australian literature. In Australia, the focus is primarily place-responsive outdoor education (Brown, 2008; Hutson, 2010; Wattchow & Brown, 2011). In a U.K. context, Scotland has mandated education for sustainability to weave together themes of global citizenship, outdoor learning, and sustainable development (Beames et al., 2012).

Harrison (2010) divided PBE literature into two areas: the American context, focused upon educational institutions embracing the local community and environment as part of the learning context, as well as the Australian and Canadian context, focused upon outdoor environmental education. Harrison (2010) summarized the human geographical writing on place (Relph, 1976; Tuan, 1974, 2001) and phenomenological influences (Casey, 2009; Heidegger, 1971) to conclude that PBE is best defined as:

- a series of visits to one locality;
- a diverse, and increasingly participant-directed, experiential approach to understanding the place—through ecology, cultural history, geology, geography, place-names, story, interactions with local community, work projects and more...;
- an action research approach, where students direct and shape their own learning, contributing to the place in various immediate or long-term ways. (p. 415)

It is appropriate for PBE scholars to characterize the field geographically given that the material place informs the practice; however, not all scholars categorize the literature in this sense.

Seawright (2014) envisioned three streams of PBE: First, one that fosters a connection with community and environment through an ideal of enlightened localism in order to challenge assumptions about the natural world (e.g., Orr, 1994; Sobel, 2004); second, one that engages critical perspectives that challenge epistemic frameworks as well as perceptions of reality such as social and economic factors (e.g., Gruenewald, 2003a; Gruenewald & Smith, 2008); and third,

Indigenous education literature (e.g., Cajete, 1994; Kawagley & Barnhardt, 1999) that carries pre-existing ethics of social and ecological sustainability (Seawright, 2014, p. 560).

Influences and Intersections of Place-Based Education

Outdoor Education

Outdoor education, in its literal interpretation, has existed since time immemorial as it is inherent in Indigenous communities and knowledges. Kirkness (1998) noted the role that community and the natural environment played in holistic traditional education. The effects of colonization and residential schools had a profound impact on the social and learning structures of Indigenous peoples as well as the North American landscape. With the establishment of common schools in Western contexts, text-based learning became the formal process for study. However, educators and conservationists from the time of the establishment of schools have argued for children to have direct experience with the world (Armitage, 2009). One aspect of this tradition is outdoor education, which in many ways is a precursor to Western PBE. Dating from the 1940s, it was a structured attempt within formal education to move children outside the walls of the school and into other environments and communities.

American society is, debatably, credited as the birthplace of Western notions of outdoor education, a movement associated with camping enthusiast L.B. Sharp. Sharp (1943) advanced his philosophy of education as, “that which ought and best be taught inside the schoolrooms should there be taught and that which can best be learned through experience dealing directly with native materials and life situations outside the school should there be learned” (p. 363–364). Sharp sought learning beyond the classroom, and for school curriculum to be paired with the best place to learn (p. 364), conceiving outdoor education as an integral part of schools and as a way to advance hands-on learning. He stated, “It is strange but true that most of the material to be taught in school comes from outside the classroom; from the land, the country at large, and the adjacent community. This material is effectively arranged in books and by other devices spread before the child in the classroom” (p. 366).

Donaldson and Donaldson (1958) called for scholarship to understand outdoor education. They stated, “outdoor education is education *in, about, and for* the outdoors ... its methodology is as old as mankind—learning by using the senses out where the subject matter exists” (p. 17). Here we find a significant step—that learners should form a connection and care for the outdoors through direct experience. When outdoor education is framed as evoking care “*for* the outdoors,” the purpose of education is extended beyond solely teaching intellectual curriculum outcomes to include a moral dimension: both the learner and the environment must be improved by the experience. This understanding helped contribute to defining outdoor,

environmental education. Donaldson and Donaldson promoted the inclusion of environmental stewardship into teaching and learning outdoors.

Hammerman et al.'s (1964/2001) work is described as a prescriptive guide for outdoor education as it explored the multi-faceted nature of outdoor education. The goals for outdoor education included the need to address curriculum and included experiential education, and the outdoors as an appropriate learning place, but says nothing about teaching *for* the environment. Priest (1986) stated that outdoor education is based upon curriculum matter (p. 14). Conceptualizing outdoor education as a matter of many relationships, Priest described outdoor education as a wide, meandering, and multi-faceted enterprise. By this time, experiential, environmental, and adventure education had begun to carve out their own trajectories in mainstream education. Priest's definition addressed the relationship between outdoor education, the environment, and formal education:

Outdoor education is an experiential process of learning by doing which takes place primarily through exposure to the out-of-doors. In outdoor education, the emphasis for the subject of learning is placed on RELATIONSHIPS, relationships concerning people and natural resources. (p. 13; emphasis in original)

This new definition reflected the plurality of phenomena occurring within the realm of outdoor education as it evolved into the 21st century. Priest (1986) went on to describe outdoor education as (a) a method for learning, (b) experiential, (c) taking place primarily outside, (d) requiring the use of all senses and domains, (e) based upon interdisciplinary curriculum matter, and (f) a matter of relationships involving people and natural resources (p. 13). Priest highlighted the relationship between humans and natural resources as a way to characterize teaching and learning outdoors as the interaction between individual experiences and the more-than-human world. An important difference between the definitions of outdoor education put forward by Priest and the Hammermans resided in the relationship to curriculum goals and outcomes. While curriculum goals and outcomes were expected to be taught in both instances, only Priest called for the integration of subject areas.

Experiential Education

Priest's (1986) use of the term "experiential process" can be traced to John Dewey, and much later, to the establishment of the Association for Experiential Education (AEE) in 1977. And while experiential learning has a plurality of meanings, it can be loosely defined as taking place anywhere by individuals learning by doing (Adkins & Simmons, 2003). Within Priest's definition of outdoor education lies the emergence of two subsections: experiential and environmental dimensions, explicitly cast as weaving together the fabric of teaching and learning outdoors.

David Kolb is credited for popularizing experiential learning in mainstream education by contributing a renewed experiential learning theory and experiential learning model. Drawing

from Dewey, Lewin, and Piaget, Kolb (1984) advanced the idea that “learning is the process whereby knowledge is created through the transformation of experience” (p. 38). Kolb posited an experiential learning cycle that involved concrete experience, observation and experience, forming concepts, and testing the concepts in new situations. Categorizing learning cycles in this way privileged individualized conceptualizations of the transformation of experiences. The AEE (n.d.) offers a summative definition encompassing many of these categories:

Experiential education is a teaching philosophy that informs many methodologies in which educators purposefully engage with learners in direct experience and focused reflection in order to increase knowledge, develop skills, clarify values, and develop people’s capacity to contribute to their communities. (para. 1)

This definition suggests that experiential learning contains many methodological frameworks to facilitate the goals to which the learning process is directed. It would seem that many programs borrow certain methodologies without knowledge of philosophical influences. These unacknowledged philosophic influences are reflected in the programmatic structures, language, and purpose of education practices. For example, Gough’s (2013) understanding of outdoor education included experiential and environmental dimensions, and students were to learn their environmental concepts in appropriate places, usually outside in natural areas. Nonetheless, the focus on environmental concerns and experiential learning supported the writers of the Belgrade Charter (UNESCO, 1975) and the Tbilisi Declaration (UNESCO & UNEP, 1977) to frame environmental education as an heir to outdoor education.

Environmental Education

Environmental education has typically examined scientific concepts of interrelationships amongst humans and the planetary resources. Specific study of local places was generally not part of environmental education; rather, global issues were most often taken up. Children on the Canadian prairies might learn of the devastation of the Amazon rain forest, without ever learning that the North American Great Plains is one of the most altered ecozones on the planet (Savage, 2004). Learning was often from textbooks, in classrooms, with very little experiential learning involved. While many interacted with their place as a basis for environmental stewardship (e.g., Rowe, 1990), the connection between localized place and scientific inquiry was not the primary focus of early conceptualizations of environmental education. The 1962 release of Rachel Carson’s book *Silent Spring* affected the way people thought about human interventions in ecosystems (Warren & Wapotich, 2011). Carson’s (1962) work asserted that the concept of ecology must mix with cultural understandings of the environment in order to address environmental issues.

In the late 1960s, environmental educator William Stapp proposed that humans are an inseparable part of a system consisting of people, culture, and the biophysical environment.

Stapp (1969) argued that an attitude of concern for the environment could motivate citizens to participate in problem solving. Two visions for environmental education emerged: the ethos of problem solving and real-world interactions contrasted with textbook learning of Eurocentric science within classrooms. If the problem-solving aims of environmental education were to be taken seriously, educational frameworks that address social inequalities would be needed. Notable scholars describe PBE as a more inclusive approach than environmental education (Orr, 2005; Sobel, 2004, p. 9). Exploring the connections between environmental education, sustainability, and citizenship is one strategy to learn how social inequalities might be understood and addressed (e.g., Kozak & Elliot, 2014).

Coyle (2005) defined environmental education as the process of thinking through environmental challenges and issues, then engaging in problem-solving activities to improve the environment. Giron et al. (2012) argued that environmental education should raise the level of critical thinking and reflection so that students could think about the future that they desire and how they wish to live (p. 141). Such attitudes reflect the core belief that environmental education must support students in thinking about preserving ecosystems for future generations of humans.

Many environmental educators want their students to learn experientially, to dwell in the natural world, and to learn the importance of healthy ecosystems. Common debates contained within the development of environmental education are also taken up within the field of PBE. For example, environmental educators struggle with a number of issues: where and how should problem-solving be taught seems to conflict with the priority to teach scientific concepts and facts to students. Concern for teaching what the curriculum dictates might enable students to score higher on their fact-oriented tests, but offers little guidance about how to apply learning to new and novel (i.e., real-world) situations. It should be noted that partnerships between schools and communities remain an ideal for environmental educators. Numerous environmental educators' practices and philosophies have aligned with PBE and there remains synergy between environmental and place-based approaches (Gough, 2013, p. 41). While the field of PBE embraces the debates within environmental education, it is also influenced by the aspirations of outdoor, experiential, and critical pedagogies.

Critical Perspectives

Gruenewald (2003a) introduced Freire's (1970/1989) critical perspectives to PBE, noting that PBE tended to take up environmental connections in rural areas, whereas critical pedagogy addressed issues of social justice in urban areas. He argued that rural and urban places needed critical pedagogy, and both should examine social and ecological elements. He termed this approach a *critical pedagogy of place*. Gruenewald (2003a) also outlined reinhabitation and decolonization, which worked to dislodge and disrupt oppressive forces (decolonization) while

conserving those environments and customs that preserve vital functions in society and for the planet (reinhabitation). According to Gruenewald (2003a), a critical pedagogy of place aims to “(a) identify, recover, and create material spaces and places that teach us how to live well in our total environments (reinhabitation); and (b) identify and change ways of thinking that injure and exploit other people and places (decolonization)” (p. 9). Decolonization and Reinhabitation are terms that reflect the social and ecological frames that make up critical pedagogies of place. Transformation (the goal of decolonization) and conservation (the goal of Reinhabitation) serve as metaphors that help clarify the distinctive, socio-ecological emphasis of a critical pedagogy of place.

Seawright (2014, p. 561) classified PBE into three streams: *liberal* (e.g., Curtiss & Theobald, 2000), in which place is the driving force for engaging learners in their curricula, for coming to understand their relationships with their community, and with the more-than-human world; *critical*, in which there is acknowledgement of the socially constructed nature of place, and of the abuses of White settler privilege, and which takes up a critical examination of the damages created by injustice (Gruenewald, 2003a); and *land-based education*, in which a different epistemology is the basis of education, where the land is conceived of as a set of relationships amongst all beings, animate, inanimate, human and more-than-human. Garcia and Shirley (2012) define critical Indigenous pedagogy as focusing on social injustices so as to transform inequitable power relations oppressive to Indigenous peoples. Shirley’s goal is to empower teachers and students to transform their places, their communities, such that corporations and White settler governments can no longer exploit Indigenous land. The process of decolonization is critical pedagogy—liberating the minds and lands of Indigenous peoples (Garcia & Shirley, 2012, p. 81).

Land-Based Education

Indigenous research methodologies help establish the relationship between IK and Western research (Battiste, 2013; Kovach, 2009; Smith, 2012; Wilson, 2008). Simultaneously, a distinct stream of Western environmental education embraced PBE for its integration of IK (Cole, 2007; van Eijck & Roth, 2010). Barnhardt and Kawagley (2005) contended that Indigenous scientific and cultural knowledge are critical ingredients for developing an interdisciplinary pedagogy of place (see also Cajete, 1994; Kimmerer, 2013). In light of strong parallels between PBE and land-based education, PBE literature must avoid co-opting IK and rather value Indigenous perspectives, histories, and research (Nespor, 2008, p. 482). This section will focus on distinguishing the two approaches, or at least mapping key intersections, rather than attempt to offer Indigenous or land-based education perspectives.

Superficially, land-based education and PBE work towards the similar ends of social and ecological justice; however, where PBE supports students in developing positive relationships

with “their” places, land-based education addresses issues of sovereignty from Indigenous perspectives. Seawright (2014) noted that where settlers claimed individual ownership of land, Indigenous peoples felt they belonged to the land. Simpson (2011) noted that the land is mother, and thus, no one can own the land, and we must all respect and care for the land. This fundamental difference between PBE and land-based education creates tension between the two potent pedagogies. In an introduction to a special issue of *Environmental Education Research*, Tuck et al. (2014) noted the need for postcolonial, Indigenous voices to be heard about PBE. They argued, “though earnest in attempts to acknowledge colonial histories of particular places, the place-based and broader environmental education literature has replicated some of the very problematic assumptions and imperatives of settler colonialism” (p. 15). In asking how PBE has positioned itself to address colonial injustices, Tuck et al. drew from theorizations of *settler* colonialism, defined as a form of colonization, in which outsiders inhabit and extract resources from land held by Indigenous peoples so as to claim it as their new home.

Settler colonialism “works” by making Indigenous land into property. Tuck et al. (2014) offered a direction for land education: “land education calls into question educational practices and theories that justify settler occupation of stolen land, or encourage the replacement of Indigenous peoples and relations to land with settlers and relations to property” (p. 8). This understanding of land is important to PBE in its call for practitioners to engage with the impacts of settler colonialism. Both land and land-based education are seemingly used interchangeably in the literature but are differentiated from PBE “because of the ontologies that animate them” (Tuck et al., 2014, p. 10). As Bang et al. (2014) made explicit, “Land is, therefore we are” (p. 45), thereby expressing that land is the source of life and orientation to living.

Calderon (2014) outlined approaches for unhinging settler colonialism through such methods as the politics of naming, political analysis, as well as redefining decolonization and reinhabitation of place. Calderon, drawing upon Peña (1998) and Brandt (2009), explored notions of territoriality in a decolonizing reinhabitation of place. Brandt argued that reinhabitation “occurs when local, democratic self-management of degraded homelands becomes possible and stakeholders come to understand the colonizing effects of past historical practices” (as cited in Calderon, p. 27). Built upon Indigenous scholarship, land-based education is rooted in the notion that all places were once, and continue to be, Indigenous. It follows that Indigenous worldviews and cosmologies are “many times [the] most viable knowledge systems related to place-based goals of critical sustainability, community building, and addressing issues of territoriality” (Calderon, 2014, p. 27). Educators must draw upon Indigenous frameworks to decolonize understanding of places. Garcia and Shirley (2012) argue that connections to place, as environmental, ecological, and spiritual, are a goal and a process for decolonization. Land-based and place-based education share the goals of decolonization and reinhabitation; however, inattentiveness to epistemological and ontological approaches

may perpetuate oppression, rather than foster reconciliation, among Indigenous and Eurocentric worldviews.

Seawright (2014) emphasized how Indigenous and settler traditions inform epistemic understandings of place:

The significance of place [in Indigenous perspective] is connected with “bodies of knowledge, and practices resulting from direct interaction with the natural world” (Cajete, 1994, p. 39). Cajete’s epistemology of place provides an analytic model of how to assess place as a progenitor of knowledge within the Western world. As Indigenous epistemologies are rooted in a particular conception of nature, so is Western epistemology. However, the Western bodies of knowledge have been developed out of deeply rooted anthropocentrism and hierarchized vision of the world (Plumwood, 2002). White supremacy, heteropatriarchy, and colonialism coexist with anthropocentrism in the Western body of knowledge to create settler traditions of place. (p. 559)

Seawright differentiated Indigenous epistemologies from settler epistemologies.

Conceptualized this way, land-based education requires a different way of thinking about human relationships with one another and the land. This differentiation is necessary for the inclusion of IK within education and curriculum reform built on respectful and appropriate strategies (Battiste & Henderson, 2008).

Directions for Place-Based Education

PBE differentiates itself as an innovative nexus to address issues facing teacher education practitioners. The way the environment, experience, and language are conceptualized within PBE literature highlights human presence within environmental problems, contextualizes the role of human experience in education, and highlights how language informs our shared understanding of place. The inclusion of both natural and built environments within PBE is a strategy to focus on the recurring need to address cultural and social issues intertwined with environmental issues. Heightened attention to non-formal education practices, critical pedagogies, and experiential education informs the rationale for distinguishing PBE as a localized approach to progressive forms of education.

Within environmental education, the objective, scientific understandings of knowledge and reality contrast with the social constructivist, inquiry-based, integrated, and emancipatory education enabled through PBE, and described in the literature. For example, Ardoin (2006) argued that PBE must extend beyond Stapp’s (1969) examination of biophysical environment to embrace psychological, sociocultural, political, and economic factors in order to integrate a sense of place with real-world issues. The influence of Gruenewald’s (2003a) critical pedagogies helped to illustrate that the purpose and structure of schooling upholds anti-environmental norms. Stevenson (2007) argued: “the socially critical and political action goals

of environmental education are contrasted ... with the uncritical role of schooling in maintaining the present social order” (p. 139). The conflict between formal schooling and critical approaches to social and environmental issues represented in PBE literature, while not dichotomous, requires renewed conversation in order to align progressive and emancipatory interests in schools. To do this, Smith (2007) argued that educators must undertake the problem-solving goals of environmental education in local contexts.

If place-based approaches broaden conceptualization of the environment to include a social dimension, then how such environments are experienced requires deeper investigation. Phenomenological influences frame the way experience is understood in PBE literature. As Morehouse (2008) explained, “understanding place has been repeatedly supported as a phenomenological process” (p. 695; see also: Relph, 1985; Tuan, 2001). Morehouse outlined how a phenomenological application of a critical pedagogy of place could be another step towards a wider acceptance and further integration of social dimensions within environmental education. Despite this call, psychological influences orient towards constructing individualized experience over social and communal issues. PBE scholars draw from phenomenological literature to inform their approach to place. Gruenewald (2003b) traced Casey’s (1997) work on phenomenology to show the origins and development of place in postmodern cultural theory (p. 622). Pointing to an increasingly homogeneous education experience at schools and universities, Cannatella (2007) argued current educational models of place deny local expressivity (p. 624). Specifically, Cannatella argued against Aristotle’s scientific objective approach to place because it relied solely upon topographical interpretations and consequently was separated from an embodied sense of being in place (p. 628). Cannatella argued that lived experiences of place, rather than abstractions of place, lend themselves to transformative education.

Johnson (2012) posited that Eurocentric knowledge divides nature and culture resulting in disconnection between cultural histories and places (p. 831). Johnson cited Buell (2001) to call for an engaged learning in which “place is not just a noun but also a verb, and verb of action” (Johnson, 2012, p. 833). Johnson (2012) supported the erasure of the binary between nature and culture and articulated a strong connection between PBE and Indigenous education. Alternatively, Tuck and Yang (2012) take issue with social justice educators using the terminology of decolonization to address all forms of social inequality. Tuck and Yang argued the definition of decolonization as the reparation of Indigenous land and life (p. 3). In outlining many versions of colonialism (external, internal, and settler colonialism), Tuck and Yang interrogate settler moves to innocence to highlight how language and metaphor is used to relieve settler guilt without giving up land, power, or privilege (p. 9). Drawing upon W.E.B. Du Bois, Franz Fanon, and others, Seawright (2014) conducted a critical race analysis for PBE. Seawright contested PBE scholars’ claim that education has become placeless and wants to

show how Western epistemologies constitute places in relation to raced, classed, and gendered outcomes of dominant knowledge systems (p. 555). Seawright argued that settler traditions of place are constituted by normative habits and practices that have been passed down for generations. A true accounting for place means shifting the epistemological and ontological frameworks by which humans relate to the natural world to create more ecologically and socially just education that promotes localized approaches as it pertains to our environment, experiences, and our languages.

Chambers (1999) suggested four challenges for Canadian curriculum writers: writing from this place which is where one is located; using a localized language, which should be inclusive of Indigenous languages; creating interpretive tools, which will be particular to place and person, not universal; and creating a curriculum that begins locally, but connects to other locations. Although Chambers did not use the term *place-based education*, her philosophy of curriculum emerged from the need for children to learn in their context, about their history, about their value and the value of others who were here before and are here now, and how they might go forward in healthy ways.

Place-Based Education, Teacher Education, and Indigenous Knowledges

As emphasized in the literature, PBE is largely informed by Western conceptualizations of outdoor, environmental, and experiential influences. Indigenous and land-based education is a more recent intersection with the PBE literature. Given criticism aimed towards PBE for its lack of post-colonial analysis and fears of ongoing neo-colonial practices, how can educators claim to integrate IK within curricular frameworks? This is a specific issue for PBE in particular, but also a wider question for public education generally. While place is an important aspect of all the aforementioned educational streams, there are key differences that can impede the shared goals of decolonization and reinhabitation.

Settler attitudes towards land, living things (including humans), and resources (e.g., water, soil, minerals, trees), as able to be exploited, have damaged once sacred notions of socio-ecological relationships and responsibilities. Calderon (2014) reflected that although Gruenewald's (2003a) critical pedagogy of place was an introduction to key aspects of education, PBE does not adequately provide the framework to disrupt colonial practices: "If as place-based education models purport, we are to teach through schooling how to promote models of sustainability and community, we also need to understand how sustainability and community cannot be achieved if the communities Indigenous to place are not central in this formulation" (Calderon, 2014, p. 26).

Land education draws on experiential and relational learning, beginning with an Indigenous epistemology that differs from that which informs Western outdoor, environmental, and PBE.

Although some scholars (e.g., Calderon, 2014) see PBE as a permutation of land education, insofar that place is a foundational concept to settler identities, Indigenous peoples, over the long duration that they have inhabited the land, formed traditions that preserved the environment. Reinhabitation and decolonization, as central goals of PBE, offer a way for teacher educators to connect to and gradually move towards those traditions. This article acknowledges the needed presence and voice of Indigenous peoples to inform the inclusion of IK within any curricular implementation.

Where PBE focuses on stories and human connections to place, and where critical pedagogies of place work to resolve social and ecological justice issues to make places healthier, land-based education considers the land and relationship first. These three approaches offer a continuum, which comprise the field of PBE. A central question emerges: Will PBE support changes in attitudes towards exploitation, or will PBE become one more method to engage students in learning curricular content? While many teacher education programs call for the inclusion of IK into curricular approaches, and while individual faculty are embracing the inclusion of place-based learning, we believe that a more complex conceptualization of PBE can support the integration of IK into mainstream education.

PBE literature highlights the potential and pitfalls for integrating IK within PBE frameworks. In the absence of anti-colonial perspectives within teacher education programs, PBE will certainly be an empty gesture towards reconciliation unless the goals of reinhabitation and decolonization include issues of territoriality and Indigenous relationships with land and sovereignty within localized approaches. PBE must be informed by and committed to the epistemological difference between place-based and land-based approaches, the incorporation of Indigenous peoples/voices/histories, including the legacy of residential schools and other colonial practices, and advocacy for the social and ecological justice aims of critical pedagogies of place. Where these tenets are included place-based pedagogical approaches may help teacher educators address the needs of Canadian communities.

Conclusion

Literature representative of outdoor, experiential, environmental, critical, and Indigenous approaches were explored to highlight how PBE differentiates itself as an innovative nexus to address issues facing teacher educators. Initially, outdoor education focused on children experientially exploring and learning to appreciate the outdoors through activities to promote the development of survival skills, scientific knowledge, care of the land, and moral character. The development of environmental education shifted the focus to recovering from the damage that humans had caused to our ecosystems and to maintaining the health of the planet. Historically, the tendency within environmental education was to focus on scientific concepts that revealed how damage was being done to the planet, concepts which may or may not have

been taught experientially. PBE moved the focus back to people's relationships with place, with the intention that individuals would come to love their own places, and that learning should begin within their locale and expand outward. Taking up critical pedagogy within PBE brought social justice into focus. Both social and ecological justice issues should be considered as students explore their places outside the four walls of a classroom. The ways in which IK are conceptualized and included within place-based approaches is an integral issue for education generally, and teacher education programs specifically. Returning to Gruenewald's (2003a) outline of reinhabitation and decolonization, which worked to dislodge and disrupt oppressive forces while conserving those environments and customs that preserve vital functions in society and planet, we call for such forms of education today in the hope of creating a healthier planet for all species, including humans.

References

- Adkins, C., & Simmons, B. (2003). *Outdoor, experiential, and environmental education: Converging or diverging approaches?* (ED467713). Eric.
<https://eric.ed.gov/?id=ED467713>
- Ardoin, N. (2006). Toward an interdisciplinary understanding of place: Lessons for environmental education. *Canadian Journal of Environmental Education, 11*(1), 112–126.
<https://cjee.lakeheadu.ca/article/view/508>
- Armitage, K. (2009). *The nature study movement: The forgotten popularizer of America's conservation ethic*. University Press of Kansas.
- Association for Experiential Education. (n.d.). *What is experiential education?*
<https://www.aee.org/what-is-ee>
- Bang, M., Curley, L., Kessel, A., Marin, A., Suzukovich, I., & Strack, G. (2014). Muskrat theories, tobacco in the streets, and living Chicago as Indigenous land. *Environmental Education Research, 20*(1), 37–55. <https://doi.org/10.1080/13504622.2013.865113>
- Barnhardt, R., & Kawagley, A. O. (2005). Indigenous knowledge systems and Alaska Native ways of knowing. *Anthropology & Education Quarterly, 36*(1), 8–23.
<https://doi.org/10.1525/aeq.2005.36.1.008>
- Battiste, M. (2013). *Decolonizing education: Nourishing the learning spirit*. Purich.
- Battiste, M., & Henderson, J. Y. (2009). Naturalizing Indigenous knowledge in Eurocentric education. *Canadian Journal of Native Education, 32*(1), 5–18.
<https://tinyurl.com/yb77kss6>
- Beames, S., Higgins, P., & Nicol, R. (2012). *Learning outside the classroom: Theory and guidelines for practice*. Routledge.

- Brandt, C. B. (2009). A thirst for justice in the arid Southwest: The role of epistemology and place in higher education. *Educational Studies, 36*(1), 93–107.
https://doi.org/10.1207/s15326993es3601_8
- Brown, M. (2008). Outdoor education: Opportunities provided by a place-based approach. *New Zealand Journal of Outdoor Education, 2*(3), 7–25. <https://tinyurl.com/y35tgo92>
- Buell, L. (2001). *Writing for an endangered world: Literature, culture, and environment in the U.S. and beyond*. Belknap Press.
- Cajete, G. (1994). *Look to the mountain: An ecology of Indigenous education*. Kivaki Press.
- Calderon, D. (2014). Speaking back to Manifest Destinies: A land based-education approach to critical curriculum inquiry. *Environmental Education Research, 20*(1), 24–36.
<https://doi.org/10.1080/13504622.2013.865114>
- Cannatella, H. (2007). Place and being. *Educational Philosophy and Theory, 39*(6), 622–632.
<https://doi.org/10.1111/j.1469-5812.2007.00319.x>
- Carson, R. (1962). *Silent spring*. Houghton Mifflin.
- Casey, E. (1997). *The fate of place: A philosophical history*. University of California Press.
- Casey, E. (2009). *Getting back into place: Toward a renewed understanding of the place-world* (2nd ed.). Indiana University Press.
- Chambers, C. (1999). A topography for Canadian curriculum theory. *Canadian Journal of Education / Revue canadienne de l'éducation, 24*(2), 137–150.
<https://journals.sfu.ca/cje/index.php/cje-rce/article/view/2749>
- Cole, A. G. (2007). Expanding the field: Revisiting environmental education principles through multidisciplinary frameworks. *Journal of Environmental Education, 38*(2), 35–45.
<https://doi.org/10.3200/JOEE.38.1.35-46>
- Coyle, K. (2005). *Environmental literacy in America: What ten years of NEETF/Roper research related studies say about environmental literacy in the U.S.* The National Environmental Education & Training Foundation. <https://files.eric.ed.gov/fulltext/ED522820.pdf>
- Curtiss, J., & Theobald, P. (2000). Communities as curricula. *Forum for Applied Research and Public Policy, 15*(1), 106–111.
- Donaldson, G., & Donaldson, L. (1958). Outdoor education: A definition. *Journal of Physical Education, Recreation & Dance, 29*(5), 17–63.
<https://doi.org/10.1080/00221473.1958.10630353>
- Elder, J. (1998). *Stories in the land. A place-based environmental education anthology*. (Nature Literacy Series Number 2). Orion Society.
- Freire, P. (1989). *Pedagogy of the oppressed*. Continuum. (Original work published 1970)

- Garcia, J., & Shirley, V. (2012). Performing decolonization: Lessons learned from Indigenous youth, teachers and leaders' engagement with critical Indigenous pedagogy. *Journal of Curriculum Theorizing*, 28(2), 76–91. <https://tinyurl.com/y4wa856n>
- Giron, G., Vasquez–Martinez, C–R., López, J. S., & Bañuelos, A. A. (2012, June 12–15). *Environmental education: From the perspective of scientific knowledge for constructivist learning* [Paper presentation]. Bulgarian Comparative Education Society Annual Meeting, Kyustendil, Bulgaria. <https://files.eric.ed.gov/fulltext/ED567073.pdf>
- Gough, A. (2013). The emergence of environmental education: A critical history. In R. B. Stevenson, M. Brody, J. Dillon, & A. E. J. Wals (Eds.), *International handbook of research on environmental education* (pp.13–22). Routledge.
- Gruenewald, D. (2003a). The best of both worlds: A critical pedagogy of place. *Educational Researcher*, 32(3), 3–12. <https://doi.org/10.3102%2F0013189X032004003>
- Gruenewald, D. (2003b). Foundations of place: A multidisciplinary framework for place–conscious education. *American Educational Research Journal*, 40(3), 619–654. <https://doi.org/10.3102%2F00028312040003619>
- Gruenewald, D., & Smith, G. (2008). *Place–based education in the global age: Local diversity*. Lawrence Erlbaum Associates.
- Hammerman, D., Hammerman, W., & Hammerman, E. (2001). *Teaching in the outdoors* (5th ed.). Pearson. (Original work published 1964)
- Harrison, S. (2010). “Why are we here?” Taking “place” into account in UK outdoor environmental education. *Journal of Adventure Education and Outdoor Learning*, 10(1), 3–18. <https://doi.org/10.1080/14729671003669321>
- Heidegger, M. (1971). *Poetry, language, thought* (A. Hofstadter, Trans.). Harper Collins.
- Hutson, G. (2010). Revisiting the meanings of “place” for New Zealand place–based outdoor education. *New Zealand Journal of Outdoor Education*, 2(4), 43–61.
- Johnson, J. (2012). Place–based learning and knowing: Critical pedagogies grounded in Indigeneity. *GeoJournal*, 77(1), 829–836. <https://doi.org/10.1007/s10708-010-9379-1>
- Kawagley, A. O., & Barnhardt, R. (1999). Education Indigenous to place: Western science meets native reality. In G. A. Smith & D. R. Williams (Eds.), *Ecological education in action: On weaving education, culture, and the environment* (pp. 117–140). SUNY Press.
- Kimmerer, R. (2013). *Braiding sweetgrass: Indigenous wisdom, scientific knowledge, and the teaching of plants*. Milkweed Editions.
- Kirkness, V. (1998). Our peoples' education: Cut the shackles; cut the crap; cut the mustard. *Canadian Journal of Native Education*, 22(1), 10–15.

- Kolb, D. (1984). *Experiential learning: Experience as the source of learning and development*. Prentice Hall.
- Kovach, M. (2009). *Indigenous methodologies: Characteristics, conversations and contexts*. University of Toronto Press.
- Kozak, S., & Elliott, S. (2014). *Connecting the dots: Key strategies that transform learning for environmental education, citizenship and sustainability*. Learning for a Sustainable Future.
- Lieberman, J., & Hoody, L. (1998). *Closing the achievement gap: Using the environment as an integrating context for learning*. State Education and Environmental Roundtable.
- McVittie, J., & Webber, G. (2018, October). *Pedagogies of place: The teaching and learning of place-based education in an undergraduate education program* [Paper presentation]. Canadian Environmental Education Conference, Ktunaxa Nation, BC, Canada.
- Miller, D., McVittie, J., Webber, G., & Hellsten, L. (2018, May 27–30). *How place-based education is taken up in Canadian teacher education programs* [Paper presentation]. Canadian Society for the Studies of Education Conference, Regina, SK, Canada.
- Morehouse, A. (2008). A deeper meaning of place. *Environmental Education Research*, 14(6), 693–697. <https://doi.org/10.1080/13504620802547231>
- Nachtigal, P., & Haas, T. (1998). *Place value: An educator's guide to good literature on rural lifeways, environments, and purposes of education* (ED420461). ERIC. <https://eric.ed.gov/?id=ED420461>
- Nespor, J. (2008). Education and place: A review essay. *Educational Theory*, 58(4), 475–489. <https://doi.org/10.1111/j.1741-5446.2008.00301.x>
- Orr, D. (1994). *Earth in mind: On outdoor education, environment and the human prospect*. Island Press.
- Orr, D. (2005). Place and pedagogy. In M. Stone, Z. Barlow, and F. Capra (Eds.), *Ecological literacy: Educating our children for a sustainable world* (pp. 85–95). Sierra Club Books.
- Peña, D. (1998). Los animalitos: Culture, ecology, and the politics of place in the upper Rio Grande. In D. Peña (Ed.), *Chicano culture, ecology, and politics: Subversive kin* (pp. 25–57). University of Arizona Press.
- Plumwood, V. (2002). *Environmental culture: The ecological crisis of reason*. Routledge.
- Priest, S. (1986). Redefining outdoor education: A matter of many relationships. *Journal of Environmental Education*, 17(3), 13–15. <https://doi.org/10.1080/00958964.1986.9941413>
- Relph, E. (1976). *Place and placelessness*. Pion.

- Relph, E. (1985). Geographical experiences and being-in-the-world: The phenomenological origins of geography. In D. Seamon & R. Mugerauer (Eds.), *Dwelling, place, and environment: Toward a phenomenology of person and world* (pp.15–31). Martinus Nijhoff.
- Rowe, S. (1990). *Home place: Essays on ecology*. NeWest Press.
- Savage, C. (2004). *Prairie: A natural history*. Greystone Books.
- Seawright, G. (2014). Settler traditions of place: Making explicit the epistemological legacy of White supremacy and settler colonialism for place-based education. *Educational Studies*, 50(6), 554–572. <https://doi.org/10.1080/00131946.2014.965938>
- Sharp, L. B. (1943). Outside the classroom. *The Educational Forum*, 7(4), 361–368. <https://doi.org/10.1080/00131724309340840>
- Simpson, L. B. (2011). *Dancing on our turtle's back: Stories of Nishnaabeg re-creation, resurgence, and a new emergence*. ARP Books.
- Smith, G. A. (2002). Place-based education: Learning to be where we are. *Phi Delta Kappan*, 83(8), 584–594. <https://doi.org/10.1177%2F003172170208300806>
- Smith, G. A. (2007). Place-based education: Breaking through the constraining regularities of public school. *Environmental Education Research*, 12(2), 189–207. <https://doi.org/10.1080/13504620701285180>
- Smith, G. A., & Sobel, D. (2010). *Place- and community-based education in schools*. Routledge.
- Smith, L. T. (2012). *Decolonizing methodologies: Research and Indigenous peoples* (2nd ed.). ZED Books.
- Sobel, D. (2004). *Place-based education: Connecting classrooms and communities*. Orion Press.
- Stapp, W. B. (1969). The concept of environmental education. *Journal of Environmental Education*, 1(1), 30–31. <https://doi.org/10.1080/00139254.1969.10801479>
- Stevenson, R. B. (2007). Schooling and environmental education: Contradictions in purpose and practice. *Environmental Education Research*, 13(2), 139–153. <https://doi.org/10.1080/13504620701295726>
- Tuan, Y-F. (1974). *Topophilia: A study of environmental perception, attitudes, and values*. Prentice-Hall.
- Tuan, Y-F. (2001). *Space and place: The perspective of experience*. University of Minnesota Press.
- Tuck, E., McKenzie, M., & McCoy, K. (2014). Land education: Indigenous, post-colonial, and decolonizing perspectives on place and environmental education research. *Environmental Education Research*, 20(10), 1–23. <https://doi.org/10.1080/13504622.2013.877708>

- Tuck, E., & Yang, W. (2012). Decolonization is not a metaphor. *Decolonization: Indigeneity, Education & Society*, 1(1), 1–40.
<https://jps.library.utoronto.ca/index.php/des/article/view/18630>
- UNESCO. (1975). *The Belgrade Charter: A framework for ecological education*.
<http://unesdoc.unesco.org/images/0001/000177/017772eb.pdf>
- UNESCO & UNEP (1977). *Tbilisi Declaration*. <https://www.gdrc.org/uem/ee/tbilisi.html>
- van Eijck, M., & Roth, W. (2010). Towards a chronotopic theory of place in place-based education. *Cultural Studies of Science Education*, 5(4), 869–898.
<https://doi.org/10.1007/S11422-010-9278-2>
- Waite, S. (2013). “Knowing your place in the world”: How place and culture support and obstruct educational aims. *Cambridge Journal of Education*, 43(4), 413–433.
<https://doi.org/10.1080/0305764X.2013.792787>
- Warren, K., & Wapotich, L. (2011). Rachel Carson: Inspiring a sense of wonder. In T. Smith & C. Knapp (Eds.), *Sourcebook of experiential education: Key thinkers and their contributions* (pp. 131–137). Routledge.
- Wattchow, B., & Brown, M. (2011). *A pedagogy of place: Outdoor education for a changing world*. Monash University Publishing.
- Webber, G., & Miller, D. (2016). Progressive pedagogies and teacher education: A review of the literature. *McGill Journal of Education*, 51(3), 1061–1080.
<https://mje.mcgill.ca/article/view/9315>
- Wilson, S. (2008). *Research is ceremony: Indigenous research methods*. Fernwood.
- Woodhouse, J., & Knapp, C. (2000). *Place-based curriculum and instruction: Outdoor and environmental education approaches* (ED448012). ERIC.
<https://eric.ed.gov/?id=ED448012>