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Résumé de l'article

Cette étude pilote examine les expériences de dix enseignants qui ont utilisé pendant un à trois ans une ressource éducative axée sur le lieu qui s'appelle A Walking Curriculum (« Curriculum pour la marche »). Cette ressource est un exemple d'Enseignement écologique et imaginaire, une approche pédagogique qui situe l'engagement imaginaire, la connexion émotionnelle et la compréhension somatique dans un apprentissage axé sur le lieu. Au départ, les chercheurs voulaient comprendre les pratiques des enseignants et déterminer comment (ou si) A Walking Curriculum permettait à ces derniers de mieux comprendre les principes de l'Enseignement écologique et imaginaire sous-tendant cette ressource éducative. La recherche a ensuite porté sur la nature du développement professionnel et sur la signification des changements éducatifs dans un monde plus qu'humain. Cet article examine les implications politiques d'un modèle écologique de changement éducatif qui pourrait mieux s'aligner sur les intentions de transformation éco-sociale de l'Enseignement écologique et imaginaire.

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A Walking Curriculum: From “Good Ideas for Walks” to Transformative Design for Eco-Social Change

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Abstract

This pilot implementation study examines the experiences of ten teachers who have employed a place-based learning resource called *A Walking Curriculum* for one to three years. *A Walking Curriculum* is an example of Imaginative Ecological Education—a pedagogical approach that centralizes imaginative engagement, emotional connection, and somatic understanding in place-based learning. Initially, researchers sought to understand teachers’ practices and to determine how (or if) *A Walking Curriculum* provided teachers with a deeper insight into the principles of Imaginative Ecological Education underlying it. The research focus shifted to the nature of professional development and the meaning of educational change in a more-than-human world. This article considers policy implications of an ecological model of educational change that might better align with the eco-social transformation intentions of Imaginative Ecological Education.

Résumé

Cette étude pilote examine les expériences de dix enseignants qui ont utilisé pendant un à trois ans une ressource éducative axée sur le lieu qui s’appelle *A Walking Curriculum* (« Curriculum pour la marche »). Cette ressource est un exemple d’Enseignement écologique et imaginaire, une approche pédagogique qui situe l’engagement imaginaire, la connexion émotionnelle et la compréhension somatique dans un apprentissage axé sur le lieu. Au départ, les chercheurs voulaient comprendre les pratiques des enseignants et déterminer comment (ou si) *A Walking*

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Curriculum permettait à ces derniers de mieux comprendre les principes de l'Enseignement écologique et imaginaire sous-tendant cette ressource éducative. La recherche a ensuite porté sur la nature du développement professionnel et sur la signification des changements éducatifs dans un monde plus qu'humain. Cet article examine les implications politiques d'un modèle écologique de changement éducatif qui pourrait mieux s'aligner sur les intentions de transformation éco-sociale de l'Enseignement écologique et imaginaire.

Keywords / Mots clés : eco-social change, educational change, ecological policy, Imaginative Ecological Education, walking curriculum / changement éco-social, changement éducationnel, politique écologique, Enseignement écologique et imaginaire, curriculum pour la marche

Introduction

In the face of escalating ecological crises, one of the greatest challenges educators face is getting beyond an obsolescent system that physically and philosophically separates teaching and learning from the living world (Green & Somerville, 2014; Gruenewald & Smith, 2008; Sobel, 2005). Conventional K-12 schooling remains an overwhelmingly indoor, individualist, and human-centred experience that is essentially place-less, rarely enacting the unique affordances of the local ecology or place-specific culture(s) in which it occurs (Judson, 2015b; McKenzie, Hart, Bai, & Jickling, 2009; Piersol, 2015). The daily “school experience” that most children receive tends to reinforce the belief that human culture is fundamentally independent from nature and learners are rarely afforded opportunities to connect imaginatively with the places in which they live (Judson, 2010, 2015a; Pyle, 1993).

A large body of research indicates how direct and meaningful encounters with the living world—especially as children—can support feelings of connection that ultimately drive future eco-ethical actions (Hoover, 2021; Rosa, Profice, & Collado, 2018). Outdoor learning has thus been identified as particularly effective for developing an understanding of the human world as part of the ecological order, or as David Orr describes it, our “implicatedness in life” (2005, p. 105). More than simply “getting outside,” outdoor education scholars note the importance of emotional engagement in such learning experiences (Carmi, Arnon, & Orion, 2015; Lumber, Richardson, & Sheffield, 2017). In other words, to develop a sense of connection, students need to get outside in ways that are “wonder-full” (Cant, Egan, & Judson, 2013) to address the emotional disconnection or disaffection students tend to experience by default within the conventional school system (Blenkinsop, 2003, 2006; Hinds & Sparks, 2008; Martin, White, Hunt, Richardson, Pahl, & Burt, 2020; Martusewicz, Edmundson, & Lupinacci, 2011; Seidel & Jardine, 2014; Takahashi, 2004).

This pilot implementation study sought to investigate how teachers employ and make sense of Imaginative Ecological Education (IEE); an outdoor learning pedagogy designed to centralize imaginative engagement, emotional connection, and somatic understanding (Judson 2010, 2015a/b). Specifically, the authors sought to understand how teachers employ a form of IEE called *A Walking Curriculum* (AWC)

(Judson, 2018). What began as a kind of program evaluation of AWC evolved in response to the data into a search for what professional development, educational change, and educational policy mean in a “more-than-human world” (Abram, 1997). Data revealed success in terms of supporting teachers in taking learning outside to engage with the local context. However, interview data also revealed that AWC was less effective in communicating the underlying project of educational transformation at the heart of IEE, and the ontological implications of moving towards a pedagogy that recognizes place as “co-teacher” (Blenkinsop & Beeman, 2010). For example, the data clearly indicate that while the participants demonstrated energetic and creative use of AWC walking inquiries to “get outside,” there was little indication that using AWC led them to expand their sense of imagination’s role in learning or, more profoundly, to question their beliefs, values, or ontological orientations with respect to more-than-human agency. This realization led us, the authors, to question whether this eco-social transformation project is inferred by the IEE principles upon which AWC is based. Faced with these findings, we wondered: what kind of professional development might move AWC from being simply an accessible teaching tool for educators—a set of good ideas for walks that fits unproblematically into established schemes—to a transformative pedagogy that supports reflexive insight into the pre-suppositions shaping (ecological) education? That is, how can the principles underlying AWC be reframed to inspire teachers to move toward the deeper aspects of eco-social transformation? And, with this reframing in hand, what are the curricular and pedagogical policy implications for professional learning and development?

The following sections describe the research project and apply scholarship from the field of educational change theory to interpret the data. The research points to dimensions of ecological pedagogy and change theory that might inform an ecological model for professional learning that interweaves features of educational change theory (Fullan, 2016) with IEE principles (Judson, 2015a) and—to push the ontological envelope, as it were—attempt to align these with some design principles for eco-social transformation (Fettes, Cole, & Blenkinsop, 2023). This work is exploratory in nature but does point to interesting future research and some preliminary practical guidelines for the professional development of imaginative and ecological pedagogies that aim to support transformative educational change. The article concludes with a discussion of some initial policy implications for ecologizing teacher education and teacher professional learning.

Study focus and research methodology

This implementation study examines how ten teachers have been employing *A Walking Curriculum* (AWC) (Judson, 2018) over a period of one to three years.¹ AWC outlines activities for outdoor learning based on the principles of Imaginative Ecological Education (IEE) (Judson, 2010, 2015a). AWC attempts to inspire and co-create meaningful relationships with the more-than-human world by recognizing the educative agency of local ecologies as co-teachers (Blenkinsop & Beeman, 2010) and re-engaging the body, emotions, and imagination in all learning. Imagination is intentionally engaged in IEE by way of designing lessons rich in “cognitive tools” such as story, vivid mental imagery, heroic qualities, change of context, and a sense

of wonder (Egan, 1997, 2005). Cognitive tools support learning, in short, because they revitalize the emotional and imaginative significance of knowledge to make it more meaningful (Egan & Judson, 2016). Cognitive tools are thus employed in IEE to support affective engagement in all aspects of learning. Feeling (engagement of emotion and imagination), Activeness (engagement of the body), and Place (openness and connection with natural cultural context) are the three guiding principles of IEE (Judson, 2010, 2015a).

A Walking Curriculum was designed to be a highly accessible introduction to IEE for K-12 educators (Judson, 2018). It has dual aims: first, to support more teachers in taking learning outside, and second, to inspire interest in IEE's deeper goals—a transformation from common objectives-based teaching practices to a pedagogy that centralizes imagination and encourages educators to seek the unique affordances of place in their teaching (Judson, 2018). It is a relatively small book comprised of 60 easy-to-use walking-based activities that focus on the local natural world and employ cognitive tools to engage the imagination. Discussion of the theoretical foundations of IEE is intentionally brief. Rather, imagination and inquiry-focused walking themes are offered as a way for teachers to get outside more often for learning. These walking themes are rooted in IEE principles; they are designed to invite learners to investigate local places, engage the body, and centralize imaginative engagement through cognitive tool-based activities linked to each walk. Given that AWC is a relatively new practice, there is no research literature that addresses its use specifically. This implementation project is an attempt to begin to fill that gap by pointing out successes, challenges, and next steps for research and practice.

The ten teachers who participated in the research had a range of background knowledge with respect to both outdoor education and the principles of IEE. All selected teachers had expressed interest on social media (Twitter) in learning more about AWC. Six of the teachers had learned about AWC solely through social media and personal interest, two had participated in a workshop about IEE and AWC, and two had studied in the Imaginative Education graduate program offered at Simon Fraser University. All of the participants had, at some point, also enrolled in at least one Walking Curriculum 30-day challenge with their students.² All of the participants worked in the elementary school context or as district coordinators with children in elementary school.³

Data collection involved semi-structured interviews lasting approximately 45-60 minutes. The authors' interview questions were designed to capture educators' experiences enacting imagination-focused outdoor teaching, including their core challenges and best practices. Interview questions also aimed to unearth how teachers understand the educative significance of the imagination and in what ways AWC has impacted their view of education writ large. Interview audio was recorded and transcribed using Otter software to generate ten transcripts for analysis.⁴

We employed an inductive approach to analyze the data including in-case and cross-case coding (see Miles, Huberman, & Saldana, 2014). The transcripts were independently thematically coded and these codes were then compared to determine a shared set of themes, keywords, and, ultimately, pedagogical presuppositions. The analysis process went through multiple cycles as we collaborated to compare codes

and explore recurrent or significant themes. The findings presented here reflect the main themes that emerged from these analysis cycles.

Literature review

Our interest in understanding the complexities of implementation and educational change led us to the prolific work of Michael Fullan (1993, 1999, 2003, 2016; Fullan, Edwards, & Wheatley, 2022). The authors draw on Fullan's scholarship to understand aspects of meaning-making in the change process. Fullan's research on educational change reveals a nuanced landscape; visible "landmarks" draw attention while invisible shaping forces make (and often break) attempts at lasting transformative change.

Fullan suggests that the meaning of any educational change to an individual teacher or collective includes three dimensions: resources or materials, teaching practices or approaches, and beliefs and values (Fullan, 2016). New resources or teaching practices are the most visible aspects of change and may represent an educator's first encounter with something new. The new resource can be quick to adopt "on the surface," that is, experimenting in the classroom with minimal challenges to one's deeper pedagogical or ontological assumptions. Fullan (2016) notes, however, that considering change or implementation only in terms of using a new resource oversimplifies the process:

It is possible to change "on the surface" by endorsing certain goals, using specific materials, and even imitating the behavior without specifically understanding the principles and rationale for the change. Moreover, with reference to beliefs, it is possible to value and even be articulate about the goals of the change without understanding their implications for practice. (p. 31)

Thus, for meaningful and lasting change to occur, one must also address invisible change forces (Fullan, 1993, 1999, 2003).

Beliefs and values are powerful—and often invisible—forces shaping the change landscape. They are not something that many educators routinely think about and can be more difficult to alter as they tend to be connected to one's identity as an educator and reinforced by established structures in schools and the dominant culture. They include the *moral purpose* of being a teacher—doing what is best for all learners—that drives all good educators (Fullan, 1993, 1999). The realm of the invisible can also encompass the underlying principles guiding new approaches, for instance, the *why* behind any new resource. When meaning-making is informed purely by the visible realm of resources and practices, educators do not tend to struggle with existing beliefs, values, or structures that may contradict the desired change. As a result, rather than including deep *reculturing* of beliefs and values, changes are fit into existing schemas; they are modified to fit what-is, or what-is is restructured to include a new approach (Fullan, 2016). What Fullan describes as the subjective meaning of change involves wrestling with beliefs and values to understand how a change connects to one's moral purpose. It is emotional work: "Real change ... represents a serious personal and collective experience characterized by

ambivalence and uncertainty” (2016, p. 21). Often, educators must wrestle with the loss of changing a deep belief or value and the vulnerability that can come from enacting pedagogy in a different way.

Whether working with the visible or invisible aspects of change, meaningful and lasting change can only occur within an ongoing cycle of collaboration, direct experience, and emotional engagement (Fullan, 2016; Fullan, et al., 2022; Fullan & Hargreaves, 2016). Systemic and sustained change requires a “culture of collaborative professionalism” and the creation of shared meaning (Fullan & Hargreaves, 2016, p. 7). This collaborative work must include direct experiences of the intended change to motivate further commitment. In other words, educators “cannot want ‘it’ until they have tried it” (citing Bate, Bevan, & Robert, 2005, p. 58). Finally, these experiences must be emotionally engaging. Fullan (2016) notes how feeling paired with new action motivates change and, ultimately, beliefs: “behaviors and emotions often change before beliefs—we need to act in a new way before we get insights and feelings related to new beliefs” (p. 39).

Fullan’s scholarship offers a valuable lens to interpret our data; however, it does not address—nor does it attempt to challenge—dominant conceptions of human centrism. It thus does not offer an *ecological* understanding of educational change in a more-than-human world. Fullan’s conception of moral purpose, for example, only refers to supporting learners (Fullan & Hargreaves, 2016). While we do not dispute the need to support all learners’ and teachers’ wellbeing as a necessary force for educational change, we would also like to trouble the potentially human-centric framing. Education for ecological understanding is morally connected to the wellbeing of the entire living world. In addition, Fullan is very clear that lasting and meaningful change requires shared meaning among educators. Collaboration, in this sense, tends to be construed as a human-to-human activity. Fullan’s work does not consider an ontological position in which the creation of shared meaning includes the living world and all its branched, winged, scaled, leafed, or furry beings (Van Horn, 2021).

Noticing these limitations and hoping to find research that would offer a more ecological framework for interpreting this study, we expanded our search, turning to literature on the nature of educational change in “environmental education.”⁵ This search turned up little research on models of change for outdoor learning, confirming Meighan and Rubenstein’s (2018) observation that “the research surrounding training preservice teachers and professional develop is incomplete” (p. 172). There is, however, extensive literature on social change for sustainability (see Abdulla, Ansari, Canli, Keshavarz, Kiem, Oliveira, Prado, & Schultz, 2019; Barcham, 2021; Irwin, Tonkinwise, & Kossoff, 2022). Expanding the search to the field of design for social change unearthed an article that outlines principles for education that support the kind of ontological change that is more aligned with the place-based principles of IEE.

Fettes, Cole, and Blenkinsop (forthcoming) acknowledge the potential value of connecting the theoretical and practical knowledge of designers and educators “in order to move beyond anthropocentrism, human-as-capitalist consumer, nature as resource and include the more-than-human world as co-designer, co-educator, co-creator and co-citizen” (p. 2). They note that connecting education and design-thinking has become uncommon, and that “education is strikingly absent from the design literature,

just as design and systemic change are rarely engaged with in the educational literature” (p. 5). However, both fields contribute valuable theoretical and practical knowledge for eco-social cultural change. Environmental educators have practices to meaningfully connect people to place and the living world, and designers bring “creative, experimental, hopeful, imaginings and enactments of desirable potential futures in co-creative processes alongside those most affected by these challenges” (p. 2).

Drawing on principles from different facets of design thinking including service, transition, and social transformation design, Fettes et al. suggest ways that educators can create learning opportunities to transform anthropocentric thinking according to principles they call “transformative eco-social design.” In brief, the principles include all my relations (design so we “work relationally with all beings”, p. 8), abundant time (design in ways that open up conceptions of time to slow down and honour possibility), mystery/unknowability (design in ways that celebrates the wonder, imagination, and infinitely complex nature of the living world), embeddedness/integration (design in ways that support human beings in learning from the land and feeling a sense of belonging within the living world), ancient futures (design to learn from the wisdom of Indigenous cosmologies), and (re)creative dissonance (design to be open to difference, dissonance, tension, and change). The authors argue that these six principles are needed to support a “cultural shift in humans’ relationship with the more-than-human world” and are offered as “reminders of particular kinds of questions to ask, perspectives to try on, processes to engage with in our efforts to think beyond the constraints of the Capitalocene” (Fettes et al., p. 4). These same principles are valuable for understanding and supporting meaningful educational change and, specifically, for shaping teachers’ professional learning. This article explores how these principles may inform professional development in relation to imaginative ecological pedagogies like AWC. It also points to potential policy implications that derive from these principles in order to move away from anthropocentric models of change.

Findings

This section highlights key themes emerging from the data analysis. Unanimously, teachers demonstrated an enthusiastic commitment to taking learning outside with inquiry-focused walks. They acknowledged the accessibility of AWC and its value for engaging learners outside. There were, to put it simply, more benefits expressed than challenges. However, it was unclear if use of AWC supported or catalyzed teachers’ deeper understanding of or interest in IEE principles. Thus, it seems AWC successfully achieves its first aim (getting outside) but, on its own, does not achieve the second (deeper learning about IEE pedagogy). It does not seem to suitably or effectively convey either the IEE principles informing the practice or the deeper project of educational change and eco-social transformation that underlies the principles.

Teachers’ perspectives: Opportunities and challenges. Data revealed teachers’ success in taking student learning outside with AWC. In terms of positive feedback, AWC was described by all participants as a practical and accessible “tool” for outdoor learning. All participants said they could pragmatically employ AWC activities in their learning contexts, which ranged from urban to suburban to rural. Mandy, for example, noted that “anyone can do it.” Lou similarly claimed that “[AWC] could

be done anywhere. And you didn't even have to walk very far ... you could walk to the sidewalk and from the school or even the school yard." Interestingly, over half the participants used words like "openness," "freedom," and "liberation" to describe AWC, indicating that part of the appeal is the customizable nature of the walks.

Participants indicated that they value the purpose or intention provided by the walking themes (e.g., Hiding Place Walk or Line Walk), noting how these could be modified and connected across curriculum. At the same time, AWC offers flexibility: "It's a focused walk without it being a constricted, conformed walk. And so that's what I really like about it" (Bal). Participants creatively modified the walks to link to their curricular intentions. Lou, for example, described how they value the adaptability of AWC:

I like that the walks can be simple or complex, depending on where you go with it. I like that it's a starting place. ... I can connect it to inquiries, you know, we are doing an inquiry on cedar trees and the tree of life and so we're going out and picking a tree ... we're learning about trees and imagining [how] our tree is connected to other trees by their roots.

Several participants emphasized how AWC is a great practice for anyone interested in beginning place-based learning. Paul commented, for example, "I try to get teachers outside who aren't used to being outside. It's a great stepping stone for them. [It's a] great introduction to seeing how [learning] can be done outside." Kye similarly noted, "When I started [using AWC] I was new [to place-based learning] and I needed a framework to start off with. I think that's what [AWC] gave me."

Participants also unanimously expressed that student response to AWC is almost universally positive. While noting some initial hesitancy, many described student learning through AWC in terms of a clear increase in enthusiasm and engagement. Sanj, who has been using AWC for three years, claimed, "[I] do not have a single student who does not want to go outside!" Interestingly, the participants who had employed AWC for the longest spoke the most positively about its impact. Repeatedly employing walking themes seems to support increased observation skills, curiosity, and emotional connection with place. When asked about the impact on his students, Sanj replied,

Increased observation! School is where [we] look at stuff we've never noticed before. ... It was fascinating to see what they hadn't noticed and what they got from noticing even just on the road going to school. It opened so many questions, because they're now looking. Whereas before it was just like: "Well, I'm just going to school."

Time (i.e., professional development time to incorporate a new pedagogy), weather, and safety were consistently the three main challenges or concerns participants identified as hindering AWC. Concerns about going outside in extreme weather environments when children have unsuitable clothing was a limiting factor for a few participants and their colleagues. Similarly, the need for additional supervision to ensure student safety was a concern for educators who felt they have children who may not stay with the group.

(Mis)Understandings: Imagination, cognitive tools, place. As indicated above, the AWC appeared successful in inspiring teachers to take learning outside and to provide students with direct experiences in their local contexts. It is unclear how well AWC conveyed the IEE principles of *Feeling*, *Activeness*, and *Place/Sense of Place*, or how well it revealed the role of cognitive tools in engaging learners' imaginations. Overall, participant responses revealed differing levels of knowledge about the IEE principles informing AWC. Unsurprisingly, one of the participants who had heard about AWC through social media and who did not have additional training (and did not pursue additional reading about IEE) demonstrated the least awareness about AWC's overall goal of provoking deeper ecological understanding. Jo, for instance, equated AWC with taking his usual indoor practice outdoors: "The sidewalk can be our whiteboard ... just let's do the same activity. But we're gonna do it outdoors now." Jo also expressed the value of AWC as a way to be active outside (i.e., get exercise) rather than engage the body in place: "Need a 'body break'? We're gonna go out, and we're gonna walk ... Now let's get back to our work." Several other participants identified "getting kids moving" and "doing daily physical activity" as a benefit of practicing AWC. In contrast, Lou, the teacher with the most knowledge and experience of the underlying IEE principles, stated:

It's *not* about the walking. It's about all the thinking and engaging. I mean, the name almost works against it. Well, I don't suppose it works *against* it, but it's *so much more* than just walking.

In general (and unsurprisingly), people with the most experience of IEE principles indicated deeper learning and engagement via a cognitive tool approach. When asked about IEE and how using AWC impacted her practice, Mandy stated:

It definitely had a major shift on my practice, and I would do it again, no matter what grade I taught ... I started thinking about what do we value in education? Where does it happen? How do we define learning? And the imagination piece ... we noticed that when we engage their imaginations or use of those [cognitive] tools ... we had engagement for longer periods of time. ... We saw the benefit of when we engage [students'] whole bodies, including their imaginations, even at such a young age, how rich and deep that learning became and how meaningful and memorable for them.

Few participants talked explicitly about "cognitive tools" in the interviews. For example, only two participants mentioned using cognitive tools to engage imaginations. Participants with the least experience using AWC and no additional training did not seem to know what cognitive tools were, despite the fact that each walking activity in AWC is paired intentionally with a cognitive tool "extension" to engage the imagination.

One participant described cognitive tools as "the activity with the walking theme," illustrating a fundamental misconception about their role in making walks more imaginative and meaningful. When asked about how imagination was employed in AWC, only Lou described cognitive tools as "tools of imagination," two participants indicated outright that they do not think about imagination when doing

AWC, and the remaining participants seem to associate the “imaginative” part of AWC with the openness of “inquiry” and the emergence of students’ ideas when engaged in walking themes. Krista’s conception of imagination seemed to be focused on teacher freedom and spontaneity rather than using cognitive tools intentionally with learners. She reflected, “imagination comes into play where you as an adult can simply frame something and then have an incredible walk as you watch that flourish ... your imagination as a teacher starts going wild ... And I think that’s all you need.”

Discussion

Overall, the data revealed that participants were successfully moving learning outside with AWC. By moving learning outside, these teachers are doing the important work of challenging deeply entrenched “common sense” practices of school. So, in this way, AWC is a useful first step—or “stepping stone” as one participant said—to more eco-pedagogies. However, it is also clear that, on its own, AWC is not designed in a way that meaningfully communicates the underlying principles of IEE. *A Walking Curriculum* does not seem to adequately demonstrate the IEE principles informing the practice, nor does it adequately or engagingly present the deeper project of educational change and eco-social transformation that underlie them. Not surprisingly, then, teachers tend to “skip to the walks” and ignore both the cognitive tools that have been coupled with each walk to re-centre imaginative engagement with place, as well as the deeper ontological implications and, presumably, *dissonance* (Blenkinsop, 2012) of moving towards a worldview that recognizes the agency of a more-than-human world. This study’s findings confirm what Fullan (2016) suggests is most common when implementing educational initiatives: namely, that meaning-making for teachers tends to focus on the visible dimensions of change and forego reflexive inquiries into the invisible dimensions of *why*. For us, as proponents of AWC, this presents a rather unnerving paradox. While it is positive that these ten teachers are having success with AWC, and it has supported a shift to new or more outdoor learning, it is possible that the *ease* of using it may be preventing teachers from delving into the deeper educational change project at the heart of IEE.

This analysis revealed limited deeper understanding of the IEE principles informing AWC and—despite the apparent success of the walks in terms of teacher and student interest and engagement—only little interest in learning more about the underlying pedagogy. For example, Bal, indicating that part of her job is to teach other educators about AWC, noted that she always emphasizes how AWC is *not* fundamentally “a different way of teaching.” Her message to other teachers is, essentially, to use AWC as a way to “just get outside” (for a related critique of this common sentiment see Derby, Piersol, & Blenkinsop, 2015). Similarly, Jo felt AWC is basically an active way to do *indoor* things *outdoors*. Neither of these participants noted the role of imagination, emotional connection, place, or cognitive tools in their responses, nor did they frame their use of AWC in terms of cultivating a deeper sense of our “implicatedness in life” (Orr, 2005, p. 105). Only two of the ten participants acknowledged that getting outside for walks is not, ultimately, the *real* pedagogical objective of AWC. These two participants—Mandy and Lou—differentiated between “going outside for walks” and “IEE walks.” Despite the fact that *Feeling, Activeness, and Place*

are the three principles underlying IEE, and that each principle is discussed in the introductory chapters of AWC, few participants named emotional engagement, somatic understanding, or seeking the affordances of local place(s) as part of their practice. Lou, who happens to be the most experienced with IEE theory, even described AWC as something “separate from academic learning,” rather than a lens to enrich or transform the academic ideals of education. Reflecting on how she feels after a particular walking experience with students, she lamented: “Wow, that was great but we don’t have anything in our science book.”

There is, regrettably, little evidence of critical reflexivity with respect to how AWC fits with these teachers’ beliefs, values, or moral purpose as educators. The data depend, of course, on the questions we ask. Still, despite asking about challenges around implementing AWC, no participants alluded to any kind of internal struggle or tension to centralize imagination or employ cognitive tools. And yet, IEE represents a radical departure from the progressivist ways of learning most educators have been trained to employ and tend to practice without question. This marked lack of emotional discomfort may, in fact, be indicative of “surface-level” change. It is also evidence of the limitations of AWC, on its own, as a practice to initiate deeper learning for educators. There is too little information on IEE in *A Walking Curriculum* and what is included does not inspire further learning. Meaningful and lasting change, as Fullan (2016) notes, is hard; it can lead to loss and suffering. Conflict is important for transformative change (Blenkinsop, 2012) and this lack of conflict suggests a superficial understanding in which AWC is being made to fit with established beliefs and values about education.

In the wake of analyzing these interviews, we wonder if, as Piersol (2015) puts it, “teachers can end up teaching messages that are counter to their own values despite their best intentions” (p. 97). That is, despite individual desires to cultivate some kind of environmental consciousness in students via outdoor experiences, the “industrialised, hierarchical, competitive and individualised structures at the heart of public schooling [remain] antithetical to the work of ecological education” (p. 97). If AWC is to be more than an easy-to-use resource of “good ideas for walks,” it must, on some level become an “act of disruption” (Piersol, 2015, p. 97).

This analysis highlights the limitations of AWC as a way to inspire understanding of IEE principles. More importantly, it highlights a set of deeper concerns about what educational change and professional development mean in a more-than-human world. In this respect, our initial findings with AWC represent just one example of a much larger concern in institutional and individual (i.e., teacher) transformation. Meaningful and long-lasting implementation of IEE, like many other ecological learning initiatives, necessarily involves something of an ontological shift away from anthropocentrism (Kopnina, Sitka-Sage, Blenkinsop, & Piersol, 2018). It is important to acknowledge the undeniable pressure teachers experience every single day. In addition to attending to the intellectual, social, emotional, and physical needs of increasing numbers of students from diverse backgrounds, they also encounter many reform initiatives focusing on social issues and on teaching and learning in their disciplines. Engaging meaningfully in any of these initiatives requires time and resources. It is not surprising, therefore, that teachers may first engage with the visible changes of new curricular

resources without digging into the deeper pedagogical—and indeed, ontological—implications of such works. This pressure and, ultimately, scarcity of time and energy to deeply engage, is a serious issue for any innovative (i.e., ecological) initiative. In a curriculum field overgrown with proposals for change, how do we invest the time and resources needed to support deeper change? In a day that can leave them exhausted from multiple pressures, how can time and physical/intellectual space be created for deep learning so that teachers can meaningfully engage with the proposals before them? These larger questions have multiple implications for research, pedagogy, leadership, and policy creation. To support deeper change in the context of this work—supporting ecological understanding of humankind’s relationship within the living world *and* the desire to act, teach, and learn from this position—we see a need to both revise the pedagogical shape of AWC and to apply a different approach to professional learning. This article focuses on the latter.

Towards ecological educational change. This section explores the dimensions of a potential model for ecologizing educational change (Table 1). We take the three essential aspects for educational change outlined by Fullan—collaboration, direct experience, and emotional engagement in knowledge creation—and align these with the three principles of IEE (Judson, 2010, 2015a/b)—Feeling, Activeness, and Place/Sense of Place—and a subset of three of the six principles of transformative eco-social design offered by Fettes et al. (in press)—(Re)creative dissonance, Abundant time, Mystery/Unknowability. Together this grouping creates three generative categories that we have called Relationality, Immersion, and Affect. Our intention is to begin to consider a model of/for educational change in the context of a more-than-human world, and to provide teachers who are interested in working with AWC with a few “designerly prompts” for digging deeper into some of the more invisible aspects of IEE. These “prompts” for consideration are italicized and begin each section below.

Table 1: Integrated model for transformative imaginative ecological professional learning

	I Relationality	II Immersion	III Affect
Educational change principles (Fullan)	Collaboration	Direct experience	Emotional engagement
IEE principles (Judson)	Place	Activeness	Feeling
Eco-social change principles (Fettes et al.)	(Re)creative dissonance	Abundant time	Mystery/unknowability

Through this initial model and the discussion it includes, we hope to inspire interested teachers to conceive of educational design in an analogous way to emergent trends in the larger field of design—that is, away from technocratic managerialism in service to a human-centric “Capitalocene,” and toward a grassroots co-design between workers and community members in service to and with the place(s) in which they live. To conclude, we aim to instigate further dialogue, pointing to policy implications around teacher education and teacher professional learning based on this initial model.

(I) Relationality: Collaboration, place, (re)creative dissonance

What might it look like to co-design walking curriculum experiences that collaborate with place? What kind of professional community of practice would be required to recognize and challenge invisible beliefs and values about the more-than-human world?

As the interview data illustrate, it is possible to teach outdoors and *in place*, as it were, without recognizing the agency and educative potential of collaborating *with place* as a more-than-human co-teacher (Blenkinsop & Beeman, 2010). We acknowledge that such a shift in collaborative design will challenge many beliefs and values regarding the subjectivity, interrelatedness, and intrinsic value of more-than-human beings. As such, Fettes et al. (in press) turn to Indigenous scholarship (Kimmerer, 2013; McCoy, Tuck, & McKenzie, 2018; Smith, 2012; Wilson, 2008) and the notion of “all my relations” (Laduke, 1999) as a cross-cultural means of recognizing and challenging some of the ontological presuppositions of modernity. Wood and Judson (2022) provide a positive first step in exploring a relational ontology within AWC. In this 2022 resource, walking experiences are reimagined to provide learners opportunities to explore First People’s Principles of Learning.

Given the axiological challenges of learning to collaborate with the living world, we want to emphasize the importance of collaboration with a community of practice that can, as it were, speak the same language and move through difficult emotional and professional challenges as a supportive collective. As Fettes et al. claim, such a state of “(re)creative dissonance” may be required to maintain “thinking and practices ... open to difference, contradiction, paradox and dissonance” (p. 17). As the interview data affirm, (re)creative dissonance does not tend to be valued or actively cultivated in conventional school experiences. It would be reassuring, in the future, to hear teachers talk about both the easy-to-use visible aspects of AWC, but also some of the more invisible challenges of enacting educational change. Putting decolonization at the centre of place-based practice will surely involve courageous conversations about intersectionality, positionality, privilege, as well as an understanding of how to collaborate with “all-our-relations” as participants, decision-makers, stakeholders, and co-teachers (Blenkinsop, Morse, & Sitka-Sage, 2019). To provoke such conversations, future editions of AWC ought to provide challenging prompts and issues for individual reflection or group discussion.

(II) Immersion: Direct experience, activeness, abundant time

What might professional development look like in a more-than-human world? What kind of direct experiences, timeframes, and gestures of reciprocity might be required to cultivate meaningful relationships with/in the place(s) we live and learn?

Concerns about “time”—to research new pedagogical perspectives, to prepare outdoor lessons, and to fit place-based experiences within curricular objectives—were mentioned in eight of the ten interviews. While such concerns are not unwarranted, it is important to emphasize the educative significance of direct experiences (for both teachers and students), and notions of “abundant time” as ways to counteract colonial notions of time as a “scarce resource” (Fettes, et al, forthcoming, p. 10). Teachers who are interested in employing AWC, but who are worried about time, might consider, as Fettes et al. suggest, the works of philosopher Roman Krznaric (2020), who

argues that modern society is “colonizing the future” by treating it as a dumping ground for its toxic legacies (Krzynaric, 2020, as cited in Fettes et al., p. 10). Similarly, the work of curriculum scholar David Jardine may be helpful in pushing back on scarcity-focused thinking and instead framing AWC as a form of “curriculum in abundance” (Jardine, Friesen, & Clifford, 2006). Walking as a practice is, perhaps, one of the key activities required to rethink notions of professional development in a system in which there never seems to be enough time (Jardine, 2013). Walking as a way of attuning physically, emotionally, and imaginatively to the living world is, for example, the first theme noted in the literature on walking pedagogy (Beavington, 2021; Beyes & Steyaert; 2021; Donald, 2021; Lyle & Snowber; 2021). Unlike texts, which are static and often tend to lose their novelty and educative impact over time, the living world is a virtually interminable source of learning, wonder, and knowledge. The same walking activity from AWC, conducted in a different place or different time of year or framed with a different narrative, can lend itself to different curricular objectives. Our hope is that if teachers develop a walking practice as part of their professional development and learning, the unfolding wonders of the living world may “respond” as a co-teacher with manifold ideas and activities to ease the grind culture of conventional schools.

(III) Affect: Emotional engagement, feeling, mystery/unknowability

What is the role of imaginative and emotional engagement in cultivating place-based awareness and provoking eco-social transformation in education (for both teachers and students)?

One of our blind spots going into this research was how imagination would be understood. In IEE theory, imagination is explicitly linked to employing cognitive tools in collaboration with place in order to maximize emotional engagement. This is not clearly articulated in the AWC resource. As described, the data reveal some confusion about the target of imaginative engagement in IEE. In IEE, the imaginative potential of students is meant to be cultivated in outdoor learning by way of employing story-form, metaphor, binary oppositions, and so on. However, interview data make it seem as if teachers are sometimes interpreting the flexibility of outdoor learning as an opportunity to experiment with their own imaginative freedom. This is not necessarily a negative outcome of using AWC, but it does indicate, again, how one of the fundamental components of IEE is not clearly articulated. Participants’ responses did not reflect the IEE *Feeling* principle that suggests a cognitive tool approach to walking enriches the potential of place-based education through imaginative engagement.

In the future, teachers could be supported in engaging with the “mystery and unknowability” at the heart of an IEE approach. As Fettes et al. (in press) write, “Wonder and imagination are more central to [ecological] modes of meaning-making than certainty and control” (p. 12). Ecologizing educational change will, as they claim, “also challenge environmental educators to decentre themselves as human, as expert knowers, as teachers, in order to make space for other teachers and voices, including those of the more-than-human world” (p. 12). As such, it could be useful to see teachers who are employing AWC in the future explicitly name the cognitive tools they are using to design and implement place-based experiences and the stra-

gies that they are using to engage with the mystery of the world, to cultivate a “wonder-full” education (Cant et al., 2013) and—given our deep integration in a more-than-human world—the urgency for eco-social transformation in students.

Policy implications: Content and process. This final section points to a few policy implications that would be required to support the *ecologizing* of professional development and educational change. The change required is clearly radical (i.e., getting to the *radix*, or root, of the problem) as it will surely require *unlearning* dominant conceptions of human supremacy and moving towards a more relational and implicated conception of the living world. This study has illustrated how difficult it can be for individual educators to dig into such radical depths in the absence of an ecological model for change or policies that push the ontological envelope, as it were. That is, in addition to the multi-faceted daily pressure educators face, teacher learning—both content and process—and theories of change that seamlessly fit within current approaches do not necessarily provoke the *ecologizing* process, even when teachers are employing “eco-friendly” teaching resources such as AWC.

In terms of content, any lasting change will likely need to entail coursework for preservice and practicing educators that engages them deeply and in an ongoing way with Indigenous theory and practices in learning, eco-philosophy, and ecocritical reflection. While this may seem like a big ask, we are reminded and inspired by a recent mandate in the British Columbia curriculum that requires all graduates to have at least four credits of course work focusing on Indigeneity (British Columbia Ministry of Education, 2023). While singular professional development days might help in learning this content, we suspect that a long-term, cohort-based, and place-inclusive course model is required to meaningfully engage teachers in investigating deeply rooted beliefs about teaching, learning, and being.

Importantly, policy must also consider the practices of teaching and learning. The actual ways in which educators are learning must be place-based and imagination-focused. This implies that educators should learn about imagination and place through professional development initiatives that cultivate such awareness. Of course, any policy changes to teacher education will have ripple effects for post-secondary education in terms of pre-service teacher education pedagogy and practices. Ongoing policies that support decolonizing and ecologizing postsecondary curricula and practices support this goal, but further consideration will be required if educators are going to be learning outdoors. While beyond the confines of this article, policy must also address possible financial, geographical, and organizational barriers for educators’ learning to take place largely and literally outside the box of conventional schooling.

Conclusion

As the world faces the ongoing and increasingly catastrophic impacts of climate change, we would hope to see increased attention focused on how to educate differently and, importantly, how to re-imagine human-nature relationships. We hope our contribution to this complex problem is to provide the first steps toward a more ecological model for educational change that might provide teachers interested in using AWC (or other resources that support taking learning outside classroom walls) some “designerly prompts” to move towards the more invisible or axiological aspects of

doing this work. We have learned that the radical pedagogical and ontological shift at the heart of IEE principles is insufficiently communicated in AWC. So, the model proposed in this article may support the design of professional learning opportunities and point to ways in which AWC might be redesigned and introduced to teachers to communicate the ontological goals of IEE more fulsomely. There are significant policy implications in this work including radical changes to what and how teachers learn and the models employed to assess educational change. As a pilot study, this analysis has generated many themes for future research as well as highlighted some glaring limitations.⁶ Expanding and deepening research on this topic, future research will seek to employ story-based and ecologically oriented methodology such as *EcoPortraiture* (Blenkinsop, Fettes, & Piersol, 2022) to explore teachers' learning as they engage in self- and place-based study. We seek teachers' stories of teaching, of place, and of imagination as they engage in learning activities shaped by the principles proposed above. Future research will investigate more deeply what professional development means with/in a more-than-human world and how easy-to-use resources like AWC can become vehicles for moving teachers toward deeper connection with the living world.

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Notes

1. Ethics approval for this study was received from the Research Ethics Board at Simon Fraser University.
2. In this activity, teachers are encouraged to do at least one walking-focused activity from the AWC resource with their students every day for 30 school days. Over 1,500 educators have participated in these challenges since 2018.
3. While we know that AWC is most used with younger learners, this is not the sole context of its use. Future research will involve educators using IEE in secondary school contexts.
4. While outside the scope of this study, we identify the value of triangulating data collection. It would have been generative, for example, to observe teachers in practice; however, the geographical spread of the participants, financial constraints, and the limiting influence of COVID-19 prohibited such observation.
5. For example, nine of our ten participants were elementary school teachers. It would be interesting to gather research on AWC at the secondary or university level to assess whether such programs are challenging the "invisible" aspects of educational change. Additionally, all ten of our participants identified as white.
6. Four peer-reviewed environmental education journals were reviewed: the *Canadian Journal of Environmental Education*, *Environmental Education Research*, *Journal of Environmental Education*, and the *Australian Journal of Environmental Education*.

References

- Abdulla, D., Ansari, A., Canli, E., Keshavarz, M., Kiem, M., Oliveira, P., Prado, L., & Schultz, T. (2019). A manifesto for decolonising design. *Journal of Futures Studies*, 23(3), 129–132.
- Abram, D. (1997). *The spell of the sensuous: Perception and language in a more-than-human world*. New York, NY: Vintage.
- Barcham, M. (2021). Towards a radically inclusive design — indigenous story-telling as code-sign methodology. *CoDesign*, 19(1), 1–13.

- Beavington, L. (2021). Walking pedagogy for science education and more-than-human connection. *Journal of the Canadian Association for Curriculum Studies*, 18(2), 163–178. doi:10.25071/1916-4467.40626
- Beyes, T., & Steyaert, C. (2021). Unsettling bodies of knowledge: Walking as a pedagogy of affect. *Management Learning*, 52(2), 224–242. doi:10.1177/1350507620979713
- Blenkinsop, S. (2003). Choice, dialogue, and freedom: Towards a philosophy of education based in existentialism [Unpublished doctoral thesis]. Cambridge, MA: Harvard University.
- Blenkinsop, S. (2006). Seeds of green: My own arctic copper/mine. *Canadian Journal of Environmental Education*, 11, 157–165.
- Blenkinsop, S. (2012). Four slogans for cultural change: An evolving place-based, imaginative and ecological learning experience. *Journal of Moral Education*, 41(3), 353–368. doi:10.1080/03057240.2012.691634
- Blenkinsop, S., & Beeman, C. (2010). The world as co-teacher: Learning to work with a peerless colleague. *The Trumpeter: Journal of Ecosophy*, 26(3), 26–39.
- Blenkinsop, S., Fettes, M., & Piersol, L. (2022). *Ecoportraiture: The art of research when nature matters*. Bristol, UK: Peter Lang.
- Blenkinsop, S., Morse, M., & Sitka-Sage, M. (2019). Freedom and flourishing in a posthumanist age: More-than-human being in revolt. *Philosophy of Education Society Yearbook 2017*, 585–597.
- British Columbia Ministry of Education. (2023, September 27). *Indigenous-focused graduation requirement*. British Columbia Ministry of Education. Retrieved September 30, 2023, from <https://www2.gov.bc.ca/gov/content/education-training/k-12/support/indigenous-focused-graduation-requirements>
- Cant, A., Egan, K. & Judson, G. (Eds.) (2013). *Wonder-Full education: The centrality of wonder in teaching and learning across the curriculum*. Milton Park, Oxfordshire, UK: Routledge.
- Carmi, N., Arnon, S., & Orion, N. (2015). Transforming environmental knowledge into behavior: The mediating role of environmental emotions. *The Journal of Environmental Education*, 46(3), 183–201. doi:10.1080/00958964.2015.1028517
- Derby, M., Piersol L., & Blenkinsop, S. (2015). Refusing to settle for pigeons and parks: Urban environmental education in the age of neoliberalism. *Environmental Education Research*. 21(3), 378–389.
- Donald, D. (2021). We need a new story: Walking and the *wāhkōhtowin* imagination. *Journal of the Canadian Association for Curriculum Studies*, 18(2), 53–63. doi:10.25071/1916-4467.40492
- Egan, K. (1997). *Educated mind: How cognitive tools shape our understanding*. University of Chicago Press, MI.
- Egan, K. (2005). *An imaginative approach to teaching*. Hoboken, NJ: Jossey-Bass.
- Egan, K. & Judson, G. (2016). *Imagination and the engaged learner: Cognitive tools for the classroom*. New York, NY: Teachers College Press.
- Fettes, M. (2013). Imagination and experience: An integrative framework. *Democracy and Education*, 21, 1–11.
- Fettes, M., Cole, L., & Blenkinsop, S. (In press). Prompts for eco-social transformation: What environmental education can learn from transformative design. *Journal of Environmental Education*.
- Fullan, M. (1993). *Change forces: Probing the depths of educational reform*. Falmer Press.
- Fullan, M. (1999). *Change forces: The sequel*. London, UK: Falmer Press.
- Fullan, M. (2003). *Change forces with a vengeance*. Milton Park, Oxfordshire, UK: Routledge Falmer.
- Fullan, M. (2016). *The new meaning of educational change*. New York, NY: Teachers College Press.
- Fullan, M., Edwards, M., & Wheatley, M. (2022). *Spirit work and the science of collaboration*. Thousand Oaks, CA: Corwin Press.
- Fullan, M., & Hargreaves, A. (2016). *Bringing the profession back in: Call to action*. Oxford, OH: Learning Forward.
- Green, M., & Somerville, M. (2014). Sustainability education: Researching practice in primary schools. *Environmental Education Research*, 21(6), 832–845. doi:10.1080/13504622.2014.923382

- Gruenewald, D., & G. Smith. (Eds.) (2008). *Place-Based education in the global age: Local diversity*. Lawrence Erlbaum.
- Hinds, J., & P. Sparks. (2008). Engaging with the natural environment: The role of affective connection and identity. *Journal of Environmental Psychology*, 28(2), 109–120. doi:10.1016/j.jenvp.2007.11.001
- Hoover, K.S. (2021). Children in nature: Exploring the relationship between childhood outdoor experience and environmental stewardship. *Environmental Education Research*, 27(6), 894–910. doi:10.1080/13504622.2020.1856790
- Irwin, T., Tonkinwise, C., & Kossoff, G. (2022). Transition design: An educational framework for advancing the study and design of sustainable transitions. *Cuadernos del Centro de Estudios en Diseño y Comunicación. Ensayos*, 105, 31–72.
- Jardine, D.W. (2013). Time is [not] always running out. *Journal of the American Association for the Advancement of Curriculum Studies*, 9, 1–32.
- Jardine, D.W., Friesen, S., & Clifford., P.A. (2006). *Curriculum in Abundance*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- Jickling, B., Blenkinsop, S., Timmerman, N. & De Danaan Sitka-Sage, M. (Eds.) (2019). *Wild pedagogies: Touchstones for re-negotiating education and the environment in the anthropocene*. doi:10.1007/978-3-319-90176-3
- Judson, G. (2010). *A New approach to ecological education: Engaging students' imaginations in their world*. Bristol, UK: Peter Lang.
- Judson, G. (2015a). *Engaging imagination in ecological education: Practical strategies for teaching*. Vancouver, BC: UBC Press.
- Judson, G. (2015b). Re-Imagining sustainability education: Emotional and imaginative engagement in learning. In F. Kagawa & D. Selby (Eds.) *Sustainability frontiers: Critical and transformative voices from the borderlands of sustainability education* (pp. 205–220). Toronto, ON: Barbara Budrich Publishers.
- Judson, G. (2018). *A walking curriculum: Evoking wonder and developing a sense of place (K-12)*. Vancouver, BC: KDP/Canadian ISBN Service.
- Kimmerer, R. (2013). *Braiding sweetgrass*. Minneapolis, MN: Milkweed Editions.
- Kopnina, H., Sitka-Sage, M., Blenkinsop, S., & Piersol, L. (2020). Moving beyond innocence: Educating children in a post-nature world. In *Research Handbook on Childhood Nature* (pp. 603–621). New York, NY: Springer International Publishing.
- LaDuke, W. (1999) *All our relations: Native struggles for land and life*. Chicago, IL: Haymarket Books.
- Lumber, R., Richardson, M., & Sheffield, D. (2017). Beyond knowing nature: Contact, emotion, compassion, meaning, and beauty are pathways to nature connection. *PLoS ONE*, 12(5), e0177186. doi:10.1371/journal.pone.0177186
- Lyle, E., & Snowber, C. (2021). Walking as attunement: Being with/in nature as Currere. *Journal of the Canadian Association for Curriculum Studies*, 18(2), 6–20. doi:10.25071/1916-4467.40514
- Martin, L., White, M.P., Hunt, A., Richardson, M., Pahl, S., & Burt, J. (2020). Nature contact, nature connectedness and associations with health, wellbeing and pro-environmental behaviours. *Journal of Environmental Psychology*, 68, 1–54. doi:10.1016/j.jenvp.2020.101389
- Martusewicz, R., Edmundson, J., & Lupinacci, J. (2011). *Ecojustice education*. Milton Park, Oxfordshire, UK: Routledge.
- McKenzie, M., Hart, P., Bai, H., & Jickling, B. (Eds.) (2009). *Fields of green: Restoring culture, environment, and education*. New York: NY: Hampton Press.
- McCoy, K., Tuck, E., & McKenzie, M. (Eds.). (2018). *Land education: Rethinking pedagogies of place from Indigenous, postcolonial, and decolonizing perspectives*. Milton Park, Oxfordshire, UK: Routledge.
- Meighan, H.L., & Rubenstein, E.D. (2018). Outdoor learning into schools: A synthesis of literature. *Career and Technical Education Research*, 43(2), 161–177. doi:10.5328/cter.43.2.161
- Miles, M.B., Huberman, A.M., & Saldana, J. (2014). *Qualitative data analysis*. Thousand Oaks, CA: Sage.

- Orr, D.W. (2005). Recollection. In M.K. Stone & Z. Barlow (Eds.), *Ecological literacy: Educating our children for a sustainable world* (pp. 96–106). Mountain View, CA: Sierra Club Books.
- Piersol, L. (2015). *Eco care: Nurturing possibility and resistance within education* [Unpublished doctoral thesis]. Vancouver, BC: Simon Fraser University.
- Pyle, R.M. (1993). *The thunder tree: lessons from an urban wildland*. Boston, MA: Houghton Mifflin.
- Rosa, C.D., Profice, C.C., & Collado, S. (2018). Nature experiences and adults' self-reported pro-environmental behaviors: The role of connectedness to nature and childhood nature experiences. *Frontiers in Psychology*, 9, 1055–1055. doi:10.3389/fpsyg.2018.01055
- Seidel, J., & Jardine, D. (2014). *Ecological pedagogy, buddhist pedagogy, hermeneutic pedagogy: Experiments in a curriculum for miracles*. Bristol, UK: Peter Lang.
- Sheridan, J., & Longboat, D. (2006). The Haudenosaunee imagination and the ecology of the sacred. *Space and Culture*, 9(4), 365–381.
- Sobel, D. (2005). *Place-based education: Connecting classrooms and communities*. Northampton, MA: The Orion Society.
- Smith, L.T. (2012). *Decolonizing methodologies: Research and indigenous peoples*. London, UK: Zed Books.
- Takahashi, Y. (2004). Personal and social transformation: A complementary process toward ecological consciousness. In E. O'Sullivan & M.M. Taylor (Eds.), *Learning toward an ecological consciousness: Selected transformative practices* (pp. 169–182). Camden, UK: Palgrave Macmillan.
- Wilson, S. (2008). *Research is ceremony: Indigenous research methods*. Halifax, NS: Fernwood Publishing.
- Wood, J. & Judson, G. (2022). *Walking forward: Learning from place*. Retrieved September 30, 2023, from <https://www.educationthatinspires.ca/files/2022/05/Walking-Forward-Wood-Judson-2022.pdf>
- Van Horn, G. (2021). Kinning: Introducing the kinship series. In G. Van Horn, R.W. Kimmerer, & J. Hausdoerffer (Eds.), *Kinship: Belonging in a world of relations: Planet* (Vol. 1, pp. 1–11). Libertyville, IL: Center for Humans and Nature Press.