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An ecophenomenological interpretation of planetary social pedagogy

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Abstract

This article examines planetary social pedagogy through an ecophenomenological lens, drawing on Maurice Merleau-Ponty's phenomenology to emphasise the interconnectedness between humans and the more-than-human world. Planetary social pedagogy addresses the limitations of traditional educational models rooted in rationalism and anthropocentrism by promoting more holistic perspectives in learning. By embracing cognitive, metacognitive and epistemic dimensions of understanding, planetary social pedagogy provides a pathway for education that facilitates extending spatial, temporal and ethical awareness to cultivate planetary citizenship. This article advances the discourse on planetary social pedagogy by incorporating an ecophenomenological perspective that emphasises direct sensory engagement within the more-than-human world as a critical aspect of transformative pedagogy to move

beyond anthropocentrism. Through mindful sensory engagements, embodied memories and co-creative arts practices, educators can facilitate learning that empowers individuals to become responsible citizens of the Earth. The transformative framework calls for a profound cultural shift towards embodied, relational and ethically engaged ways of being.

Keywords ecophenomenology; embodied learning; interdependence; Maurice Merleau-Ponty; more-than-human world; planetary social pedagogy; relational ontology; responsibility; sustainability education; transformative learning

Introduction

The escalating ecological crises, such as climate change and biodiversity loss, reveal profound inadequacies in the cultural practices of post-industrial societies (Ripple et al., 2024). These environmental challenges are not merely scientific or technological but fundamentally cultural (Plumwood, 2002). People have been unable to adapt their cultural values and behaviours to align with planetary boundaries (Richardson et al., 2023). Education is crucial in this context, as it can transmit existing cultural norms or catalyse transformation for sustainability (Cook, 2019; Foster et al., 2019; Lange, 2019; Martusewicz et al., 2015; Salonen et al., 2023; Sterling, 2010; Värri, 2018). Therefore, it is clear that the escalating ecological problems demand a cultural shift in how education is conceptualised and practised.

This article aims to provide both a theoretical foundation and practical strategies for implementing planetary social pedagogy (PSP) in educational settings. While rooted in ecophenomenological theories, this work seeks to inspire actionable change by offering concrete pedagogical practices. With phenomenological approaches and arts-based contemplative methods, educators can facilitate deeper connections between learners and the more-than-human world, ultimately supporting transformative learning that cultivates ecological awareness and responsibility (Keto et al., 2022). Through this dual focus on theory and practice, the article serves as a bridge between abstract philosophical insights and their application in real-world educational contexts.

Traditional educational models, such as Enlightenment rationalism, neoliberal individualism, behaviourist instrumentalism and anthropocentric humanism, have proven insufficient to address the complexities of the current planetary challenges (Sterling, 2010). These models perpetuate a disconnected, human-centred worldview that neglects the broader ecological systems on which all life depends (Martusewicz et al., 2015). To build sustainable futures, educational frameworks that acknowledge the embeddedness of humans within the more-than-human world are needed (Keto and Foster, 2020). PSP responds to this need by cultivating ecological awareness and responsibility by placing human well-being within a larger planetary context and advocating for transformative educational practices (Salonen et al., 2023).

PSP builds on traditional social pedagogy by emphasising the interconnectedness between individuals, society and the Earth (Salonen et al., 2023). It promotes a social-ecological worldview that recognises the intrinsic value of all life – human and non-human, living and non-living alike. By promoting transformative learning experiences, PSP encourages individuals to critically examine their beliefs and behaviour and develop a planetary sense of responsibility (Salonen et al., 2023). A core aspect of PSP involves integrating transformative learning experiences across cognitive (knowledge-based), metacognitive (reflective) and epistemic (experiential) levels of understanding (Sterling, 2010). These interconnected levels form a basis for a holistic learning strategy, enhancing learners' ability to think critically and systemically about global ecological issues. Ultimately, PSP aims to nurture planetary citizens committed to building a more sustainable and just future for all (Salonen et al., 2024).

The purpose of the article is to explore and interpret PSP through an ecophenomenological lens, drawing mainly from Maurice Merleau-Ponty's (1945/2010, 1968, 2003) phenomenology, and to examine the profound interdependencies between humans and the rest of nature (Abram, 1996; Brown and Toadvine, 2003; Toadvine, 2009; Värri, 2018). Ecophenomenology goes beyond acknowledging human

interconnections with other life forms; it seeks to uncover how human perception, experience and understanding are fundamentally shaped by their intimate relationships with the more-than-human world (Abram, 1996). In this theoretical study, I also draw from my previous practice-based studies on embodied learning (Foster and Ojanen, 2025; Foster and Sutela, 2024; Foster, Törmä et al., 2022; Foster and Turkki, 2023; Foster et al., 2019). How can PSP, interpreted through an ecophenomenological lens and informed by embodied learning, reveal and cultivate the profound interdependencies between humans and the more-than-human world and enable pedagogical practices that transcend anthropocentric assumptions and promote meaningful multispecies co-living?

Planetary social pedagogy

PSP is an educational approach that expands the foundations of traditional social pedagogy by emphasising the interconnectedness between individuals, societies and the Earth (Salonen et al., 2023). Traditional social pedagogy primarily focuses on supporting well-being, personal growth and social interaction within human communities (Hämäläinen, 2003). PSP broadens this focus into the relations between human societies and their ecological – and even geological – contexts, recognising that human well-being is intricately linked to the whole planet (Salonen et al., 2023). This holistic perspective is significant in the current time of planetary crises. Complex threats like climate change, biodiversity loss and resource depletion demand a transformative shift in how human agency and responsibility are understood and how this also affects pedagogical practices.

PSP aims to cultivate this shift by challenging anthropocentric perspectives that contribute to unsustainable practices (Martusewicz et al., 2015; Sterling, 2010). A key aspect of PSP is the development of a social-ecological worldview, which recognises humans as part of a larger ecological community (Folke et al., 2016; Krasny et al., 2011). This worldview encourages a sense of planetary belonging beyond the prioritised human-centred concerns (Salonen et al., 2024). PSP encourages individuals to consider how their actions contribute to the more extensive social-ecological system, linking personal agency to planetary well-being.

Research has shown that transformative learning experiences can lead to profound worldview shifts and more sustainable behaviours (Boström et al., 2018). Sterling (2010) has argued that lasting changes in participants' ecological practices can be achieved through transformative learning that integrates cognitive, metacognitive and epistemic levels of understanding. While epistemic learning in Sterling's sense refers broadly to changes in underlying assumptions and ways of knowing, Salonen et al. (2023) operationalise this dimension in sustainability education by emphasising experiential approaches. Building on this interpretation, PSP encourages learners to critically evaluate their values, beliefs and behaviours concerning the broader ecological context, ultimately empowering them to take meaningful action towards a more sustainable future (Lange, 2019).

First, the cognitive level of understanding in PSP involves acquiring foundational knowledge about sustainability's scientific, social and cultural aspects and the interconnected social and ecological systems. Second, the metacognitive level requires learners to reflect on their thoughts and values regarding their role within these systems. Through metacognitive understanding, learners consider the implications of their actions on local, global and planetary scales. Finally, the epistemic level – understood in Sterling's (2010) broad sense as a transformation in one's underlying assumptions and ways of knowing – is applied in PSP through experiential and embodied approaches that integrate learners' sensory, emotional and practical experiences with cognitive and reflective insights. Together, these three levels of understanding form a solid basis for the comprehensive learning process to empower individuals to contribute to a sustainable future (Salonen et al., 2023).

Through empowering and transformative learning experiences, PSP aims to expand learners' perspectives on spatial, temporal and ethical dimensions of existence and, in that way, understand their role within the broader social-ecological system (Salonen et al., 2023, 2024). First, the spatial dimension focuses on how individuals and societies understand their relations to place – from local to planetary scales (Salonen et al., 2023). Learners are helped to acknowledge that their local actions are interconnected with broader regional, global and planetary systems (Folke et al., 2016). For example, consumption choices made in one country can have far-reaching ecological and social impacts elsewhere (Wiedmann et al., 2013). Recognising individual actions as part of broader networks requires a systems-thinking approach (Capra, 1996).

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Second, PSP emphasises the significance of expanding the temporal dimension, which means understanding one's place within the past–present–future time continuum (Salonen et al., 2023). Building a more sustainable future requires learning from the past and acting responsibly in the present. Futures literacy involves envisioning different potential futures and using these visions to influence present decisions (Miller, 2024). By cultivating futures literacy, PSP encourages individuals, especially young people, to move beyond passive adaptation to future uncertainties and actively shape the future through informed actions (Rajala et al., 2023). Learners can see themselves as active agents who can impact not only their own lives but also the future of their communities and the planet as a whole.

Third, the ethical dimension of PSP refers to expanding moral responsibility to include humans, other life forms and whole ecosystems (Salonen et al., 2023). Learners are challenged to adopt a moral stance that acknowledges that the well-being of humanity is deeply interdependent with other species and ecosystems (Plumwood, 2002; Singer, 2023). The ethical dimension also emphasises planetary responsibility that encompasses both intragenerational equity (ensuring fairness within the current generation) and intergenerational equity (considering the well-being of future generations) (Kortetmäki et al., 2021). By stressing the importance of the ethical dimension, PSP seeks to expand learners' moral circle to include not just humans but also more-than-human others (Salonen and Åhlberg, 2012).

In conclusion, PSP is a transformative educational framework that addresses the urgent need to reconsider how humans relate to the Earth. Through transformative learning, PSP empowers individuals to critically reflect on their roles within the interconnected web of life, promoting a cultural shift towards sustainable practices (Sterling, 2010). By expanding reality's spatial, temporal and ethical dimensions, PSP helps learners understand their place within a more extensive social-ecological system and take responsibility for their actions (Salonen et al., 2023). This holistic approach enables an expanded sense of belonging and agency, essential for addressing our time's complex challenges and creating a sustainable future (Keto and Foster, 2020; Salonen et al., 2024). However, this shift towards a holistic understanding of interdependencies in the more-than-human world calls for a deeper exploration of how humans perceive their relationships with other life forms and how they can cultivate co-beneficial ways to interact within these relations.

Merleau-Ponty's phenomenology and its ecophenomenological interpretations

Maurice Merleau-Ponty's (1945/2010, 1968, 2003) phenomenology offers a framework for understanding the inherently embodied relationship between humans and the world. His theories challenge the traditional Cartesian separation of mind and body by showing that perception is not merely a mental event but an embodied act (Hung, 2008). For Merleau-Ponty (1945/2010), the *perceiving body* is the primary site where one comes to know and make sense of the world. By the *lived body*, Merleau-Ponty (1945/2010) refers not merely to the biological, physical or anatomical entity but to an integrated body-mind-spirit whole, emphasising the interconnected nature of physical, mental and spiritual aspects of human existence. The body as an object can be investigated and measured; the lived body can only be experienced (Parviainen, 1998).

We continuously negotiate our existence within a dynamic reality through bodily senses, movements and gestures (Abram, 1996; Parviainen, 1998). We come to know the world through embodied participation; however, it is crucial to acknowledge that the world also exists independently of our perceptions and interpretations. The concept of embodiment describes the pre-objective, immediate nature of bodily involvement in the world, which demonstrates that our bodies are intricately connected to our experience of reality (Merleau-Ponty, 1945/2010).

In education, the *pre-objective world* provides a foundational layer of experience that influences how individuals perceive, relate to and ultimately learn about the world (Värri, 2018). With the perspectives of passivity and activity on perception, it is possible to reflect on the complex ways the body engages with its environment. Merleau-Ponty viewed passivity not merely as the absence of action but as an intrinsic aspect of perception that works in tandem with activity (Hughes, 2016). The body is constantly being affected by, and, in turn, affecting, the world. Understanding this dynamic is also crucial for developing transformative pedagogy.

Learners engage with the world before it is divided into learning subjects and learnable objects. Relational ontology emphasises that the human body is not an isolated observer but an integral

participant in the fabric of existence (Bannon, 2011; Toadvine, 2009). Our bodies are not independent agents but are always affected by other beings and environments (Keto and Foster, 2020). For example, through our breathing bodies, we are intimately connected to plant life – a reciprocal relationship where what we exhale, plants inhale, and what they release, we take in (Abram, 1996). Humans are fundamentally part of nature rather than separate from or above it. Education that cultivates the relational understanding of a more profound relationship with the more-than-human world can lead to ecological responsibility and care instead of domination or exploitation (Martusewicz et al., 2015; Värri, 2018).

Central to Merleau-Ponty's (1968, 2003) later theories is the concept of the *flesh*, which refers to the fundamental element that unites the perceiving subject and the perceived world. As Merleau-Ponty describes, flesh is not a biological or material entity but a shared, ontological tissue connecting all living beings (Evans and Lawlor, 2000). It denotes the reciprocal relationship between perceiver and perceived, where boundaries between subjectivity and objectivity become fluid. Perception is an interdependent exchange in which the world is not merely an object of contemplation but something with which one has a participatory relationship (Merleau-Ponty, 1968). The body, therefore, becomes a living interface through which one intertwines with the world, challenging the dichotomy of self and other (Merleau-Ponty, 2003).

Another essential concept in Merleau-Ponty's (1968) phenomenology is *chiasm*, which refers to intertwining subjective experience with the objective world (Evans and Lawlor, 2000). As Hughes (2016) points out, the chiasm should not be understood merely as a reversible relationship. Instead, it should be seen as a dynamic interplay that maintains difference within unity, acknowledging the distinctiveness of both the perceiver and the perceived even as they intertwine. So, relational ontology does not aim to dissolve difference but instead incorporates it into a shared, yet differentiated, experience of the world (Bannon, 2011). This chiasmatic relationship can be understood, for example, by how touch works: when I touch something, I am also aware of being touched (Merleau-Ponty, 1945/2010). So, chiasm emphasises that mutual exchange is central to the human perception of the world. It illustrates the ongoing dialogue between the self and the other. The self is both a perceiver and something that is perceived, and the world is shaped by and shapes our embodied experiences (Merleau-Ponty, 1945/2010, 1968).

Through the concepts of the lived body, pre-objective world, flesh and chiasm, Merleau-Ponty breaks down the rigid dichotomies that have long dominated Western thought – such as mind-body, subject-object and culture-nature (Plumwood, 2002). He lays the groundwork for a relational ontology where the human body is not an isolated entity but a connection point within relations (Abram, 1996; Bannon, 2011; Toadvine, 2009). Our bodies participate in the world much like a note within a symphony, where each note influences and is influenced by the others (Merleau-Ponty, 1968, 2003). So, the relational body – not an isolated mind – actively creates meaning, reinforcing that we are fundamentally embedded in a shared, living world through our embodied existence.

Merleau-Ponty's ideas on embodiment and relationality have had profound implications for contemporary ecophenomenology (Abram, 1996; Bannon, 2011; Brown and Toadvine, 2003; Cataldi and Hamrick, 2007; Deka, 2018; Hung, 2008; Toadvine, 2009; Värri, 2018; Wood, 2001). This field merges ecological concerns with phenomenological methods to explore the interconnectedness between human experience and the natural world. Ecophenomenology, informed by Merleau-Ponty's work, seeks to move beyond the traditional view of humans and nature as separate (Abram, 1996; Toadvine, 2009). Instead, it investigates how human perceptions and understandings are shaped by their embodied interactions with the environment and all beings (Abram, 1996; Brown and Toadvine, 2003).

Ecophenomenological ontology challenges mechanistic views of nature by presenting a dynamic interplay in which humans and more-than-humans co-constitute. It highlights the importance of acknowledging all living beings as active participants in our shared existence (Abram, 1996). Rather than viewing animals, plants and ecosystems as passive backdrops for human life, this perspective sees them as integral, vibrant, active agents (Keto and Foster, 2020). Such an understanding deepens our sense of ecological embeddedness and the ethical responsibilities that follow. By dissolving the barriers between subject and object, relational ontology lays the groundwork for an ethical engagement with the world – urgently needed to address contemporary ecological crises.

It is also essential to notice that embodiment is something we, humans, share in common with other animals. This perspective challenges the anthropocentric belief that humans are separate from or superior to nature (Plumwood, 2002). Instead, embodiment places us as deeply interwoven with the more-than-human world through our senses, emotions and perceptions. This relational idea of humanity aligns with the pedagogical goal of cultivating a sense of belonging and responsibility within a larger ecological context (Salonen et al., 2024). Furthermore, recognising the agency and vitality of

more-than-humans can promote more ethical and sustainable ways of engaging with the world (Keto and Foster, 2020). The embodied understanding of a human and the relational understanding of reality stress the importance of developing pedagogical practices based on direct bodily – not just intellectual – engagements in the world.

Practical approaches to cultivating belongingness to the more-than-human world

Translating the abstract ecophenomenological concepts of embodiment and relationality into educational practices is challenging. The practical approaches outlined here are based on my previous practice-based research (Foster, 2016; Foster, Mnemo ZIN et al., 2022; Foster and Ojanen, 2025; Foster and Sutela, 2024; Foster and Turkki, 2023; Foster et al., 2019) and aim to give examples of embracing the interdependence of all life forms and challenging dualistic worldviews that dominate modern societies. The practices cultivate a holistic and transformative connection between learners and the more-than-human world by emphasising presence, sensory engagement, care, empathy and co-creative practices. Furthermore, by helping learners attune to themselves and others in mindful ways, these methods support learners in resonating with other living beings, envisioning ecosocial futures and understanding their place within the time–space continuum.

My practice-based research aligns with and contributes to the growing body of work in related fields, such as dance and music education. Ecosomatic practices in dance, for instance, highlight embodied awareness and kinesthetic empathy, fostering a deeper understanding of the interrelations between humans and the more-than-human world (Albright, 2019; Dako, 2021; Fraleigh and Riley, 2024; Hunter, 2021; Olsen, 2020). Site-specific dance, in particular, has been explored as a medium for engaging with environmental ethics and acknowledging more-than-human agency (Häggström, 2019; Kloetzel, 2019; Kloetzel and Pavlik, 2013; Reeve, 2015). Similarly, music education has drawn attention to eco-literacy, sustainability and ecomusicology, advocating for practices such as mindful listening, improvisation inspired by the sonic environment, and the reuse and recycling of instruments as part of broader ecosocial initiatives (Shevock, 2018; Shevock and Bates, 2019; Sutela, 2023; Titon, 2020; Varkøy and Rinholm, 2020). Moreover, music and soundscape research emphasises the interconnections between sound, place and all living beings (Barclay, 2013; Oliveros, 2005; Paine, 2017; Pedelty, 2011; Vadén and Torvinen, 2014).

The practices presented in this article offer symbolic and metaphorical layers for learners to deeply explore and discuss their connections with other life forms (Foster, Törmä et al., 2022). At the same time, the practices also serve as very concrete ways to engage in multispecies interaction (Foster and Ojanen, 2025; Foster and Sutela, 2024; Foster and Turkki, 2023). Through direct, intimate activities – such as mindful nature walks, embodied improvisations and co-creative arts with natural elements – learners do not just conceptualise their connection to the more-than-human world; they actively participate in it. The combination of metaphorical reflection and tangible practice lays a solid foundation for learning in multispecies coexistence, making the interdependencies between humans and the rest of nature an experiential reality rather than an abstract concept.

Ultimately, the practices seek to nurture transformative learning that informs, inspires and motivates participants to actively co-create a just and sustainable planetary, multispecies community. By integrating creative practices informed by ecophenomenological insights, learners can move beyond intellectual engagement to evoke embodied connections. The shift from traditional anthropocentric models is radical since it challenges the conventional separation of humans from nature, and thus, it can first cause uneasiness among some learners (Foster and Turkki, 2023). However, by creating safe and open educational spaces that encourage learners to explore their relationships with other species, it is possible to nurture a sustainable life orientation that involves not just adopting sustainable practices but developing a profound sense of planetary belonging (Foster and Sutela, 2024). So, the three pedagogical practices of (1) mindful sensory engagements, (2) embodied memories and (3) co-creative arts practices, are designed to translate ecophenomenological insights into meaningful actions.

Mindful sensory engagement: practising presence and cultivating embodied interaction

Practising presence involves cultivating learners' capacity to attune to themselves, others and their surroundings to support an intimate connection with the more-than-human world (Foster, 2016; Foster and Ojanen, 2025; Foster and Sutela, 2024; Fraleigh and Riley, 2024; Oliveros, 2005). Activities such as mindful nature walks and meditations encourage learners to engage deeply with the sensory richness of their environment. These practices reposition other animals and plant life not as a mere backdrop for human activities but as central participants in being and acting and thus also learning within the world (Abram, 1996). Learners become more aware of their interdependencies with the more-than-human world by slowing down, embracing silence and practising attentive presence (Foster, 2016). These sensory engagements reflect the concept of embodiment, which describes the body as the primary means of perceiving and experiencing reality (Merleau-Ponty, 1945/2010). Cultivating presence means fully engaging in each moment, laying a foundation for ecological sensitivity.

Embodied engagement integrates body, mind and spirit, directly challenging what Berry (1996) describes as the isolation of the body. This detachment, prevalent in modern cultures, leads to a disconnect between human physical, mental and spiritual well-being and social and ecological well-being (Berry, 1996). The malbeing of humans and the planet are consequences of exploiting the body and ignoring its interconnectedness with the natural world. In contrast, embodied engagement aims to reunite body, mind and spirit as well as the self with another – in a similar manner described in Indigenous epistemologies (Kimmerer, 2013). By positioning the relational body as the central site of experience and understanding, it is possible to revitalise a more holistic view of ourselves within the world (Salonen et al., 2023). The holistic idea of humans resonates with Merleau-Ponty's view that the body is not merely a physical entity but is integral to how we come to know and interact with the world (Merleau-Ponty, 1968).

This holistic approach values embodied practices, such as body awareness exercises, movement and sound improvisations, and tactile interactions with natural materials (Foster, 2016; Foster and Ojanen, 2025; Foster and Sutela, 2024). Also, simple everyday actions that physically connect the body with the environment – such as barefoot walking, swimming in natural waters or paying attention to one's surroundings with all senses – cultivate an awareness of the body as an integral part of the more-than-human world (Abram, 1996). By recognising the body's central role in perception, learners experience the natural world more profoundly, nurturing a sense of connection with others and even a sense of wholeness that transcends the purely intellectual understanding of the other. This embodied idea of existence and knowledge aligns with Merleau-Ponty's idea of the flesh of the world – the concept that the body and world are ontologically intertwined, and our interactions with others are fundamentally reciprocal (Merleau-Ponty, 1968).

Sensory walks, for example, help learners slow down, sense deeply and become attuned to the visual, sonic and tactile connections to their surroundings (Foster, 2016; Foster and Sutela, 2024; Oliveros, 2005). When learners pay close attention to the sounds of birds, the texture of tree bark and the scents of the forest, they actively engage with their environments through their bodies instead of focusing solely on abstract, decontextualised knowledge about other species or ecosystems. While biological and ecological facts are essential, embodied experiences dissolve the perceived separation and hierarchy between self and others and humans and the rest of nature. With diverse sensory exercises, it is possible to focus on often neglected olfactory and gustatory experiences, too, to revitalise the holistic body as a sensing being – similar to any other animal.

Similarly, movement practices like site-specific improvisations emphasise intuitive and sensory engagement with the environment (Foster and Ojanen, 2025; Foster and Turkki, 2023; Hunter, 2021; Kloetzel, 2019). Paying attention to sensations aroused by movement or, in contrast, actively creating tactile sensations with specific movements can help to investigate the relations between active and passive involvement in the world through the perceiving body. These sensory practices help learners recognise the environment as an active participant in their experience rather than a passive backdrop. This approach echoes Merleau-Ponty's (1968) concept of chiasm – the intertwining of perceiver and perceived – where the boundaries between the self and the other blur.

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Embodied memories: reconnecting with past sensory experiences

Reconnecting with past sensory experiences helps learners better understand their ecological self (Pulkki et al., 2021) and their relationships with the ecosocial community (Keto and Foster, 2020). The recollections reflect the temporal and spatial aspects of identity and belonging within the more-than-human world. Revisiting past sensory experiences, particularly those from childhood, can be a powerful way to understand multispecies' coexistence within the time–space continuum (Foster, Mnemo ZIN et al., 2022).

Reflecting on the earliest encounters with the more-than-human world often reveals a time when one's senses were more attuned to nature – before the anthropocentric worldview became dominant through socialisation (Foster, Mnemo ZIN et al., 2022; Keto and Foster, 2020). Thus, these memories can serve as a valuable resource for re-awakening sensory awareness and rekindling a sense of wonder and connection with the natural world (Abram, 1996). The embodied remembering echoes Merleau-Ponty's (1945/2010) notion of pre-objective experience – the idea that our sensory engagements with the world are primary and shape our experiences and understanding before conceptual thought takes over. The embodied childhood memories also reflect a chiasmatic relationship between the perceiver and the perceived, where boundaries between the self and the world are fluid and interconnected (Merleau-Ponty, 1968).

For example, reconnecting with sound memories can reveal one's deep connection to place and emotional states (Harris, 2015). Sounds are carried within our lived bodies and can also evoke rich multisensory and emotional knowledge, often linking us back to specific environments and moments from childhood (Foster, Mnemo ZIN et al., 2022; Foster and Sutela, 2024). In memory-based listening practices, learners use their imagination to revisit a place with familiar sounds (Paine, 2017). Reconnecting with sound memories can also be practised while walking. The sound walks provide opportunities for students to connect with their environments in a multisensory manner, nurturing their awareness of how they interact with and are shaped by the sounds around them.

Collective memory work can also reveal how our thoughts and value systems have been shaped by Western modernity. Western thought patterns are based on an anthropocentric worldview that positions humans as supreme and disconnected from the rest of nature (Plumwood, 2002). Collective memory work helps learners recognise that we are not only socialised within human communities but also ecosocialised by the rest of nature (Foster, Mnemo ZIN et al., 2022). Ecosocialisation describes a process by which individuals are shaped not only by human social environments but also by interactions with other organisms and ecological entities (Keto and Foster, 2020). By engaging with collective memory work, learners can identify how their childhood memories reflect diverse ecosocial relations (Foster, Mnemo ZIN et al., 2022). By situating childhood beyond purely human contexts, participants can see how their upbringing involved an intrinsic connection with more-than-human others.

Collective remembering allows learners to reflect on their meaningful experiences in a way that brings new perspectives to their relationship with the world (Hughes, 2016). By listening to the stories of others, learners can move beyond a limited, local focus to embrace a broader, interconnected view of their place in the world. Furthermore, by revisiting and re-imagining past experiences, learners can consider the long-term consequences of their actions. This perspective that emphasises the continuous interplay between past, present and future within ecological systems encourages an appreciation of intergenerational stewardship and planetary inclusion (Salonen et al., 2024). Including multisensory awareness practices in collective biography work can allow learners to connect more deeply with their bodily belonging to the more-than-human world (Foster, Mnemo ZIN et al., 2022).

Co-creative arts practices

By perceiving the world through an artistic lens that embraces embodied and relational knowledge, learners can cultivate a deeper awareness of the reciprocal relationships with others – humans, other animals and plants – that define their existence. However, not all art making or art education automatically transcends a dualistic understanding of reality. Art education can incorporate contemplative perspectives to enable a sense of profound belonging to the more-than-human world. Practices such as meditation, mindful observation and sensory awareness exercises help

learners experience asubjectivity (Vadén and Torvinen, 2014), aligning with Merleau-Ponty's concept of pre-objective experience – where individuals encounter the world before the distinction between subject and object arises. These asubjective experiences nurture a deeper, more connected relationship with the world, reinforcing that the more-than-human world is not separate from us but intimately intertwined with our being (Foster and Sutela, 2024; Foster and Turkki, 2023).

Learners collaborate alongside both humans and non-humans in multispecies co-creative art projects (Foster and Turkki, 2023). They might use natural materials like leaves, stones and branches to create art pieces, integrating the textures and forms of these materials into their work. Alternatively, learners can simply attune to subtle, more-than-human cues – such as the rustling of leaves, the rhythm of waves or the movement of clouds – and respond through movement, sound or visual expressions. For instance, a learner might create a soundscape using instruments fashioned from natural objects or choreograph a dance that mirrors the patterns of wind or water.

This co-creative process aligns with Merleau-Ponty's (1968) idea that our embodied participation in the world involves both passive reception and active engagement. Art becomes a form of phenomenological enquiry – an exploration of the lived world that reveals the layers of perception shaping our experience (Merleau-Ponty, 1964). By engaging in these practices, learners become more attuned to their environments and the myriad ways that they are interconnected with the more-than-human world.

Co-composing with the sounds of the more-than-human world is an example of a collaborative creative process where participants generate and shape artistic expressions in relation to elements like wind, rocks and plants (Foster and Sutela, 2024). The collaborative composing happens through an ongoing dialogue in which participants respond to the sensory cues, rhythms and forms of these diverse others. For example, musicians might improvise alongside birdsong or the sounds of flowing water, allowing these natural elements to influence tempo, melody and mood. This process emphasises attunement and reciprocity, underscoring that creativity is not an exclusively human endeavour but a co-creative interaction with a living, dynamic world (Foster and Sutela, 2024). It resonates with Merleau-Ponty's notion that our perception is always entangled with the world itself, where the flesh of the world represents a shared ontology in which boundaries between perceiver and perceived blur (Merleau-Ponty, 1968).

Similarly, site-specific dance improvisations offer learners an intuitive and embodied means to engage with the more-than-human world (Foster and Ojanen, 2025; Foster and Turkki, 2023). Activities such as moving in response to the textures of rocks, the sway of trees or the flow of water become practices for exploring the self as inherently interconnected with the environment (Foster, 2016). These movements foster a sensory awareness of the world and illuminate the inseparable relationship between humans and nature, where both are continuously influencing, shaping and co-creating with one another. This approach embodies Merleau-Ponty's (2003) vision of a dynamic, living world where the boundaries between self and environment dissolve into a shared, relational existence.

Ultimately, these artistic practices are crucial in cultivating an ethic of care, empathy and creativity. By engaging with the more-than-human world through artistic expression, learners are encouraged to move beyond traditional, anthropocentric modes of engagement and embrace a more relational, interconnected perspective. As Merleau-Ponty (1964) emphasises, the role of the artist – and by extension, the learner engaged in creative practices – is to reveal the depth and complexity of the world, making visible the relationships often obscured by everyday perception. Co-creative practices foster a profound sense of belonging and responsibility towards ecological communities by recognising the agency and vitality of the natural world as active co-creators. Artistic practices based on a relational understanding of reality aim not only to transform individual perceptions of creativity but also, in the context of education, to highlight how embodied interaction with the world can enrich diverse ways of understanding.

Ecophenomenological and embodied perspectives of the levels of understanding in planetary social pedagogy

In this section, I illustrate how the three levels of understanding – cognitive, metacognitive and epistemic – are addressed within PSP and how to integrate ecophenomenological and embodied approaches into each level (Table 1). While these levels have already been described by other scholars of social pedagogy

(Salonen et al., 2023; Sterling, 2010), my focus is on learning grounded not only in rational knowledge but in lived, relational experiences within the more-than-human world.

Table 1. Ecophenomenological and embodied practice's contributions to levels of understanding in PSP

Level of understanding	PSP	Ecophenomenology	Embodied practices
Cognitive	Acquiring knowledge about social-ecological systems, understanding facts and processes in planetary contexts.	Describing human–nature relations, emphasising perceptions and sensory engagement in the more-than-human world.	Practising from the knowledge of the lived body; recognising how (ecological) knowledge influences experiences.
Metacognitive	Encouraging critical reflection on values, beliefs and behaviours, enabling systems thinking and value transformation.	Reflecting on the lived and relational experiences, challenging dualism and recognising the pre-objective world.	Reflecting on embodied experiences and memories, focusing on the relational body's role in learning and identity.
Epistemic	Including experiential learning that transforms entire worldviews; focusing on embodied, affective and intuitive knowledge.	Cultivating an intimate connection with the more-than-human world through direct experience, leading to transformation.	Engaging in co-creative (arts) practices with the more-than-human world, leading to a transformative awakening.

The cognitive level of understanding traditionally involves acquiring rational knowledge about social-ecological systems (Salonen et al., 2023). The ecophenomenological approach goes beyond intellectualism. While the facts about planetary processes produced by natural and social sciences are essential, the phenomenological perspective reminds us that all knowledge originates in our holistic engagements within the world. Therefore, when describing human–nature relations, the emphasis is on relational bodily perceptions. Embodied practices, particularly those of diverse sensory engagements, can deepen learners' understanding of the world's interdependencies.

However, when integrating an ecophenomenological approach to PSP, it is vital to acknowledge the reciprocal relationship between cognitive and embodied understanding. For instance, if the learner has ecological knowledge about the human body as a multispecies community – a host to diverse forms of microbial life – it can change how they experience themselves and their role in the more-than-human world (Keto and Foster, 2020). When learners internalise that their bodies are not isolated entities but are deeply interconnected with countless other forms of life, this cognitive insight reshapes their embodied sense of self. Thus, while sensory experiences enhance cognitive understanding, cognitive insights, in turn, influence how we perceive and experience our embodied existence.

The metacognitive level of understanding means critical reflection on one's values, beliefs and behaviours. Extending PSP's systems thinking approach to an ecophenomenological perspective makes it possible to help learners move beyond dualistic thinking, such as the separation of mind and body and human and nature. By recognising a pre-objective world – a foundational layer of experience that exists before intellectual categorisation – learners can better understand the relational nature of their existence. Reflective practices, such as collective biography work and memory-based listening, can assist learners in uncovering how social and cultural narratives have shaped their experiences about other life forms. Learners can be encouraged to revisit and share childhood memories, focusing on the senses – such as remembering the feeling of grass underfoot or the sound of wind through trees. This process of

reflection can lead to a profound recognition of the interdependence with others and, in that way, also guide towards a sense of belongingness within the broader ecological community.

The epistemic level of understanding refers to transforming worldviews through experiential learning that integrates embodied, affective and intuitive knowledge. The ecophenomenological approach focuses on direct, embodied engagements cultivating an intimate, co-creative relationship with the more-than-human world. Transformative learning is not just about acquiring new information but about experiencing a shift in how one perceives and relates to the world. Embodied practices, such as site-specific dance and movement improvisations, enable learners to experience the flesh of the world. For example, learners might be asked to create sounds with or to move in response to bird song, wind, water or moss. These activities cultivate a sense of co-creation, where learners do not just use the environment as a backdrop or instrument but engage with it as active, living participants in the creative process. By experiencing these reciprocal influences – feeling how they affect their environment and are affected by it – learners develop a deeper understanding of knowledge as inherently relational and embodied.

Addressing today's pressing environmental challenges requires a collective transformation in understanding and engaging with the world. The practices encouraged within ecophenomenology-informed PSP – such as embodied sensory engagements, reflective memory work and co-creative arts – support not only individual transformations but also collective awakenings. The modern socialisation process, based on anthropocentric thinking, drives the growing human away from an innate connection to all living things. In reality, humans cannot live in a sterile laboratory that is devoid of contact with other forms of life. When human-centric thinking is dismantled through transformative education, the learner becomes aware of how the more-than-human life also shapes the person they become. Learners are encouraged to develop a sense of planetary citizenship – recognising that the well-being of human and more-than-human communities are fundamentally intertwined.

PSP can redefine learning as a participatory, transformative process by integrating embodied, ecophenomenological insights across the cognitive, metacognitive and epistemic levels of understanding. With special attention to ecophenomenological aspects of reality, PSP can ground education in lived experiences, emphasising that true understanding comes not only from knowing the world intellectually but from being in it fully, bodily and relationally. This approach moves PSP beyond merely providing new ways of knowing; it aims to transform how learners perceive, experience and engage with the world. By supporting active, engaged participation in co-creating a sustainable and just planetary community, PSP has the potential to cultivate a profound shift towards a more relational understanding of human place within the web of life.

Conclusion

This article has explored the intersection of ecophenomenology and PSP, advocating for an educational approach that cultivates a profound sense of interconnectedness between individuals, society and the Earth. In light of the current ecological crisis, it is imperative to adopt transformative learning experiences that transcend the artificial separation of humans from the more-than-human world. By examining the philosophical underpinnings of ecophenomenology, mainly drawing on the work of Maurice Merleau-Ponty, this article has illuminated how embodied, relational experiences with a sense of ethical responsibility can inform a more holistic and sustainable way of being in the world.

Ecophenomenology provides a framework for PSP to move beyond theoretical concepts towards practices that cultivate a sense of belonging within the web of life. The reflections offered in this article underscore the urgent need for holistic approaches to planetary issues. By practising presence, reconnecting with sensory experiences and engaging in co-creative practices, educators can facilitate transformative learning that empowers individuals to become responsible planetary citizens. This transformation is not merely an educational imperative but an ethical obligation during an ecological crisis. Such transformation requires a collective commitment to rethink humanity's relationship with the more-than-human world – from exploitation and domination to mutual respect, reciprocity and care.

To achieve this, educators, curriculum developers and policymakers must integrate embodied and relational approaches into formal and informal educational contexts. Whether applied in early childhood settings, formal school systems, higher education or community initiatives, these practices can be adapted to encourage ecological consciousness across all ages and contexts. Educators can incorporate

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embodied activities into daily learning to allow learners to engage their full bodily potential rather than relying solely on the cognitive dimension. Curriculum developers can design programmes based on views of learning, humanity and reality that extend beyond anthropocentric thinking. Policymakers can support integrating perspectives of radical inclusion of all life into education standards and, that way, enable planetary well-being.

Transformative shifts in education provide a way to address current ecological crises while also presenting a hopeful vision of the future. Transforming educational systems is not just about transmitting knowledge; it is fundamentally about reshaping how relations are formed between individuals, other species and the planet itself. Such a shift is necessary to meet the complex challenges of this era and ensure the flourishing of all life forms on Earth for generations to come.

Declarations and conflicts of interest

Research ethics statement

Not applicable to this article.

Consent for publication statement

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Conflicts of interest statement

The author declares no conflict of interest with this work. All efforts to sufficiently blind the author during peer review of this article have been made. The author declares no further conflicts with this article.

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