




## ARTICLE

# Wilding Pedagogies: Impact of an In-Service Teacher Training in Greece with Nature as Co-Teacher

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## Abstract

Western contemporary educational systems tend to re-produce, and thus maintain, the existent non-sustainable social structures, failing to live up to the present critical times. Their aim is confined to preparation for financial “success,” whereas they disregard the imminence of environmental crises and global social shifts and are rooted in the human sense of superiority over nature, that is, anthropocentrism. The present article acknowledges the need for reconsideration of humans’ place and role in the ecosystem and focuses on the importance of a more ecocentric pedagogy. A holistic in-service teacher training was designed and implemented in Greece, inspired by the wild pedagogies touchstones, mainly the notion of nature as co-teacher. Twelve participants met for the course of a year to immerse themselves in nature-centred, affective, relational, “wild” experiences. Changes were recorded using pre/post-semi-structured interviews to inquire into participants’ perceptions of self versus Self (i.e. acknowledging oneself as part of a larger whole) and perceptions of (environmental) education. It appears that deep, relational nature experiences (a) can shift the perception of individualised self towards Self, (b) can shift the perception of teacher identity towards that of a change agent and (c) can set ethics and values education as a priority among trainee-teacher participants.

**Keywords:** Deep ecology; ecocentric; holistic approach; in-service training; teachers; wild pedagogies

## Introduction

The latest IPCC reports on climate (IPCC, 2023) together with UN Environment (2019) reports on biodiversity loss — among other accumulating data — point towards major environmental shifts in the imminent future, an era much referred to as “The Great Turning” (Macy & Brown, 2014). In such challenging times, a shift in the educational paradigm is required, considering that a number of young people today regard modern schools as irrelevant to their needs and pressing for change (see the Greta Thunberg movement and school strikes).

Our ecological crisis is at its root a crisis “in the way humans relate to the world” (Jickling, Blenkinsop, Timmerman & De Danann Sitka-Sage 2018, p. 5). According to Jickling et al. (2018), a significant portion of humanity has lost the ability to care and “live in wonder” (p. 5) about the Earth itself; thus, any proposed new educational paradigm should contain curricula and pedagogies that are “fundamentally disruptive to these ways of being,” (p. 67), address more than reason, offer more than information and are in active engagement with the earth.

Most mainstream formal school systems appear unable to adjust to these demands (Georgopoulos, 2014, p. 15) and remain intent on sustaining the status quo by eliminating any innovation that

threatens to upturn the system that has created them (Aikens, 2021; Morse, Jickling & Quay 2018). The current mainstream formal educational systems, moulded by modern societal ethics and the individuals who comprise them (Sterling, 2017, pp. 33–34), tend to promote individuality over citizenship, separate logic from emotion, allow human domination over nature (Orr, 1994, p. 27), teach competition, aim at the pursuit of financial and professional success while — to a great extent — understand “education” to be the pursuit of professional ascent, disregarding personality development (Lobrot, 2015, p. 103) or the cultivation of ethics and emotion. All of the above is rather “a narrowing, debasement even, of the meaning and purpose of education” (Sterling, 2017, p. 35), which, according to John Dewey (1922, p. 194), either encompasses ethics or contradicts itself.

Optimistic views for a “transformation through an emancipatory disaster” (Aikens, 2021, p. 7) should come with a plan, in the sense that the crisis can only be an opportunity when people are prepared for it. For example, certain members of the teaching community are searching for new pedagogies that will help to create “islands” of change within formal education, despite the lack of external or material motivation and means (Aikens, 2021; Winks & Warwick, 2021). If we are to raise a generation of healers and restorers of the Earth, two things are required: overcoming the obstacles caused by a lack of imagination of a different way of being and relating; and an effort to “wild” education (Jickling & Blenkinsop, 2020), against the “monoculture of modern life” (Prakash, 1995, p. 4).

Within this framework, Orr’s notion that “all education is environmental education” (2011, p. 12) appears reasonable. Environmental education (EE) is a field that carries the dynamic of an alternative educational proposal, not only methodologically, but by redefining the aims of education in general (Sterling, 2017, p. 42), changing the dominant narrative and providing a new, earth-inspired meta-narrative (Blenkinsop & Morse, 2017).

### ***(Re)Introducing ecocentric ethics in environmental education***

In the Greek educational community, EE appeared to carry the potential of an alternative pedagogical view, one that could contribute to a socio-cultural shift. However, for more than three decades now, it has not fulfilled this expectation. This is possibly because its function and role as a proponent of ethics education has not been fully clarified, as it instead sways between outdoor and natural science education (Georgopoulos, 2014, p. 17).

In modern Greek curricula in the last decades, the term EE is interchangeable with — and gradually tends to be replaced by — education for sustainability (ES) or education for sustainable development (ESD). ES/ESD brings an emphasis on human needs, such as social justice, poverty elimination, fair share among humans or human access to resources. However, there is a concern that this trend, despite carrying critical sociopolitical messages, might push the more-than-human to the margin of this discussion and fail to relate differently to the cosmos, especially when nature might still be considered as a commodity to be shared and valued for its ecosystemic services (Kopnina & Cherniak, 2015; Kopnina, 2013; Washington, 2018). However, research has shown that those who espouse more ecocentric values are more internally motivated to action as they are characterised by biospheric altruism (Dietz et al., 2005).

Therefore, it is maintained that an ecocentric approach to education, or ecopedagogy, enriches ES/ESD by broadening the ethical community to include other-than-humans and aims to educate the newest generation for their own and the planetary well-being, well-being viewed beyond economic prosperity (Kopnina, 2020).

An ecocentric approach to EE can take many forms and has been initiated by many schools and movements. In his seminal paper of 1973, Naess proposed that humanity adopt a deep ecology perspective, that is, perceiving all organisms to be interconnected in a field of relations, each having its own equal right to live and prosper. Of course, this school of thought is not something

new. Indigenous thought and practices placed humans in a more engaged relationship with the earth and all beings, and ought to be reassessed, whereas present dominant Western beliefs and values ought to be questioned (Devall & Sessions, 1999, p. 59–61).

The ultimate goal is to cultivate a sense of Self (as opposed to “self”), that is, in which one perceives oneself as part of the larger whole rather than detached from it (Devall & Sessions, 1999, p. 66). In order for this to happen, one needs to work with oneself, towards self-awareness via meditation, self-reflection, the constant posing of good questions that regard life, nature, society; trust intuitions; perceive the world holistically, via the body, emotions and two brains (referring to both the logical-analytical perception and the more imaginative-intuitive that are assigned to the two hemispheres) (Devall & Sessions, 1999, pp. 69–81). Also, the cultivation of the ecological Self entails perceiving the Earth as an animate organism (Devall & Sessions, 1999, p. 123), for example, endorsing the *Gaia theory* (Lovelock & Margulis, 1974) according to which, Earth is a mega-organism, upon which every being, animate or inanimate (the distinction is vague) collaborates to maintain the big body’s overall balance (homeostasis).

### ***Towards ecocentrism in EE through wild and holistic pedagogies***

Wild pedagogies can be the vehicle for carrying ecocentric values into EE. Wild pedagogies is an academic school of thought born through discontent with mainstream contemporary educational systems that fail to live up to the pressing current needs for an education that prioritises planetary well-being. The proposals for shifting the dominant educational paradigm revolve around six touchstones, which can be summarised as follows: (1) nature should be regarded not as an object of study but as a place/entity from which one can learn, provided (2) one allows for sufficient time and patience for observation of cycles and relationships (Jickling et al., 2018). In this process, (3) the wild is to be approached by a humbler position, renegotiating the superiority of one’s species, in order for one to learn from the myriads of beings that surround us (Jickling et al., 2018). (4) It is important to be open to the unexpected, as education is an open and dynamic process, the outcome of which is always negotiable and depends on the persons (human or non-human) involved (Jickling et al., 2018). Also, (5) education is a political act, and (6) its aim is to build healthy relationships and communities (Jickling et al., 2018).

The other significant pillar, when aiming for transformative learning, is a holistic approach in education, that is, addressing the whole human (body-emotion-cognition-intuition-spirit) (Tsevereni, 2020a). As Orr (2011) observed, emotions “have proved to be [as] useful over evolutionary time” as arms and legs (p. 32). Adherence to cognition only tends to separate many people from the rest of creation, therefore spirituality also needs to be united with science (Reason, 2007). The dualism of body versus mind collapses in the “embodied cognition” theory, according to which the body has its own way of perceiving and responding (Varela et al., 1991). Moreover, intuitive understanding is given more and more space, as a valid learning tool, increasingly acknowledged in the educational community (Dane & Pratt, 2007; Hyland, 2017; Mani et al., 2014; Meiklejohn et al., 2012).

### ***The study: ecocentric in-service teacher training in Greece***

This study emphasises the need to develop an ecocentric EE. In this respect, a training programme for educators was implemented, inspired by and endorsing wild pedagogies principles — primarily the notion of “nature as co-teacher.” The results of its implementation over the course of almost a year are presented here.

The in-service training drew from the field of ecocentric pedagogy and aspired to enhance ecoliteracy, that is, the ability to perceive the world in systems and interconnections together with

the quality of care and respect that arises from the understanding of humans' non-dominant position within the system (Orr, 2011, pp. 251–261). Ultimately, the training attempted to cultivate ecocentric values and enhance the participants' internal locus of control (Georgopoulos, 2014, pp. 234–261) in order for them to become change agents.

### **Learning approaches and methods**

The most important vehicles for transformative, holistic learning that were used include:

- **The arts** (expressive or visual arts), as they address and involve a person sensually, emotionally, intuitively, cognitively, symbolically and creatively (Illeris, 2012), promote seeing multiple realities and subjectivity through imagination that can lead to problem-solving (van Boeckel, 2009), offer room for creative contemplation but also provide space for vulnerability (Mantere, 1992) and cultivate wonder and disengage our confined minds from Cartesian dualisms (Anderson & Guyas, 2012). Theatre and role-play more specifically can explore values and alternative viewpoints, by adopting other perspectives, human and non-human (McNaughton, 2010) as well as broaden the mind as to the many different ways of existing there can be (Young, McGown & Haas 2010, p. 52).
- **Sensory awakening techniques and games**, which offer full body participation and emotional trigger (Tseveni, 2020b); Young et al., 2010, p. 46).
- **Myth**, which has been a major tool for cultivating values over the ages (Gruenewald, 2003; LaChapelle, 1978, as cited in Devall & Sessions, 1999) giving the opportunity to create new narratives that counter the dominant ones (Jickling et al., 2018; Sheridan, 2002).
- **Camping and living outdoors**, which provides an “immersion experience” that can help maturation (Gruenewald, 2003), by offering opportunities for meaningful encounters with human and more-than-human (Georgopoulos, 2014, p. 241) and community building (Hendricks & Miranda, 2003). It can also promote personal development by expanding one's comfort zone (Sibthorp et al., 2003). Additionally, it can offer a way to experience the real affordances of a place and cultivate a sense of “belonging to a place” (LaChapelle, 1991), where space is an entity that influences conversation and thought (Morse et al., 2018).
- **Ritual**, which is an elaborate spiritual technology based on thousands of years of experience (LaChapelle, 1978, as cited in Devall & Sessions, 1999) that connects humans to cycles and seasons, teaches values, helps express emotions such as gratitude and respect and bonds the people involved.
- Finally, **guided visualisation and meditation** are used for similar reasons as above.

### **Research questions**

The research presented in this paper aimed to investigate three main questions: whether the implementation of a wild pedagogical teacher training, applying holistic methods:

1. enhances ecocentric values and notions in teachers, namely, the acknowledgement of the intrinsic value of biodiversity and the recognition of Earth as a being, along with the cultivation of systemic thinking, that is, ecoliteracy,
2. clarifies the understanding of EE as values education (over outdoor, adventure, science or other kinds of education *in* or *about* the environment),
3. empowers teachers to become change agents by enhancing their internal locus of control.

## Methods

### **Participants**

A group of 12 individuals — seven women and five men of Greek origin — were selected after a call for applications was circulated via social media and mail, among the researcher's social circle. All participants are residents of the Drama region of Northern Macedonia county in Greece. Almost all participants were educators of diverse subjects. Specifically, the group consisted of three primary school teachers, three preschool teachers, one English language teacher, three Greek language teachers, one music teacher and one farmer (who exceptionally expressed the wish to participate and was accepted into the team). Their ages varied from 33 to 60.

### **Research design and procedures**

During the first acquaintance/organisational meeting, participants were notified of the content and the aims of the training and the research, were fully informed of the research requirements (interviews, journals), were asked about limitations, restrictions and impediments, and the course context was co-created, considering their needs. Participants committed to fully participate in at least eight Sunday meetings over the course of a year and to be interviewed twice. The time and place of meetings were negotiable due to weather and other unpredictable conditions. Meetings started in October 2019, were disrupted during the Covid-19 pandemic's strict isolation measures and were resumed in April 2020 and lasted until December 2020. In total, the programme consisted of eight all-day meetings (on Sundays), one weekend camping trip and two afternoons for reading inspiring texts and discussion. Meetings took place outdoors — mostly in forest settings — in the broader Drama region, and effort was made to change location every time. The rationale behind changing location was to expose ourselves to as diverse habitats as possible, on the premise that these would initiate different nature conversations and foster different teachings. Greece has the privilege of hosting the richest flora biodiversity in the whole of Europe — and the Drama region in particular boasts a broad range of vegetation zones. One additional reason was that participants were encouraged to propose and organize, as part of a group emancipation process, so the trip leadership was assigned to different people every time.

### **Procedures**

Each of the meetings constituted a thematic unit and activities were built around this theme. The activities were always open to negotiation, both with the participants and within the facilitator's/researcher's thoughts, in compliance with the wild pedagogy touchstone of being open to the unexpected. The landscape also participated in this negotiation — as different environments offer different opportunities — and so did the weather. A brief outline of the thematic units and activities implemented for their purpose is as follows: (a) getting to know the others in terms of aims, motivations and team building by drawing and presenting “what brought me here and now,” also creating team rituals; (b) sensory awakening and discovery of biodiversity by playing with textures, natural materials, doing temporary art, drawing a sound map, creating smell cocktails; (c) discovering cycles and relationships, focusing more on mutualisms (Margulis & Sagan, 1997; Mittelbach & McGill, 2019) — discovering what connects rather than what separates — by observing and role-playing members of ecosystems and how they interact; also guided visualisation to carbon cycle (Harding, 2010); (d) connecting to Gaia via guided visualisation, burying in leaves, storytelling myths on Aboriginal beginning of life compared to western mythologies (Bird Rose, 2017), creating a common modern myth, sit spot contemplating birth-life-death and journaling (Jickling & Blenkinsop, 2020); (e) discovering the affordances of a place (LaChapelle, 1991) through foraging, firemaking, cooking, water cleaning and creating our place-specific songlines inspired by the Aboriginal ones (Young *et al.*, 2010, p. 444); (f) expressing

gratitude by cleaning, creating and making offerings to local community; (g) adopting non-human perspective through role-playing and mimicking, for example, deer ears, fox walk and bird language (Young et al., 2010, p. 382, 338 and 378, respectively); and (h) discussing what EE is by reading inspiring texts such as “Sense of Wonder” (Carson, 1965) and wild pedagogies touchstones and journalling general impressions and ecosophies.

A series of open-ended questions were designed by the researcher, regarding perceptions and emotions with reference to (a) ecocentric values and notions (as presented above), (b) EE and (c) locus of control, which is presented below, together with their aim and discussion of findings. These questions were designed to be asked both prior to and after the training, with the addition of post-training questions referring to the process of facilitation and reflection.

**Data collection strategies and data analysis.** This qualitative research used pre/post-semi-structured interviews. The researcher had a pre-constructed framework of concepts and theories that could be transformed or extended based on the processing of the data produced. There were no predetermined categorizations, rather openness to new or unexpected as regards the interviewees’ concepts and ideas that the questions yielded (Bryman, 2012).

Since there was no predetermined theoretical categorisation, an inductive thematic analysis was used to analyse our data according to Braun and Clarke’s (2006) guidelines. The transcripts were studied in order to categorise the replies and detect critical themes. The thematic map and the codes formed from the pre-interviews were compared to post-training interview replies and investigated for changes and reformulations of beliefs, attitudes and notions. Although the thematic analysis was not deductive (i.e. top-down), some themes that emerged converged with certain points of our broader theoretical framework.

## Results

### *Inquiring into a potential shift towards ecocentric values*

Participants were first asked to express their thoughts and emotions when contemplating diversity in plants and animals. What first arose in the pre-interviews was the sense of wonder, together with positive emotions of admiration and joy, and a curiosity to explore this diversity first-hand. In the post-interviews, the emotions develop into gratitude, awe and respect, resulting from the deeper acknowledgement of the richness that surrounds humans; that is, the more participants were exposed to diversity, the more they realised how much diversity exists. An optimistic and surprising shift comes from Alex who initially — and very sincerely — claimed to be “indifferent” towards biodiversity but after the training said, “we are rich [...] I feel happy.” What is also observed is the emergence of Self, obvious in Stella’s words, who initially claimed, “I could perhaps become part of nature” whereas afterwards stated “I am part of this diversity, neither more nor less important [...] I feel grateful.”

Participants were subsequently asked to describe the ecosystem in their own words and emotions, with the aim of seeing if humans are perceived by them as part of the ecosystem. The ecosystem is initially almost unanimously (apart from one) perceived as pristine nature, separate and away from human intervention, and references to humans tend to regard them/us only as destructive presences, working against it: “air, water, light, soil... and how living organisms interact with those [...] I wanted also to mention hunters previously, but the ‘ecosystem’ took me to another direction [...] overpopulation and people, I don’t know how helpful these are to the ecosystems” (Dimitris). However, in the post-interviews, humans appear to have a place in the participants’ perception of ecosystem, together with the other biotic and abiotic elements: “What is ecosystem? Whatever there is in this world, human, animal, plant, insect, how to say, rivers, water, seas, lakes, all these one whole, to me this is ecosystem” (Maria). Another shift observed is that in pre-interviews, the elements comprising the ecosystem appear as separate units: “animals, plants, soil, sun...” (Alex) whereas in the post-replies, the web of connections appears: “many



different elements and beings, [...] like knitting the threads of life of every being and somehow create a whole" (Vassilis).

Regarding the question to whom or what they would ascribe intrinsic value, the first observation is that the term is totally unknown to all and they need further explanation and clarification, which is given to them via examples: "... imagine a fish that you have never seen or will see, that is neither beautiful nor edible, do you care if it becomes extinct or not?..." (Researcher). Interviewees declare — almost unanimously — that it is impossible to think of something outside of its usefulness, if not to humans, then to someone else. There are pre-replies such as "I think it doesn't bother me if things that I don't know of, disappear or not" (Petros). After the training, thoughts moved to acknowledging that

everything has a value of its own, since they are part of one system, whose parts have equal value. Therefore, if I ascribe value A to myself, I will ascribe value A to any other part of this world, of this system. (Petros)

It can be inferred by certain replies that the introduction of this notion somehow created a query that matured, as can be observed in Margarita's pre-reply, "Difficult question... I may not have an answer right now, but I will definitely study it," who, after the training, stated: "at the thought that everything is a chain, anything that disappears costs me, regardless if I need it or not." Joanna, being the only one among the participants to state "All things that are somehow against capitalism have an intrinsic value" seems to have taken her thought one step further into the importance of values education, as seen in her post-reply "Intrinsic value is a value that should start being taught at schools [...] is a state of mind that ought to be cultivated as a way of perceiving oneself and others."

Participants were also asked to describe the Earth, otherwise called Gaia, aiming to see whether Earth is perceived as a planet or as a being and how/if this is affected by the training. The pre responses include both notions "stones, worms, plants... trees, roots, soil, houses... human walking, animals, birds..." (Marcos); however, with a sense of a motherly affection, "it awakens something motherly to me [...] like an ancient wisdom... has tremendous experience" (Nikos). In the post-replies, this notion of a being, and specifically a motherly being, is enhanced, as can be discerned in the replies of Marcos — juxtaposed to his pre-reply above — "you can call her a woman, you plant a seed in her and she gives birth, and she feeds so many people" (Marcos); also of Stella who, in her pre-reply stated, "my planet, my home, something familiar, it touches me to think I am part of this planet," whereas in her post-reply claims that "Gaia is our mother, this touches me deeply [...] hosts us and allows us to be talking today and breathe, and everything."

### ***Inquiring into changes in perception of EE towards values education***

Participants were also asked what comes to mind when they hear EE, in other words, what is EE to them. This question resulted in the most varied and diverse set of replies, in the pre-interviews. The basic notions were (a) outdoor education, (b) innovative methods and activities, (c) non-formal learning and (d) getting in close contact with the earth, for example, planting. However, those replies were randomly given and outside one, unified, specific context, like random activities each of which can constitute EE. After the training, the emergence of the notion of nature as co-teacher was observed: Nikola's pre-reply "go to nature and learn things about her" becomes "to learn to listen to nature and thank her for what she offers." Again, the perception of Self as opposed to self, as seen in Elena's pre- versus post-replies: "Going for a walk in nature and feeling free to pursue interest" which shifts into "to realise that you are in reality part of a whole and so on and see yourself as part of a whole." Also, the idea of values education appears, together with a tendency for a more coherent definition and the importance of teaching systemic thinking, that is, ecoliteracy. One very coherent and comprehensive post-definition of EE comes from Maria:

the interaction and interdependence between human & nature [...] and my place in it, respect for anything that moves or does not move, and a sense of awe for something I cannot define [...] Letting children understand what is their position in this whole, neither smaller nor bigger but equal [...] to let them see this with joy and realize that this was given to us as a gift [...] and letting them know by experience.

Also, the change in perception is depicted clearly in the post-training words of Dimitris:

It used to be natural science but now is more about our attitude towards nature, posing philosophical issues, cultivating empathy towards nature, towards each other [...] bring children closer to nature so that they can see how they impact nature and receive elements from nature that will make them a better person.

### ***Inquiring into the internalisation in locus of control and empowerment***

The question of what they think they should do or needs to be done to heal the ecological crisis aimed to detect whether teachers possess an internal locus of control. In the pre-replies most participants focused on things that need to be done, mainly by those in power, for example, governments and states, while replies focused on treating symptoms rather than causes, for example, do recycling. In the post-replies, the importance and role of education are mentioned — specifically the values education, together with the power of activist groups, changing consumption models and democracy. A very striking shift comes from Nikolas, who initially says, “I’m not sure I call it a crisis,” whereas afterwards proposes that we all need to go out of our comfort zones and be confronted with the results of our actions, as radical remedy. Also, Stella initially feels that the solution lies in healing the way people relate to each other but is at a loss as to how this can be achieved, while later exclaims that “programs such as this one” containing nature experiences, if applied to a wider population could contribute to the healing of relationships that she dreams of. Finally, Clara in her post-interview mentions her responsibility to study more — so she can be a more effective change agent and affect others — as well as the deep impact of nature experiences.

### **Discussion**

The sense of wonder expressed in the first question, regarding participants’ ecocentric perspective, is an optimistic starting point, as Carson (1965) pointed out, “If facts are the seeds that later produce knowledge and wisdom, the emotions and the impressions of the senses are the fertile soil in which the seeds must grow” (p. 34). Indeed, the positive emotions appear to deepen into more internal self-realizations, such as the fact that one is an integral part of the bigger system that encompasses all, reminiscent of Arne Naess’ (1987) invitation to contemplate on our ecological self (Self), identifying oneself with all of life, transcending both the mere identification with only humans and the colonial mentality picturing nature as an object to be exploited (Taylor & Segal, 2015).

The realizations made regarding the relations within an ecosystem, as well as the embeddedness of humans within this relational web, constitutes the beginning of ecoliteracy, that is, the perception of a system of interconnections, as one is reminded by spiritual figures (e.g. Saint Francis of Assisi), Indigenous people’s relational ontologies and Capra (2013): “You cannot go out into a forest or a meadow and take a picture of a food web [...] ecology is the study of relationships” (p. 206).

The thoughts and shift in perceptions regarding the intrinsic value, although a somewhat elusive concept (Georgopoulos, 2002), can contribute to challenging the dominant anthropocentric Western culture by attributing emotions and consciousness to non-human beings, along with



meaning and importance even to inanimate entities. Thus, *Homo sapiens* is decentred from the position of the sole conscious and meaningful inhabitant of the planet. This ecocentric mentality is hardly known among the general public nor does it appear as a priority to tackle current issues (Gavrilakis *et al.*, 2017; Kopnina & Cocis, 2017). Ethics education should not be — and in the case of the present implementation has not been — prescriptive. Participants were given the space to explore their underlying values by bringing them forward during rich and meaningful post-activity reflections. Any ethical shift or reconsideration occurred on a personal level and resulted from each participant's subjective experience or nature encounter, rather than indoctrination.

Discussing the importance of addressing and perceiving Earth as a being, as proposed by Lovelock's Gaia theory (Lovelock & Margulis, 1974), it has been suggested that a cultivation of neo-animism can perhaps constitute a healthier way of relating to the Earth and a potential for forming ethical bonds to the Great Mother (Merewether, 2019). Therefore, it is deemed important that "early childhood intuitions about the aliveness of the world must be reawakened" (Richey, 2022, p. 214).

Regarding changes in perceptions towards EE, again the most optimistic shift lies in the realization of the importance of cultivation of Self, or ecological self. Equally important is the shift from perceiving nature as an object of study to perceiving her as the teacher to be listened to, that is, recognising agency in nature, as well as attributing to her equal status as the teacher-person (nature as co-teacher (Jickling *et al.*, 2018)). In the vocabulary of anti-colonial education, the decolonising of nature starts by disputing control over and disconnection from her (Jickling *et al.*, 2018). Finally, the concept of interaction-interdependence mentioned in the participants' replies leads necessarily to the conclusion that the healing of humans depends on and requires the healing of non-humans and the planet, engendering a new era in which Earth and humanity become mutually enhancing (Plotkin, 2013, p. 105).

The internalisation of locus of control — stemming from personal maturation — is achieved through proper education (Galvin *et al.*, 2018; Peyton & Miller, 1980), complementing a positive self-image with high self-esteem (Kırdök & Harman, 2018). In any case, once the locus of control is internalized, teachers become "infinitely more effective" (Georgopoulos, 2014, p. 257), gaining the confidence that they can indeed become change agents in this time of The Great Turning (Macy & Brown, 2014).

The improvement of participants' outdoors skills leading to greater confidence and will to guide students outdoors (Velempini & Ketlhoilwe, 2022) is an optimistic change, deemed essential and moving contrary to the dominant educational worldview of the perceived safety of rows of desks and abstract concepts, disconnected from real experiences (MacEachren, 2022; Richey, 2022) and suffering what Louv (2009) calls "the nature deficit disorder."

### ***Practical implications and applicability***

We are hopeful that our research outcomes and the pedagogy that can be proposed as a result may inspire and encourage practitioners and organisations — namely: EE teachers, EE centres and environmental NGOs — to adopt, make adjustments to and even enrich the above-mentioned learning approaches and methods and plan their own wild pedagogies leading towards ecocentrism and sustainability, in further teacher trainings and/or student programmes. Furthermore, universities play a critical role in providing future teachers with the appropriate theoretical framework and pedagogical tools for an effective and ecocentric EE, incorporating in their curricula wild pedagogies and experiential learning methods such as those offered in this article. Thus, future teachers could overcome the dominant cultural atmosphere that renders them reluctant to embark upon outdoor activities.

## Conclusion

It appears that the implementation of an outdoor in-service training programme for teachers that applied wild pedagogies and a holistic approach to learning produced a positive impact on the research participants as regards their EE pedagogy and attitudes. More specifically it has — to an extent — enhanced already-existing deep emotions towards nature. It has aided in the emergence and further development of an ecological Self and has contributed to the cultivation of a neo-animistic approach to Earth, shifting away from the mainstream utilitarian perspective towards an inanimate, objectified earth. Additionally, this training appears to have worked towards the cultivation of systemic thinking, which is the perception of ecology in terms of relationships and networks, where everything is interrelated, and humans constitute a small part of this large whole. At the same time, the training seemed to increase the empowerment of individuals to believe that they can become change agents. All in all, participants started a learning process departing from their personal “status quo ante” towards un-learning concepts, ways of behaviour and socio-cultural ways of being that have been trapping our civilisation in a dead-end direction. Before it can constitute a formal proposal towards in-service teacher training, the researchers plan to apply the proposed training methodology and practices to a larger population and with enriched research tools, to further explore its potential and impact in the educational community.

As for the theoretical ground on which this pedagogical proposal has been built, an attempt was made to draw from schools of thought that serve ecocentric pedagogy. These schools are multiple and diverse, converging at points and diverging at others. The attempt was to reap the strongest points to compose a holistic pedagogical proposal. It has been debated that ecocentric pedagogy should also raise issues of social justice and gender equality, as they are relevant to the ecological issue. Those issues have not been touched — at least directly — in the present paper. The notion of self-development and the growth of ecological self (Self) has been regarded as a core issue, on the premise that any social change presupposes the growth of the individual — that is, one cannot hope to build different social structures when people that comprise those structures are the same as Western people are today, regarding values, mindset and actions.

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