Australian Journal of Environmental Education (2026), 1–13
doi:10.1017/aee.2026.10200

CAMBRIDGE UNIVERSITY PRESS

ARTICLE

Planetary Ethics in Practice: Posthuman Philosophy and Educational Experimentation in a Global Initiative

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(Received 28 March 2026 UTC; revised 28 March 2026 UTC; accepted 01 June 2026 UTC)

Abstract

Escalating planetary crises – manifested through climate change, biodiversity loss, socio-ecological inequality and geopolitical instability – demand new forms of environmental education that engage Earth system complexity beyond anthropocentric frameworks. Drawing on posthuman philosophy and the planetary boundaries framework, this paper explores how planetary ethics can be cultivated through innovative pedagogical practice. Using the "Posthuman Educator" course as a qualitative case study, the paper examines how post-anthropocentric, post-dualistic and care-based pedagogies reconfigure learning across technological, ecological and spiritual dimensions. Participant reflections and pedagogical practices reveal planetary ethics as an emergent, relational process enacted through lived experience, multispecies attunement and collective responsibility rather than prescriptive outcomes. The study argues that posthuman pedagogy offers powerful methodological and ethical resources for education by fostering embodied awareness, epistemic plurality and situated planetary consciousness. The paper contributes to educational scholarship by demonstrating how posthuman approaches can meaningfully engage with planetary boundaries thinking in transnational and decolonial contexts.

Keywords: Ecology; planetary ethics; posthuman pedagogy; posthumanism; spirituality; technology

Introduction

In May 2020, Amphan, a catastrophic supercyclone, struck the southern coast of West Bengal (India) and Bangladesh, leaving a trail of devastation in its wake. When I visited the village of Mohonpur shortly after the storm, it lay completely submerged; homes, fields and familiar landmarks had vanished beneath the floodwaters. The sheer helplessness of people dealing with a force so vast and uncontainable made me, in a deeply embodied way, confront the affective and material intensities of planetary processes. That experience has never left me. It brought into sharp focus what Amitav Ghosh describes so poignantly: "Who can forget those moments when something that seems inanimate turns out to be vitally, even dangerously alive?" (Ghosh, 2016, p. 3). In Mohonpur, the waterways themselves seemed to rise up with a ferocity that blurred the line between the natural and the animate, an unsettling reminder of the vibrancy, agency and volatility of the more-than-human world. Historically, West Bengal had largely escaped the ravages of cyclones, but Amphan shattered this precedent. Sweeping through South Bengal with terrifying winds of 112–150 mph, it wreaked havoc, especially in the Sundarbans. The storm's ferocity breached embankments, unleashing powerful surges that devastated the landscape and obliterated forest cover. In the aftermath, the scene was one of destruction: uprooted trees, tangled power lines, fallen utility poles and widespread disruptions to electricity and water supply.

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https://doi.org/10.1017/aee.2026.10200 Published online by Cambridge University Press

Amphan's impact was catastrophic, exacerbated by the fact that most embankments were constructed from earth with few reinforced concrete structures (Raha *et al.*, 2025).

From the personal and local to the planetary level, it is simply an extrapolation. A completely different yet significantly related experience by NASA astronaut Ron Garan, who spent 178 days in space, revealed that when he looked at our planet from that distance, he saw only a biosphere teeming with life. He also said, "I didn't see the economy. But since our human-made systems treat everything, including the very life-support systems of our planet, as the wholly owned subsidiary of the global economy, it's obvious from the vantage point of space that we're living a lie" (Harrison, 2025). This also reminds me of Carl Sagan's famous 1985 Senate testimony, in which he spoke about the greenhouse effect and how it is an intergenerational, global problem that cannot be solved by individual nation-states or governments. He alluded to the science behind the greenhouse effect, drawing on carbon dioxide presence in the atmospheres of other planets in the solar system. In his testimony, he raised concerns about rising carbon dioxide in Earth's atmosphere and how it is adversely affecting planetary feedback loops and will have long-term planetary consequences (Sagan, 2022). These major breaches in planetary boundaries (Steffen *et al.*, 2015) are having devastating impacts at the local scale including supercyclones affecting the Sundarbans (Ghosh *et al.*, 2023; Sharma *et al.*, 2022), multiple hazards in California (Shives *et al.*, 2025), melting of Himalayan glaciers (Talukder *et al.*, 2021), ice loss in the European Alps (Cook *et al.*, 2023), receding of Mediterranean glaciers (Wang *et al.*, 2026) and the list can go on.

Apart from the massive shifts in planetary patterns of air, water, soil and ice, we are witnessing an exponential geopolitical crisis, based on political economy, religion and power. In many countries, dissent and peaceful protest relating to environmental protection, human rights, animal rights and plant rights is being met with extreme violence and incarceration. On the other hand, there is unparalleled growth and advancement of technology, artificial intelligence and automation. We are living in a paradox, a chaos that is spiralling, enchantment is real, we can no longer ignore the vitality of matter (Bennett, 2016), the agential realism (Barad, 2007) of the more-than-human planet, the history of madness (Foucault *et al.*, 2006) is revealing its hidden layers in all its splendour, we are still searching for answers. The breaching of planetary boundaries and the growing geopolitical crises pose interesting and complex questions to science, technology and education. Also, "Climate change poses a powerful challenge to what is perhaps the single most important political conception of the modern era: the idea of freedom, which is central not only to contemporary politics but also to the humanities, the arts, and literature" (Ghosh, 2016, p. 119).

Need for new forms of environmental education

The intensifying disruptions of the Earth system, manifested through supercyclones, melting glaciers, cascading biodiversity loss and destabilised climatic feedback loops, signal that environmental change is no longer a matter of local ecosystems but of planetary processes operating at unprecedented scales. These shifts have been mapped rigorously through the planetary boundaries framework, first articulated by Johan Rockström, Will Steffen and colleagues, which identifies nine critical Earth system processes that maintain a "safe operating space for humanity" (Rockström *et al.*, 2009). When boundaries such as climate change, biosphere integrity, or biogeochemical cycles are crossed, Earth system functioning becomes increasingly unstable, threatening the conditions that support complex life. These boundaries are therefore not only scientific thresholds but ethical limits, demanding new forms of educational inquiry capable of grappling with the implications of living beyond planetary safety margins. Here, what I am also drawn to is the political implications of this strong and evidence-based science. I am interested in the multilayered differences of the concept of "globe" in "global warming" and "globe" in "globalisation" as discussed in detail by Dipesh Chakrabarty in

https://doi.org/10.1017/aee.2026.10200 Published online by Cambridge University Press

conversation with Catherine Malabou (Chakrabarty, 2023). Chakrabarty goes on to say that the globe of globalisation has the human at its centre but the planet, though a human constructed story doesn't have the human at its centre. He alludes to the fact that disciplines like geology and evolutionary biology cannot be anthropocentric as humans enter the narrative too late to be at the centre of those stories (Chakrabarty, 2023). Now the question is, how can we bring this thinking into contemporary educational structures?

Contemporary education, still largely grounded in anthropocentric assumptions about human exceptionalism, mastery and stewardship, struggles to address this complexity. Traditional pedagogies often separate humans from ecological systems, treat the environment as a passive backdrop, or frame sustainability primarily as a matter of individual behaviour change. Such models are inadequate in an era defined by planetary-scale infrastructures, global inequalities and accelerating socio-ecological volatility. As scholars such as Kate Raworth have argued through frameworks like doughnut economics, ecological overshoot must be understood alongside social justice, inviting education to take seriously questions of global equity, intergenerational responsibility and planetary governance (Raworth, 2017). Similarly, emerging fields such as Earth system justice (Gupta *et al.*, 2024) emphasise that those least responsible for planetary destabilisation are often the most affected, thereby positioning environmental education as an ethical, political and decolonial endeavour. In this field, India's leading environmentalist Sunita Narain has done significant work on environmental science, policy building, education and deep awareness. She has continually stressed on multi-source data collection, open source data, inclusion of marginalised populations in the environmental discourse, new media approaches to bring creativity to storytelling and use of mass media for dissemination of environmental analysis (Narain, 2022). She, along with another eminent environmentalist, Anil Agarwal, has also worked in the domain of environmental colonialism and raised concerns about global warming of an unequal world (Agarwal & Narain, 2012).

It is within this complex and historically contested context of our present world that the posthuman turn in philosophy and pedagogy becomes essential. Posthumanism challenges the centrality of the human subject and instead foregrounds distributed agency, multispecies entanglements and the vibrancy of the more-than-human world. New materialist theories like Rosi Braidotti's "zoe-centrism" (Braidotti, 2016), Donna Haraway's "string figures" (Haraway, 2016), Francesca Ferrando's "art of being posthuman" (Ferrando, 2023), Jane Bennett's "enchantment" (Bennett, 2016), Timothy Morton's "hyperobjects" (Morton, 2013) offer conceptual tools for understanding how humans are embedded within the technological, ecologica and planetary assemblages. Posthuman philosophy thus provides a powerful lens for re-imagining education not simply as the transmission of knowledge but as the cultivation of planetary ethics, ways of thinking, feeling and acting that recognise the interdependence of humans, nonhumans, technologies and Earth systems.

Bringing these threads together, the aim of this paper is to explore how education can be reconfigured to engage planetary boundaries thinking and foster ethical relations across technological, ecological and spiritual dimensions. This raises two central questions:

- How can posthuman pedagogy meaningfully engage the planetary boundaries framework?
- How might educational practices cultivate planetary ethics within and beyond the classroom?

To address these questions, the paper introduces the "Posthuman Educator" course as a case study, a global, interdisciplinary pedagogical experiment designed to explore how posthuman philosophy and planetary ethics can intersect in practice. In doing so, the next section establishes the necessary intellectual and ethical grounding for reimagining education as a planetary project.

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Methodological context: The posthuman educator course

The educational course which I aim to explore and discuss in the paper is named "Posthuman Educator – plurality, mediation, praxis" (Posthuman Academy, 2025). It is an online 6-month course organised by the Posthuman Academy, in collaboration with the Global Posthuman Network and the SIUA (Scuola d'Interazione Uomo-Animale), whose first iteration happened from September 2025 to February 2026. The Posthuman Academy is an educational platform dedicated to examining the philosophical, ethical and practical implications of the posthuman turn, a shift in contemporary thought that challenges fixed notions of the human in relation to technology, ecology and multispecies entanglements (Braidotti, 2016; Francesca, 2019). Founded as a space for experimentation, scholarly engagement and critical inquiry, the Academy seeks to reimagine educational practice in a world increasingly shaped by digital automation, planetary instability and rapidly evolving forms of intelligence, both human and nonhuman. The first iteration of the course has brought together leading voices and practitioners from a diverse range of countries, including Australia, Canada, India, Iran, Italy, Japan, Mexico, New Zealand, Pakistan, Poland, Portugal, Spain, Taiwan, Turkey, the United Kingdom and the United States. The teaching team featured renowned professors and researchers such as Dr Francesca Ferrando, Dr Debashish Banerji, Dr Roberto Marchesini, Dr Stefan Lorenz Sorgner, alongside a keynote lecture by Dr N. Katherine Hayles. The assistant teachers team comprised of eminent scholars Dr Stefano Rozzoni, Dr Joanna Pascoe, Dr Qurratelean Liaqat and Dr Rodrigo Esparza.

Vision and mission

The core vision of the Posthuman Academy is to move beyond the traditional human-centred paradigm that has anchored much of philosophy and education. In this worldview, the "human" is not a fixed ontological category, but an ongoing process shaped through relations with technology, ecological systems and other species (Braidotti, 2013). The Academy's mission is to cultivate learning environments where participants become posthuman educators, cultural mediators who can navigate the ethical, ecological and technological complexities of the twenty-first century. The words in the name of the course, "plurality," "mediation" and "praxis" are loaded terms and push us to think critically about multi-perspectival approaches in education. To harness the true meaning of these words, it is necessary to delve into the layers of contexts, situations, places, cultures, histories, ecologies and technologies. This explicitly causes "death of a discipline" (Spivak, 2023) to forcefully bring our attention to the planet. It is difficult, complex and challenging to create this change, but through initiatives such as this course, a conversation is sparked. Through this, scientists, philosophers, writers, artists and technologists from different backgrounds and contexts have come together, bringing their disciplinary expertise to amalgamate into a vision that addresses the broader planetary questions.

This vision is grounded in three key philosophical pillars:

- Post-anthropocentrism: Challenging the assumption that humans are the centre of meaning, agency and value in the world (Francesca, 2019; Wolfe, 2010).
- Post-dualism: Moving beyond entrenched binaries such as human/machine, nature/culture, matter/meaning, observer/observed, apparatus/phenomena and self/other, drawing from relational ontologies that emphasise entanglement rather than separation (Barad, 2007; Ferrando, 2016; Haraway, 2016).
- Matters of Care (Puig de la Bellacasa, 2017): Recognising the force of things, vitality of matter (Bennett, 2004), understanding and exploring terrapolis, "n-dimensional niche space for multispecies becoming with" (Haraway, 2016, p. 11), interconnectedness of all forms of life and the ethical responsibilities that arise from planetary co-existence.

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Pedagogical approach

The Posthuman Academy employs a distinctive posthuman pedagogy, moving from transactional knowledge transfer towards modes of experiential becoming and relational learning. Instead of positioning instructors as sole epistemic authorities, the course emphasises collective inquiry, affective engagement and intellectual humility. It also highlights the importance of the time participants spend engaging with the modules and the course. They ensure that there is not excessive pressure on participants to meet tight deadlines or study too many topics simultaneously, being considerate of their professional work and time commitments.

Participants engaged in:

- Collaborative dialogue: Decentralising the expert–student hierarchy and generating knowledge through shared reflection, collective sense-making and multimodal communication. This revealed new methods as the cohort was very diverse with varied backgrounds and contexts including the diversity in the teaching team.
- Collective "response-ability" (Haraway, 2016): Most of the exercises asked for collective as well as individual responses. This made the discussions fascinating as the collective outcome was often slightly different from the individual ones.
- Individual projects: A substantial final project that integrates philosophical theory with lived practice, enabling participants to apply posthuman concepts within personal, educational, or research contexts.
- Ethical thinking and participation: A flexible contribution model that values intellectual, physical and financial commitments while ensuring accessibility for participants from varied socio-economic backgrounds, an approach resonant with feminist and decolonial ethics of care.

Ultimately, the course operates as a bridge between high-level theoretical work and embodied, material practice. It prepares individuals to engage with escalating realities of artificial intelligence, genetic engineering, climate crisis and multispecies relationality with care, responsibility and ethical imagination.

Pedagogical modules as planetary thinking

In this section, I organise the course modules around three primary dimensions, technology, ecology and spirituality, and discuss how these dimensions foreground planetary ethics through both theoretical framing and pedagogical practice.

Technology and the posthuman condition

The course approached the concept of technology from a different perspective, offering a valuable way to think about or teach technology in an increasingly digital world. Dr Francesca Ferrando discussed Heideggerian thought on technology (Heidegger, 1977), the process of revealing, the co-creative unfolding and the way of revealing known as poiesis. In this framing, technology is not merely a tool or instrument, but a mode of disclosure, a way in which the world shows itself to us. The techne is the skill, the capacity, the knowing-how; but its application or poiesis (coming into being) is never linear or predetermined. Instead, it is always a process of merging, improvising and blending, which leads to new methods, new meanings and new outputs. Technology becomes an event rather than an object, something that is continually emerging through our encounters with it. Considering the various technologies we use today, such as AI systems, digital social media platforms, biotechnology, cybernetic body extensions and planetary data infrastructures, they are not just external tools but active participants in shaping our world. They reveal possibilities while

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concealing others; they invite certain relations while foreclosing others. Ferrando's view of technology shifts the focus from technology as a finished product to a living process humans are entangled with: altering it, being altered by it and co-creating. For teaching, this means seeing technology not as fixed or neutral but embedded in our daily lives, materially, ethically and affectively. It invites critical reflection, creative engagement and understanding that every technological encounter also reflects a way of being, knowing and becoming.

The exercises in this part of the course were engaging and applicable across various educational settings in today's world. We were encouraged to creatively respond to technology-related questions using technology itself. This involved a quiz with questions focused on the existential aspects of technology, and the cohort was divided into groups to collaboratively answer these questions. Each person was also asked to produce a creative video addressing the big questions, specifically answering: "How can posthuman educators embrace technology in a poietic, creative, and generative manner? How might this approach differ in various contexts?" I responded saying, "Posthuman educators might approach technology in a relational and exploratory manner. In my sound practice, I used advanced microphones, such as a Sennheiser omnidirectional microphone, a shotgun microphone, or a hydrophone, which capture the ambient soundscape or underwater soundscape in minute detail. Here, poiesis brings a totally new dimension which can be used in pedagogy and education as a collective and emergent tool. One creative way to use such technology is in a spatial way. To understand space in new ways, we can experiment with the position of microphones in terms of height, direction, or closeness to a particular source. This can be applied in many other fields of exploration as well. Here, the techniques of sound engineering merge with human and more-than-human spatial listening to create a spectrum of material entanglements."

In this sense, posthumanist education repositions pedagogy as an ethical and ontological practice, attentive to how learning environments shape relations between humans, technologies and the more-than-human world.

> "Posthumanist education remains loyal to our 21st-century condition, recognizing the creative potential inherent to our modes of existence. It encompasses a comprehensive understanding of the who, what, where, when, how, and why of learning and teaching, emerging from our historical, biological, and cultural evolutions, leading us to consider new challenges and opportunities, such as: *Is seating necessary in the process of learning? Can we avoid prolonged exposure to technology and screen time, in the age of the Infocene? Can educational spaces be re-imagined outdoors?*" (Ferrando & Rozzoni, 2023, p. 589)

On the other hand, Dr Stefan Lorenz Sorgner demonstrated contemporary transhumanist developments in technology, education and data control. He led us to think critically about big data, human enhancements, bioethics and broader questions of data security, data control and data democracy. He made commentary about simulation, AI takeover, mind uploading and other transhumanist notions of human existence. In one of his books, he writes,

> "Cyborg technologies have to do with the digitalization of the lifeworld, smart cities, the Internet of Things, and the upgrading of human beings by means of RFID chips. We have to realize that smart cities need upgraded humans and the Internet of Things needs to integrate the internet of bodily things. Both of these types of technologies are progressing rapidly, due to the central relevance they have for promoting a widely shared human goal, the prolonging of our health spans." (Sorgner, 2021, p. 23)

In response to these questions on technology, I reflected, "When you visit a website or app, you encounter various prompts, sometimes easily overlooked. These include requests for cookies and tracking consent, performance and analytics, targeted advertising and more. Through these

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prompts, the app or website gains access to our movements, choices, interests and needs. They are usually designed so that most people simply click "accept all." However, some users take an extra step by clicking on settings to select only the necessary functions and reject the unnecessary ones. This entire process, occurring in real time on each device, makes Sorgner's commentary on autonomy and the manipulation of our desires by machines or systems particularly relevant. This raises important questions about safeguarding democratic values. On a global scale, I believe a highly complex process is occurring where systems and machines are already part of the future. In the book Fanged Noumena, Nick Land writes, "Far from exhibiting itself to human academic endeavour as a scientific object, AI is a meta-scientific control system and an invader, with all the insidiousness of planetary technocapital flipping over. Rather than its visiting us in some software engineering laboratory, we are being drawn out to it, where it is already lurking, in the future." (Land, 2011) Though Nick Land is considered a controversial philosopher, I think he is a deeply critical thinker and has explored these issues of technological singularity extensively." When we are living, breathing and working in the same spacetime dimension of a complex entity that is continuously updating and upgrading, how do we think about autonomy and democracy? How can we mould educational structures to foster critical engagement with these current and accelerated developments?

Ecology and planetary thinking

Drawing on the insights of Dr Roberto Marchesini, the course framed posthuman pedagogy as a way of understanding ecological systems as distributed networks of human and nonhuman agencies. This approach emphasises action-based and engagement-based learning, where knowledge emerges through situated encounters, immersion and embodied participation rather than abstract theorisation. Through a series of real-world exercises grounded in relationship, encounter, repetition and time, participants were invited to attune themselves to ecological entanglements and to experience, rather than merely conceptualise, the relational dynamics that shape more-than-human worlds.

The three exercises collectively invited participants into embodied, relational and multisensory forms of ecological attunement that resonate deeply with planetary ethics and contemporary understandings of planetary boundaries. In the first activity, spending extended time in a natural setting and moving imaginatively across different more-than-human entities cultivated a shift from human-centred perception towards a distributed sense of ecological presence and interdependence. The second exercise, which involved forming a sustained relational engagement with a familiar living being, foregrounded care, reciprocity and the slow ethics of attention, qualities essential for responding to ecological degradation and the uneven impacts of planetary boundary transgressions. The third exercise, centred on bodily reflection, hybridity and performative experimentation, encouraged participants to recognise their own materiality and permeability, reminding them that human bodies are not separate from but continuously entangled with wider ecological and technological systems. Together, these practices nurture a felt understanding of interconnectedness, vulnerability and co-existence, key dimensions of planetary ethics and help learners sense, rather than merely conceptualise, what it means to inhabit a world where climate change, biodiversity loss and other boundary breaches demand new modes of responsibility, relational awareness and ethical becoming.

Roberto Marchesini's lecture on ecology highlights how humans continue to exhaust Earth's ecosystems and emissions, raising questions about whether we resemble a pathogenic force within a strained planet, as James Lovelock's Gaia hypothesis suggests. Unlike viruses, human actions result from conscious choices and moral responsibility. Despite this, our destructive capacity grows with our confusion and dismay over ecological decline. While viruses maintain a balance with their environment, humanity applies a viral logic to the planet, risking becoming a chronic condition that damages the Earth's system (Marchesini, 2021). The module encouraged us to

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become aware of our immediate environments, the different species, their behaviours, how they live, communicate and how ecology is interconnected with relationships. For example, I started observing birds in my neighbourhood in the suburb of Ringwood East, Melbourne. There is so much to learn; it is fascinating. I noticed magpies, currawongs, galahs, cockatoos, lorikeets, noisy miners, ravens, kookaburras, parrots and many other species. Each has a different form of vocalisation. There are patterns, and these patterns change during different times of the day and across seasons. The sound of insects is significantly louder and more noticeable during summer, while it is almost quiet during winter. This is just an overview of the diversity I observe every day. It gives us the opportunity to explore further into species behaviour, vocalisations, habitats, food, mating and relationships with place. Every place on the planet is connected through multispecies habitats. During a period of significant biodiversity loss, we must urgently incorporate these contexts into our educational systems and integrate science with the politics of conserving these ecological relationships and habitats.

Spirituality and planetary consciousness

In this segment of the course, Dr Debashish Banerji directs our attention to the world wisdom traditions and the metaphysics of consciousness evolution, indicating a significant transition from Darwinian biological adaptation to a paradigm of "conscious evolution" driven by entity agency. Banerji highlights a distinct moment at the cusp of the 20th century, whereby thinkers such as Sri Aurobindo and Pierre Teilhard de Chardin advanced beyond Hegel's deterministic "Time Spirit" to propose that a transcendental principle, such as the Supermind or Noosphere, is immanent within all matter, seeking self-realisation through human subjectivity. It is interesting how we move from artificial intelligence to species intelligence to the history of human intelligence and mind. Banerji examines the "triple transformation" as a methodological approach to this expansion, emphasising the role of the "psychic being" or soul personality as a central pivot for integrating individual consciousness with a universal reality. Through the analysis of these panentheistic foundations, it is established that human life is not confined within fixed biological limits but represents an open-ended process of "cosmogenetic individuation," whereby the individual becomes a coeval participant with cosmic forces in the continual creation of the world (Banerji *et al*., 2016).

He highlights how humans have crowned themselves with the title "*Homo sapiens,*" implying wisdom based solely on brain matter. But wisdom traditions and posthumanist thought challenge this, asking if plants and animals, too, possess forms of wisdom and intelligence. An archaeology of consciousness suggests wisdom is older and stranger, more like a process than a possession, echoing across scales from cells to the cosmos. Banerji went on to explain to us how psychoanalytically, this ties to the infant's primal wholeness with the mother, before language and self. The trauma of birth fragments this unity – Freud's Oedipal rupture, Lacan's entry into the Symbolic, Jung's individuation – creating a self out of primordial oneness. The mother retreats into the unconscious; desire centres on loss. This trauma shapes how minds organise the world- hierarchies, borders, divisions- leading to epistemic violence, the suppression of other knowing systems beneath empire's weight. Colonialism was not just physical but a mental fragmentation, imposing a severed logic on ecologically integrated cultures. Modernity accelerates this fragmentation, leaving little space for reconnection. Wisdom might instead be humble, process-oriented, across biological, cultural, spiritual and artificial realms, an inheritance that urges us to remember the coherence long broken by empire, which no algorithm can fully reproduce.

In response to these dense questions raised by Dr Banerji, I wrote,

> "The integration of world wisdoms will enable us to embrace the becoming in the posthuman spirituality that I propose. It will help us consider the agency of all entities including human, non-human and non-living. It will also deepen our understanding of human interactions and

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rituals built around geological forces like rivers, oceans, mountains, glaciers. Here I am really interested in exploring indigenous traditions like the 60,000-year traditions in Australia. My friend Sophia Pearce is a Barkandji woman, a researcher at RMIT University and a mother living in Gol Gol, on the Milli (Murray River) in south-west New South Wales (Kerb, 2020). She talks about situated knowledge of her land and waters, which she cares for and protects through ritual and learning. I went to Quandamooka country near Brisbane and spoke with elders there, who told me that each community/group has a totem. A totem is a natural object, like a plant or an animal, that is used as a spiritual emblem. Stories are built around this spiritual emblem. All stories and rules are designed to care for country, land, water, plants, animals and each other. It is also worthwhile to consider water-worshipping rituals in the Indian state of Sikkim, or mountain-worshipping practices in India and Nepal. This creates a broader paradigm of posthuman spirituality that is built on the ethics of relations, relationality and immanence."

Participant responses and emergent planetary pedagogy

In order to understand how planetary ethics was experienced and articulated within the "Posthuman Educator" course, participants and one assistant teacher were invited to respond to the question: How do you think the "Posthuman Educator" course has brought planetary ethics to these chaotic times? Participant reflections indicate that planetary ethics emerged in the Posthuman Educator course not as a prescriptive framework, but as a gradual reorientation of perception, pedagogy and responsibility. For many, this process began with an intimate displacement of anthropocentric thinking through everyday encounters with the more-than-human world. Vaishnavi Singh describes this shift as deeply lived rather than theoretical: "I started noticing small things in my daily life – being more conscious about waste, reflecting on my dependence on technology and even changing how I perceive nonhuman life." For Singh, planetary ethics begins not at the scale of abstract crisis, but through "small, everyday awareness," where ethical responsibility becomes personal, embodied and continuous. Others emphasised that planetary ethics was enacted less through content than through pedagogy itself. Kusumitha R articulated this clearly, noting that the course "meaningfully enacts planetary ethics by reconfiguring pedagogy itself as an ethical, relational practice." By situating learning within "a web of entanglements that includes technological systems, ecological processes and more-than-human agencies," the course displaced knowledge as human possession and foregrounded responsibility in non-hierarchical terms. Rather than reinforcing human exceptionalism, Kusumitha observed that it cultivated "an ethics of care, reciprocity and attentiveness to interconnected vulnerabilities – whether environmental, digital or biological." In this sense, planetary ethics was not merely discussed but embodied through method, structure and collaborative process.

Crucially, planetary ethics also surfaced through critique and reflexivity. Giacomo Colomba offered a nuanced tension, recognising the course's capacity to frame contemporary instability, "global conflicts, the relentless race for resources . . . racism, religious fundamentalism, regional ideologies," while also questioning whether accessibility can limit depth. He cautioned that when knowledge does not deepen into "gnosis," it risks remaining informational rather than transformative. Giacomo further identified moments where planetary ethics slipped into oppositional framings, "us vs governments," "us vs capitalism," arguing that such dualisms may obscure the fact that these systems are "also co-produced through our own practices, desires, and forms of participation." His reflection underscores the importance of recognising complicity and entanglement as central to a posthuman planetary ethics. Several participants expanded planetary ethics beyond individual transformation towards collective, transnational and praxis-oriented engagement. Gitanjaly Chhabra described the course as cultivating "an ethics grounded in relationality, plurality and ecological entanglement," where learning moved "from abstract theory

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to lived experiences." She emphasised that education itself emerged as "a technology for planetary evolution," particularly through final projects that translated posthuman philosophy into "creative, embodied and diffractive" forms of practice. These projects – ranging from installations to pedagogical and ecological interventions – demonstrated how planetary ethics can be lived rather than merely conceptualised.

From the perspective of course facilitation, Stefano Rozzoni highlighted how planetary ethics emerged through the course's transnational and plural composition. Bringing together participants from diverse geopolitical and epistemic contexts enabled the decentring of Eurocentric frameworks and the formation of "a relational network of situated knowledges." For Stefano, the figure of the posthuman educator did not precede the course but "emerges during the course through a horizontal, collective and co-creative pedagogical process, as a figure capable of navigating cultural differences, affirming epistemic plurality and addressing the complexities of our planetary condition in ethically grounded ways," capable of staying with the trouble while remaining open to affirmative responses to entangled crises. Finally, planetary ethics was articulated as requiring non-anthropocentric and poietic modes of engagement that connect planetary scales with personal, affective and creative practices. Katarzyna Ferworn-Horawa reflected that "human anthropocentric ethics seem helpless on the planetary scale," arguing for the necessity of including non-anthropocentric perspectives through poiesis and experimental praxis. Practices such as collective silence, embodied meditation and creative experimentation enabled participants to sense planetary interdependence through the body, affect and movement. As Katarzyna notes, planetary ethics becomes possible through "personal struggle: to feel . . . and change habits of thinking," where the planetary and the personal meet. She also mentioned, "Supported by the course I developed my own aest-ethical contribution by introducing an academic project on affectivity, creativity, and agentiality (my PhD thesis), and translating it into the interactive play of body/mind-in-movement." Taken together, these reflections suggest that planetary ethics within the Posthuman Educator course emerged not as a unified doctrine but as a sensitive, creative and agential collective process. Rather than offering ethical closure or certainty, the course cultivated attentiveness, relational care and plural forms of becoming-with in chaotic planetary times.

Discussion: Towards a posthuman planetary pedagogy

Contemporary educational structures must cultivate planetary ethics capable of navigating Earth system boundaries through interdisciplinary and posthuman approaches. There is an urgent need for us to go beyond traditional pedagogical structures. I ask: What is science education without the social, political and cultural dimensions it brings? In Australia, recent research on blue carbon in mangrove ecosystems is merging Indigenous knowledges with advanced science and technology, bringing to the forefront new dimensions of educational formulations (Costa *et al.*, 2026). This is what I pointed out in the previous discussions. Posthuman and new materialist ways of thinking and pedagogy help us tackle the challenges of our planet and also help us think about regenerative futures where restoration of habitats and ecosystems is the order of the day and the whole education system is designed in a way to push students to think in the direction of planetary stewardship, care and empathy. Today, we have at our disposal hundreds of technologies, yet we are disconnected from the natural world. Statistics indicate that adults in the U.S. and Canada spend 93% of their lives indoors or in vehicles. This trend is comparable across most post-industrial nations and affects all age groups, including children. Additional research shows that disconnecting from nature contributes to physical and mental health issues, playing a key role in common diseases like obesity, cancer, depression and arthritis (Ferrando & Rozzoni, 2023).

In this scenario, the kind of pedagogy that the posthuman academy has facilitated is deeply situated, de/anti-colonial and planetary, and it makes a turn from resource-based thinking to a

https://doi.org/10.1017/aee.2026.10200 Published online by Cambridge University Press

relational and embedded form of understanding of the planet and its processes. If you think of a chamber orchestra and its layers in composition, or maybe a film's sound design, which has more than a hundred layers of sound, why can't we think of educational structures in a similar way? The vision is to think of education in layered, contextual, situated, local, regional, planetary and transdisciplinary ways. The context in Australia will be different from that in India, China, Brazil, Argentina or Russia, but it is important to create cartographies of difference alongside embedding structures deeply within local and regional processes. What is happening in the island countries in the face of planetary challenges? How are they different from the impacts faced by large countries? The concept of climate refugees started coming into the conversation, and this has to be part of education systems to create a planetary ethics. In my own work on mangrove ecologies, I am engaging with three places across India and Australia, working in a transnational context. I am also interested in environmental concerns across all other mangrove ecologies on a planetary scale, which might be my next research step after my PhD. This interest has been amplified and put in focus through the "Posthuman Educator" course. Initiatives such as this give us clear pathways to harness the planetary consciousness that is deeply embedded in our consciousness.

Acknowledgements. I would like to acknowledge the support and encouragement of Dr Francesca Ferrando when I started working on this project. I would like to thank Stefano Rozzoni, Vaishnavi Singh, Kusumitha R, Giacomo Colomba, Gitanjaly Chhabra and Katarzyna Ferworn-Horawa for their spontaneous contributions.

Financial support. This research received no specific grant from any funding agency, commercial, or not-for-profit sectors.

Ethical statement. Nothing to Note.

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https://doi.org/10.1017/aee.2026.10200 Published online by Cambridge University Press

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Cite this article: Raha, P. (2026). Planetary Ethics in Practice: Posthuman Philosophy and Educational Experimentation in a Global Initiative. *Australian Journal of Environmental Education*, 1–13. https://doi.org/10.1017/aee.2026.10200

https://doi.org/10.1017/aee.2026.10200 Published online by Cambridge University Press