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Education and the environment

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The BERA Blog was established to provide research-informed content on key educational issues in an accessible manner. Its aim is to produce and promote articles that attract policymakers, parents, teachers, educational leaders, members of school communities, politicians and anyone who is interested in education today. It also welcomes the submission of research-informed articles from across this community.

The blog is edited by a small team comprising academic representatives chosen by BERA's Academic Publications Committee and the BERA office. All content is approved for publication by one or more of this team. However, the views of the authors are their own, and the views expressed on the blog (and in this collection) are not the official views of BERA.

The blog is currently curated by the editorial team of Jennifer Agbaire, Gerry Czerniawski, Naomi Flynn, Alison Fox, Elizabeth Rushton, Barbara Skinner and Kathryn Spicksley.

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The BERA Bites series presents selected articles from the BERA Blog on key topics in education, presented in an easily printable and digestible format to serve as teaching and learning resources for students and professionals in education.

Each collection features an introduction by editors with expertise in the field, and each article includes questions for discussion, composed by the authors, prompting readers to further explore the ideas and arguments put forward in the original articles.

See bera.ac.uk/bera-bites

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EDUCATION AND THE ENVIRONMENT

Editorial



ELIZABETH RUSHTON¹ & AMANDA ANDERSON²

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Today, in 2025, as an Earthly community, we face the ongoing triple planetary crises of climate change, nature and biodiversity loss and pollution and waste. Across the UK, and in many other parts of the world, we are also asking far-reaching questions about education systems, including formal schooling, and the extent to which education has planetary flourishing and interspecies relations at heart. This period of reform and revaluation of education is evident in the UK, in the reviews of the national curricula of England, Wales, Scotland and Northern Ireland, which are currently at different stages of development. However, we might question the extent to which ideas of Environment and Education are at the heart of these reviews and reforms.

Given the complex global environmental challenges we face, and the widespread recognition of the role education has in achieving environmentally just and sustainable futures, in this BERA Bites collection we have organised 13 blog posts that look across broad themes of Education and Environment.

These three themes are:

- Place and nature: Connection and belonging
- Advocacy, activism and citizenship
- Outdoor learning across the lifespan.

Across the first theme of **Place and nature: Connection and belonging**, blog post authors consider the ways in which human and more-than-human communities develop and sustain ideas of (dis)connection and (un)belonging through relationships

with places and nature. **Mike Brown** opens the contributions to this theme, exploring the ways in which in Aotearoa New Zealand, Māori knowledge systems (Mātauranga) – which encompass a broader set of relationships, including those based on kinship connections (whanaungatanga) – can enrich and inform understandings of both environment and education that extend across human and more-than-human worlds. Looking across the Tasman Sea to Australia, **Mary Graham, Simone Thornton** and **Gilbert Burgh** highlight the ways in which education, as a colonial project, has been wholly and deliberately unresponsive to place. This both excludes Indigenous ways of knowing, being and doing, and limits our capacity to respond to environmental crises. In the context of a primary school in England, **Nasreen Majid, Lucy Taylor** and **Jim Dees** explore how arts-based approaches as part of outdoor learning can enhance nature connectedness. Nature connectedness is a psychological construct that focuses on an individual's sense of their relationship with the natural world, and Nasreen Majid and her colleagues suggest that this situated and relational approach to environmental education can enhance pupil wellbeing. The final blog post in this theme, authored by **Cait-Talbot Landers** and **Bethan Garrett**, is also at the intersection of education, place and wellbeing and shares learning from a Beach School network in north-west England. They underline the vital role that teachers play in creating a 'bridge' between places and nature, including beaches and children and young people.

The second theme explores the ways in which ideas of **Advocacy, activism and citizenship** are considered in the context of education and the environment. **M. Mahruf C. Shohel** shares how a newly developed undergraduate module, 'Introduction to climate change, social justice and sustainability', provides opportunities for action and active participation for both students and educators, including considering the injustices perpetuated by environmental degradation. **Jane Essex** poses the evocative question, 'Whose climate crisis is it anyway?', urging educators and education researchers to pay greater attention to those largely marginalised in decision making about education and the environment, including children and young people with learning disabilities. **Smriti Safaya** and **Lynda Dunlop** grapple with the place of environmental activism in education, noting the increasing curbs on environmental protest in the UK at a time when action to address global warming is urgently needed. In the final blog post contributing to this theme, **Verity Jones** and **Christopher Bear** share work with primary school children and teachers in south-west Wales to consider young people's food choices and complex relationships with food as a potential route to ethical citizenship and sustainable education.

The third and final theme explores approaches to **Outdoor learning across the lifespan**. Outdoor learning broadly captures the range of learning experiences undertaken outside and can include aesthetic, cognitive, emotional, physical and spiritual experiences as part of learning. **Anna Ridgewell** underlines the importance of education settings, including early years settings and primary schools to ensure that all children have opportunities to access outdoor environments and learning. Similarly, **Sruthi Atmakur-Javdekar** spotlights the importance of accessible neighbourhood play areas with varied environmental qualities in supporting children's physical and mental wellbeing. Retaining the focus on early years settings, **Shaddai Tembo** explores the development of children's sense of self in the context of an alternative outdoor early childhood provision in Scotland. Shaddai draws on socio-materialism, which emphasises the redistribution of agency beyond the human, to explore how children might form their subjectivities within the world in more-than-human ways. This circles back to some of the themes of nature and belonging explored in the first theme, especially the ideas shared in the blog posts by **Mike Brown**, and also **Mary Graham**, **Simone Thornton** and **Gilbert Burgh**.

Turning to the role of teachers in outdoor learning, **Avril Rowley** and **Silvia Cont** highlight the importance

of initial teacher education (ITE) and outline a 'natural curriculum' for student primary teachers, which embeds nature-related content and outdoor learning across the ITE curriculum. Finally, **Barbara Humberstone**, **Di Collins** and **Geoff Cooper** reflect on the ways in which outdoor learning can support both lifelong learning and healthy ageing, and the need for people to develop a 'habit' that nurtures curiosity and interest.

Across the 13 contributions that comprise these three themes, we reflect on the ways in which educators and education researchers, in a variety of settings and contexts, are responding to environmental challenges and injustices as a core part of their professional lives. Frequently, this work, contribution and innovation is achieved in the 'gaps' rather than as a result of policy-led initiatives or support. The contributions across the blog posts included in this BERA Bites provide plenty of rich and varied approaches and ideas to take forward. Given that curriculum reform is currently a feature of education systems across the UK, we underscore the continued need for ideas and concerns about, and experiences of, the environment to be centred in education by policymakers and decision makers.

A NOTE FROM THE BLOG EDITORS

While you read these blog posts, you might also think about your own contexts or research. Perhaps you would like to contribute a post to the BERA Blog, or perhaps when you are next at a conference or professional development event you might come across someone whom you could encourage to write for us (see bera.ac.uk/submission-policy for details on how to submit). Please consider interesting methodological aspects, issues and approaches that would be worth reporting more widely, as well as the content of studies. As the BERA Blog team and our colleagues develop these resources we welcome feedback that can help us improve their quality and accessibility.



PLACE AND NATURE: CONNECTION AND BELONGING

Connecting to the land and nature

**MIKE BROWN**

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KO AHAU TE AWA KO TE AWA KO AHAU**I AM THE RIVER, AND THE RIVER IS ME**

Pleasurable experiences in nature can lead to the development of a positive attitude and active engagement with the natural world.¹ Conversely, an unpleasant experience early in life can put a person off the outdoors. While formative experiences may be a predictor of one's attitude to the natural world, other factors shape our connections in subtle but powerful ways (Brown & Fraser, 2009; Hill & Brown, 2014). The absence, overt denial or 'substitution' of the natural world can undermine the development of connections with nature. We see this, for example, when road construction destroys habitats or where the 'unpredictability' of nature is substituted for indoor reconstructions (indoor ski slopes, for instance).

We are also increasingly aware of the effects of colonisation on indigenous peoples' longstanding connection to particular places and their identity. In Aotearoa New Zealand the confiscation of land – and the associated dislocation (physical and spiritual) – has a direct and long-lasting impact on health and wellbeing, not only for those who are immediately displaced, but for future generations. The effects ripple through the wider society (Durie, 1997; Reid & Robson, 2007).²

1 Original blog post, published 9 June 2021: <https://www.bera.ac.uk/blog/connecting-to-the-land-and-nature>

2 As a non-Māori academic, I am conscious that I cannot truly represent a Māori perspective. I am only able to convey my journey of including Mātauranga Māori within my teaching. I am grateful to colleagues who have assisted me on this path.

In Aotearoa New Zealand there has been an ongoing effort to redress the injustices brought about by prolonged neglect of the legally binding treaty (Te Tiriti o Waitangi/The Treaty of Waitangi) signed in 1840 by representatives of the crown and Māori leaders. Central to redressing these injustices has been the acknowledgement of an iwi's (tribe's) spiritual connection and special standing in their land. The intimate connection to land is expressed in the term tangata whenua (people of the land). Whenua is the word used to describe both land and the placenta. It is customary in Māori tradition to bury the placenta (whenua) in a place of significance to the family (whānau). As a result, people (tangata) are linked individually and collectively through human actions and interactions with the land (whenua) as one (Brown & Heaton, 2015). As tangata whenua in Aotearoa New Zealand: the person is the earth, the earth is the person (Royal, 2002).

'In Aotearoa New Zealand the confiscation of land – and the associated dislocation (physical and spiritual) – has a direct and long-lasting impact on health and wellbeing, not only for those who are immediately displaced, but for future generations.'

This worldview encompasses a broader set of relationships based on shared genealogy (whakapapa) and kinship connections (whanaungatanga) that extend to both the human and more-than-human worlds. In areas where an iwi has established authority and rights, they exercise kaitiakitangi (trusteeship or guardianship) of the environment. Implicit in this network of relationships are four components of wellbeing (hauora); spiritual wellbeing (taha wairua), social wellbeing (taha whānau), mental and emotional wellbeing (taha hinengaro), and physical wellbeing (taha tinana), each one influencing and supporting the other.

The bicultural foundations contained in Te Tiriti o Waitangi underpin the need to recognise indigenous ways of connecting to the land in the New Zealand context. The all too brief outline of some key concepts illustrates the need to understand how connection to land is intrinsically connected to wellbeing. For as Park (1995) reminds us ‘a sense of place is a fundamental human need’ (p. 320).

History has taught us to be cautious in the application or imposition of cultural practices in contexts where they were not originally developed. The challenge is to find culturally appropriate frameworks and practices that meet the needs of the people that we serve. As we look to the future, we will need to broaden our understandings of our relationship of the natural world. In Aotearoa New Zealand, Māori knowledge systems (Mātauranga), built over generations through careful observation and an awareness of human impact on the environment, enrich and inform Western science. For example, Hikuroa (2009) has demonstrated how traditional narratives and place-naming show evidence that the Māori knew that geothermal sources followed subterranean pathways. He demonstrated this by overlaying the narrative on a geothermal map of the Taupō Volcanic Zone. By being respectful and open to different ways of knowing, we can enhance our understanding of the local environments, and honour and celebrate the knowledge that is valued in our communities, thereby enhancing wellbeing. The disruption to ‘business as usual’, due to restrictions imposed by the global pandemic, may provide opportunities to build new relationships with the people of the land. It is in building connections that we are most likely to find a common way forward to make the changes necessary to thrive in a sustainable manner.

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QUESTIONS FOR DISCUSSION

1. Think about the names of the place(s) that you live, work or recreate. What do these names tell us about the place and the people that may have established a settlement here? Do they reflect the ‘character’ of this place? Think about how the name may have changed over time and why this might have occurred. Does naming a place reflect the culture of the people that live there now or in the past?
2. Park asserts that ‘a sense of place is a fundamental human need’. Give some consideration to how your (or your family’s) connection to a place may have shaped how you speak, how you dress, and how you view people who live several hundreds of miles away. How has your sense of place shaped who you are and how you see the world?
3. In many societies change is fraught with social upheaval – particularly when there is a change to places that people care for, or they identify with. Take some time to investigate how competing interests reveal themselves in places near to you. Who gets to decide when a place is developed (or destroyed)? What happens when people are displaced and lose connection to the land? Have you (or your family) been impacted in this way?



PLACE AND NATURE: CONNECTION AND BELONGING

What about place? Education, identity and ecological justice

**MARY GRAHAM¹, SIMONE THORNTON² & GILBERT BURGH¹**¹UNIVERSITY OF QUEENSLAND, ²UNIVERSITY OF WOLLONGONG

Education plays a primary role in identity formation, including the process of national-identity building, which is reflected in education policies, national curricula and teaching practices.¹ In modern liberal-democratic countries, such as the UK, Australia, New Zealand, Canada and the United States, national identity is not inclusive of all its citizens, and it institutionally privileges members of the dominant group and culture.

The structural nature of the colonial project means that national identity is particularly harmful to Indigenous peoples' individual and communal identity reproduction, including ways of knowing, being and doing which rely on relations to place – that is, land and country. Indigenous peoples, such as Aboriginal peoples in Australia, are inextricably connected to place and, thus, identity is relational and cannot be separated from land and country. Education as part of the colonial project has paid little attention to place, which is problematic – not only as it excludes Indigenous ways of knowing, being and doing, but because it also fails to respond to growing environmental crises. In this blog post, we focus

on the need for converting classrooms into place-responsive communities of inquiry that are essential to developing eco-citizen identities – identities that break with socially and environmentally harmful knowledge and habits.

The self as embedded in nature is often obscured in liberal democracies. These societies perpetuate and maintain colonial ways of knowing, being and doing, particularly the concept of self as an independent, self-reliant, property-owning individual – which is a self traditionally defined in opposition to nature, creating a nature/culture dualism. Consequently, individualism – as the basis for identity and sociopolitical ordering – works to deny the embedded nature of humans, creating an ecological blind spot. Colonial countries view land as merely instrumental, as a means to an end. Consequently, there is very little that signals a limit to action – that is, an ethical limit – which has allowed for today's widespread exploitation and its resultant environmental crises. These crises have 'ushered in a new search/struggle in the Western world for the true definition of identity or meaning-for the definition of human identity, that is, not political/nationalist identity' (Graham, 1999, p. 110).

¹ Original blog post, published 21 September 2022: <https://www.bera.ac.uk/blog/what-about-place-education-identity-and-ecological-justice>

‘Education as part of the colonial project has paid little attention to place, which is problematic – not only as it excludes Indigenous ways of knowing, being and doing, but because it also fails to respond to growing environmental crises.’

Colonialisation as the dominant national narrative has radically transformed landscapes into built environments – habitats constructed exclusively for humans. Conversely, for Aboriginal peoples, place and humans are relational; place is epistemically inscribed through a relational ethos, a caring for country and kin. Relationality forms the basis of lore, law and sociopolitical ordering. Active in areas and interrupted in others, these practices become ‘patterns etched in the landscape by tens of thousands of years of human occupation that are available for recovery and revival in face of colonisation’ (Brigg & Graham, 2020).

It is ecologically irrational to view humans as separate from place. Humans are not independent but interdependent both socially and ecologically. To undo such irrationality requires a pedagogy capable of disrupting the nature/culture divide that has been a feature of colonial education. This is necessary as ecologically irrational education produces ecologically irrational citizens who are ill-equipped to respond to environmental crises. Place-responsive education is crucial for the development of eco-rational citizens, and should, therefore, be a key feature of educational theory and practice including the community of inquiry.

Sustained and caring attention to place through inquiry is needed as the classroom is not sealed off from the world. Place is not merely neutral ground upon which learning occurs; it is diverse, active and multi-storied. To ignore multi-storied narratives is to silence the diversity of meanings etched in the landscape and allow the dominant ideology to continue to colonise place. Crucial, then, is engagement with Indigenous ways of knowing, being and doing, so that non-Indigenous students learn how to read different landscapes by learning not only the Western science and history of a certain place but also the Indigenous science and history, the needs of the flora and fauna, the dangers to the ecology, and the ways that human interaction with place can both cause and mitigate such dangers.

Such learning can take place both in and outside the classroom. For example, dialogue with Indigenous peoples and perspectives in a community of inquiry could open a pathway for students to develop a greater sense of place. Indigenous relationships with land are evident in philosophy, science, stories, dance, music (an example being Kev Carmody and Paul Kelly’s song ‘This Land is Mine’),² which can provide stimulus for understanding the Indigenous concepts of obligation to land and care for country that have been part of their sustainable land management practices for tens of thousands of years. Outside the classroom, ecological identity can be cultivated by ‘groups caring for particular chosen tracts of land not only via gardening, but tending, having recreational and ceremonial activities there, creating stories about and artistic expressions of the relevant sites, protecting them from damage’ (Graham, 1999, p. 108).

Bringing Indigenous and non-Indigenous discourses together through communities of inquiry that are place responsive is a positive step towards reconstructing human relationships to place and ecological communities. It is also a vital step if education is to mitigate social and environmental injustice, which is essential for mounting an educational response to climate change.

2 <https://www.youtube.com/watch?v=xY2WAH0F778>

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QUESTIONS FOR DISCUSSION

1. Can we address the environmental crisis without addressing colonialism?
2. How does the relationship between logic and ontology shape identity and, by extension, education?
3. Can democracy be compatible with place-responsive ecological citizenship?

Nature connectedness through the arts: Co-creating a curriculum to support pupil wellbeing in primary schools



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The importance of connecting with nature using an arts-based approach¹

Connecting with nature has shown huge benefits to our mental and physical wellbeing. Learning about nature also offers deeper opportunities for pupils to become more sensitised about our impact on the planet and what we can do to support the regeneration of the earth's biodiversity. The arts provide a distinctive lens for teachers to focus on aspects of nature to develop projects to enable sustained and long-term impact on pupil wellbeing.

The aims of our project

The project set out to understand how a group of year 5 pupils form connections with nature through the arts to support their wellbeing and how these connections supported pupils to conceptualise a nature-connected curriculum. The project also sought to understand how this work would support pupils to build their eco-capabilities.

Research that inspired this work

The research of Walshe et al. (2022), conceptualising the notion of eco-capabilities,² inspired this research. Eco-capabilities build on the work of Amartya Sen's theory of human capabilities (Sen, 1993). This framework enabled an insight into how the participants connected

with nature using an arts-based approach and how many of the eight eco-capabilities (autonomy; bodily integrity and safety; relationality: human; relationality: nonhuman; senses and imagination; mental and emotional wellbeing; spirituality; and identity) they developed.

Figures 1 and 2: Pupils on their nature walk which took place as a starting point for the project



The methodological approach used to collect the data

A mosaic approach, adapted from Clark and Moss (2011), was used to incorporate creative approaches to understanding how pupils connected with nature and visualised a nature-based curriculum. The approaches ranged from a pre and post survey carried out to measure the impact of the project, and nature walks to connect with nature and to learn photography skills. Furthermore, the project incorporated a living willow sculpture as part of the legacy and focal point of the work. This enabled pupils to incorporate the skills they had developed in their design and technology lessons about natural den designs.

1 Original blog post, published 9 July 2024: <https://www.bera.ac.uk/blog/nature-connectedness-through-the-arts-co-creating-a-curriculum-to-support-pupil-wellbeing-in-primary-schools>

2 <https://www.ucl.ac.uk/ioe/departments-and-centres/curriculum-pedagogy-and-assessment/research/eco-capabilities-supporting-childrens-wellbeing-through-participatory-art-nature>

Figure 3: Pupils working on prototypes of their natural den designs in design and technology



Key findings of the project

Pupils have built awareness of how connecting with nature supports their wellbeing and happiness. As part of their curriculum development, the pupils released a range of videos.

Some videos of the activities are:

- how to make a twig sculpture
- how to make a wind decoration

The project findings suggest that the skills gained from the project have long-term benefits, not just for the wider school community but also for the individual pupils beyond the study. These benefits include intrinsic understanding of personal wellbeing and how activities in the natural environment can enhance wellbeing. Furthermore, immersion in this project has supported pupils to understand how looking after the natural environment can start locally and with themselves. The project has highlighted five of the eight eco-capabilities: autonomy and individuality/identity; mental and emotional wellbeing; senses and imagination; relationality; spirituality. For example, for autonomy and individuality/identity, a feature of the project has been enabling pupils to have greater ownership of the direction of their learning and to express their personality. This will be further developed by the revised art curriculum.

Following the project, teachers have considered the impact of nature connection when designing their curriculum. This has helped teachers to see how curriculum content can connect with nature and support a creative approach to incorporate climate change and sustainability education literacies.

Figures 4, 5 and 6: The creation of a living willow sculpture: a living legacy of our project



The longevity of the project

The participating cohort are now called 'nature bugs' and lead this work across the school. Some examples of disseminating the work are the nature bugs working with subject leaders to create a nature-connected curriculum so that the benefits of this approach can be fed across all areas of the curriculum, and supervising lunchtime nature activities with monthly themes to ensure the school's outdoor spaces are being used effectively to enable pupil wellbeing. Finally, the pupils have developed wider skills of communication by sharing their expertise and through work developed with their local community.

Figure 7: The pupils exploring activities for the nature connection curriculum



This research project was funded by the British Curriculum Forum Curriculum Investigation Grant. Read the full project report [here](https://www.bera.ac.uk/publication/nature-connectedness-through-the-arts).³

³ <https://www.bera.ac.uk/publication/nature-connectedness-through-the-arts>

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QUESTIONS FOR DISCUSSION

1. How do you understand Nature Connection? How might you describe or define this concept?
2. What aspects of this project can you use to develop skills with teachers to help primary pupils to connect with nature?
3. Which ideas of curriculum development within this project resonated with you?



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PLACE AND NATURE: CONNECTION AND BELONGING

Teachers are doing it for themselves: Developing Beach School approaches to support an effective climate change curriculum



CAIT TALBOT-LANDERS¹ & BETHAN GARRETT²

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Zac Goldsmith's controversial resignation letter¹ in 2023 was interesting for its 'insider' revelation about the apathetic attitude of the present political leadership towards the environmental crisis, and the paralysing effect that this is having upon all sections of UK government.² This inertia is evident in the leadership that the Department for Education (DfE) is, or rather is not, providing to schools in England. The DfE's strategy states we should be harnessing 'children's passion for the natural world' (DfE, 2022). However, it is symptomatic of the lack of priority this issue has within the educational agenda that, a year later, most schools in our networks appear not to know of the existence of this strategy. As such, teachers and educators are being forced to take action themselves.

In 2017, we established a Beach School network across the north-west of England. This is a free collaboration of educators, health professionals and

environmentalists who all wish to deliver outdoor and environmental education within their local areas. We meet three times a year to: discuss current research and theory; share ideas for practice; work collectively to address problems and barriers; and develop communal understandings of how a Beach School approach could look in our communities. Sessions are led by members' priorities and concerns, and all involve a practical element, whereby teachers experience the beach environment first-hand. Previous focus points have included sustainability, creative arts, food production and mental health. A key principle is to empower teachers to engage with the beach in a way which suits their own context, helping them to develop a personal rationale for teaching on the beach, as well as supporting them with the tools and knowledge to do so.

Our teachers are motivated by the desire to understand how Beach School could contribute to addressing educational, social and health inequalities in the region. Such disparities were specifically identified by Public Health England as being prevalent across coastal communities (PHE, 2021). Beach School, as a place-based educational approach that situates learning on

¹ <https://www.theguardian.com/politics/2023/jun/30/zac-goldsmith-resignation-letter-in-full>

² Original blog post, published 16 January 2024: <https://www.bera.ac.uk/blog/teachers-are-doing-it-for-themselves-developing-beach-school-approaches-to-support-an-effective-climate-change-curriculum>

the coast, provides authentic experiences of interacting with the natural environment and ecosystems. This type of engagement with blue and green space is often lacking in areas of socioeconomic deprivation, hence schools themselves can provide opportunities to subvert this. We frequently find that even pupils who live within walking distance of the beach do not engage with it in their daily lives, so teachers have a vital role to play in bridging this gap. If pupils are to understand the importance of pro-ecological actions, it helps to develop a positive relationship with their locality (Sobel, 2006).

‘We frequently find that even pupils who live within walking distance of the beach do not engage with it in their daily lives, so teachers have a vital role to play in bridging this gap.’

In her Guardian article (Harvey, 2020), Fiona Harvey identified how the current English national curriculum barely mentions the teaching of climate change, and it is noticeably absent from the Ofsted inspection framework. There have also been calls for a research-informed, multidisciplinary approach to climate change, which focuses upon developing values and attitudes, alongside an understanding of environment-specific knowledge, global inequalities and social justice.

Since 2021, we have engaged in participatory research with schools to gather practitioners’ and pupils’ perceptions. Together we have identified some potential impacts that Beach School can confer, which are informing our principles and practices moving forward. These include positive affective responses which link to both calmness and exhilaration, demonstrating the dynamic emotional power of the coast. Additionally, teachers recognise how direct and repeated engagement with local beaches can create deeper personal relationships and bonding with both the place and non-human life. One educator observed how her class were, ‘gaining a greater understanding of their personal responsibility to take care of, and protect, the beach environment’. This is a crucial time to take an educational risk, and through alternative approaches such as Beach School we intend to support teachers and schools in making valuable progress.

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QUESTIONS FOR DISCUSSION

1. What processes and systems could be changed to better support teachers to come together to jointly develop and share practice?
2. What does the coastal environment offer educationally, both in terms of curricular subject learning, and sustainability or environmental education?
3. With the current curriculum review under way, where can we find space for local, place-based approaches, and how can we lobby politicians to recognise the urgency of addressing environmental education?



ADVOCACY, ACTIVISM AND CITIZENSHIP

From loss to action through climate change education and advocacy



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THE BEDFORD COLLEGE GROUP

Imagine someone who has lost the physical existence of the place where he was born and brought up.¹ As a child, he used to roam around freely in the fields and neighbourhoods of his birthplace, a rural village at the shore of the Bay of Bengal. But those cherished memories now flicker like distant stars in the night sky as the village has vanished, swallowed by the relentless tides of erosion fuelled by climate change. Thus, my childhood memories do not have physical existence. Growing up in a village erased from the map by environmental degradation has left an indelible mark on my heart, identity and the way I work in education and research. It is a scar that fuels my unwavering commitment to climate causes, a commitment to ensure that no other individuals nor communities suffer from the same fate. I believe we need to include climate change mitigation and adaptation approaches as the integral part of our curriculum (Shohel et al., 2021).²

In my quest to make a difference, I, along with three colleagues from the Bedford College Group in England,

embarked on the BERA BCF Curriculum Investigation project,³ a curriculum development initiative. This initiative aimed to engage and empower students and teachers in a co-creation process to develop a Level 4 undergraduate module outline to provide knowledge, skills and tools to better understand climate change, social justice and sustainability (Shohel et al., 2023).⁴ Through relentless dedication and collaborative effort, we crafted an introductory module titled 'Introduction to climate change, social justice, and sustainability'. This module is not just a module to transfer knowledge and skills. It is an example of hope, a roadmap for action through active participation and engagement to change the practice in our professions and everyday life (Shohel, 2023).⁵ It explores the intricate connections between climate change, social justice and sustainability, illuminating the disparities and injustices perpetuated by environmental degradation as the impact of human greed and inconsiderate behaviours.

1 Original blog post, published 9 July 2024: <https://www.bera.ac.uk/blog/from-loss-to-action-through-climate-change-education-and-advocacy>

2 <https://www.igi-global.com/gateway/chapter/272182>

3 <https://www.bera.ac.uk/award/bcf-curriculum-investigation-grant>

4 <https://www.igi-global.com/gateway/chapter/331281>

5 <https://www.bera.ac.uk/publication/students-as-the-co-creators-of-the-sustainability-curriculum>

‘Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it’s the only thing that ever has.’ Margaret Mead

The project has focused on involving students as the co-creators of a sustainability curriculum for the Bedford College Group with the intention of making it available to other educational institutions. Employing participatory methodologies, workshops were convened to solicit the perspectives of both students and educators from the college on climate change, social justice and sustainability, and their implications for future generations. This research initiative empowered participants to actively engage in designing and developing the module content, instructional methods and assessment strategies to align with their unique needs and interests. By fostering collaborative partnerships between students and staff, the project gave ownership to its participants, and highlighted their autonomy and voices in the curriculum development process (Werder & Otis,⁶ 2023; Drew et al., 2016;⁷ Bovill et al., 2011⁸).

The research outcomes offer invaluable insights into student engagement and involvement in curriculum development. The project introduced practical approaches to address the issues related to climate change, inequalities and sustainability while understanding them from individuals and local communities’ perspectives (McNamara & Buggy, 2016;⁹ Fernandes-Jesus et al., 2020¹⁰). The Bedford College Group envisions the integration of climate change education and sustainable development across its diverse education and training programmes. The module was designed to foster a transformative educational journey for students as they could emerge as proactive contributors to address global challenges.

But beyond awareness, our module development process has cultivated a sense of agency among the participants. It empowers students and teachers to become catalysts for change to equip students with

the knowledge and skills needed to advocate for a more sustainable and just world. For me, this project is not just an academic or a professional piece of work. It is deeply personal and profoundly embedded in my worldview and life philosophy. It is a testament to the resilience of communities like mine, a tribute to the voices silenced by the rising tides and unfortunate fate. And it is a solemn promise to our future generations that we will not stand idly by as our planet crumbles beneath us. Rather, we will try to address global crisis through local actions.

As I reflect on my journey from loss to action, I am reminded of the words of Margaret Mead: ‘Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it’s the only thing that ever has’.¹¹ Together, let us be that small group. Let us stand shoulder to shoulder, united in our commitment to a sustainable and just future, for the fate of our planet – and generations yet to come – hangs in the balance.

11 <https://www.amazon.co.uk/thoughtful-committed-citizens-change-has-Margaret/dp/1076409903>

QUESTIONS FOR DISCUSSION

1. Climate education and advocacy: How can educational institutions best integrate climate change education, social justice and sustainability into their curriculums to foster meaningful action, rather than just awareness, among students and educators?
2. Collaborative curriculum design: What are the potential benefits and challenges of involving students as co-creators in developing sustainability-focused educational modules, and how can these challenges be addressed to ensure effective implementation?
3. Local actions for global impact: Considering the emphasis on local actions to address global crises, how can communities and educational systems worldwide collaborate to share strategies and resources while respecting local contexts and challenges?

6 <https://www.taylorfrancis.com/books/edit/10.4324/9781003444503/engaging-student-voices-study-teaching-learning-megan-otis-carmen-werder-mary-taylor-huber-pat-hutchings>

7 <https://www.emerald.com/insight/content/doi/10.1108/jpcc-09-2015-0006/full/html>

8 <https://www.tandfonline.com/doi/abs/10.1080/1360144X.2011.568690>

9 <https://www.tandfonline.com/doi/full/10.1080/13549839.2016.1216954>

10 <https://doi.org/10.1285/i24212113v6i2-2p1>



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ADVOCACY, ACTIVISM AND CITIZENSHIP

Whose climate crisis is it anyway?



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While global attention is focused on the need to mitigate climate change, it is noticeable that the debate is largely conducted by those with power about what others should be doing about it.¹ As is commonly the case, those who are less empowered in political and economic processes are largely excluded from important decision-making. Through my work in science, technology, engineering and mathematics (STEM) learning with those with learning disabilities, I have become increasingly concerned about the exclusion of these young people because of an assumption that they can neither understand the issues nor contribute to the debate (Kolne & Lindsay, 2020; Wei et al., 2013). For that reason, I undertook two sets of activities that intentionally targeted young people at risk of such exclusion.

The first of these was funded by the EPSRC's (Engineering, Physical Science Research Council) impact acceleration account² scheme. I led a team of researchers and academics at the University of Strathclyde (Glasgow, UK) whose work would enhance sustainability in offering a sustainability STEM summer school for young people with additional support

needs (ASN). The workshop leaders engaged in workshop sessions to prepare them for working with the participants of the summer school and prepared activities that would show the participants what the academics' research was about and how it could bring us closer to sustainability. Over the summer holidays of 2021 and 2022, these 10 colleagues ran hands-on workshops for up to 30 young people. Beyond ensuring that the activities would be meaningful to the participants, I consciously looked to dismantle other barriers that were likely to make attendance difficult. We used our funding to pay for buses to bring them to the study centres we used, provided lunch and lent clothing for outdoor activities if required. We hired a professional storyteller to introduce key ideas and terminology through folk tales and a photographer who provided a record of the young people's activities and achievements, especially important for those who would struggle to share their experiences verbally.

The young people's enjoyment of the hands-on learning was evident and a series of plenary activities on the final day showed that they had really understood the concept of environmental sustainability. Meanwhile, the academics universally reported that they had enjoyed working with learners who were quite different to the audiences they were accustomed to and had learnt a lot about teaching a lay audience. The evaluation data

1 Original blog post, published 9 July 2024: <https://www.bera.ac.uk/blog/whose-climate-crisis-is-it-anyway>

2 <https://www.ukri.org/what-we-do/browse-our-areas-of-investment-and-support/epsrc-impact-acceleration-accounts/>

(currently being collated) indicates that the gap between experts in, and the marginalised from, discussions about climate crisis requires active efforts to bridge it. Doing so enabled us to bring both sets of partners to better understand each other and to discuss how knowledge about technology can be made accessible to potential end users (the so-called ‘hardware’ and ‘software’ elements of technological innovation) (Bhamra et al., 2011).

‘The inference that I draw from these projects is that there is a far wider concern for the environment and the climate crisis than may be immediately discernible. Those who do not volunteer to participate in debate or initiate action are not absent because of an indifference to the issue.’

Following on from the pilot, an approach by a colleague prompted me to run a second activity with young people who had attended the summer scheme. I joined her in running a discussion with the young people on their ideas about what they thought they should be learning about the environment and a further one to find out what young people thought should be done by different authorities. The questions which had been put to the young people were re-worded to improve accessibility and the consultation run face-to-face rather than on-line. It was very noticeable that at both consultation exercises the young people expressed genuine interest in the subject matter and the desire to contribute to the consultations (BERA, 2021 and Dunlop et al., 2022.).

The inference that I draw from these projects is that there is a far wider concern for the environment and the climate crisis than may be immediately discernible. Those who do not volunteer to participate in debate or initiate action are not absent because of an indifference to the issue. Rather, they face barriers to contributing, often barriers which marginalise them from decision-making and simultaneously make it difficult to take the actions that they know are needed. Meanwhile, experts in matters of sustainability need to be supported and encouraged to reach out to under-represented groups in order to ensure that they too can play an active part in the fight for the future of our shared planet.

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QUESTIONS FOR DISCUSSION

1. What understanding do policymakers have of the people whose lives are shaped by policies? How could this be enhanced?
2. Which features of the intervention described might be considered unusual for a STEM outreach activity? How could this approach be used in other contexts?
3. While a strategic view might be to reach those most likely to have the power to make major changes, what arguments are there for prioritising the engagement of marginalised people in key debates?



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ADVOCACY, ACTIVISM AND CITIZENSHIP

Does environmental activism have a place within education?



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The Intergovernmental Panel on Climate Change (IPCC) warns that the pace and scale of current action to limit global warming is inadequate – but that urgent climate action can secure a liveable future for all (IPCC, 2023).¹ There have been calls for researchers across disciplines to respond to the challenges of the Anthropocene in terms of what we research, how we research, and beyond our research (Perrin & Dorrell, 2024). Climate protest movements have emerged out of frustration with government inaction on climate change and the knowledge that acting now has the greatest potential to prevent climate breakdowns. Education – formal and non-formal, across the life course – has a key role to play in preparing societies to decide which paths to take, and for enabling the conditions for full participation in these decisions, which raises questions about the relationships between education, action and activism. However, some educators feel they have to tread carefully when it comes to talking about political participation in class (Dunlop et al., 2024).

Despite research indicating that teachers and students support an action-based curriculum on climate change (Howard-Jones et al., 2020; Dunlop et al., 2022; UNESCO,

2022), environmental and climate change education occupies the margins in England (Greer, et al., 2023) with a focus on learning about the environment, rather than addressing environmental justice, advocacy or action (Glackin & King, 2020). In contrast, the United Nations Framework Convention on Climate Change calls for action for climate empowerment (ACE),² to empower all members of society to engage in climate action through education, training and public participation. This requires an understanding of educational settings as political spaces in the sense of Hay (2007, p. 77), as places where there is ‘the capacity for agency and deliberation in situations of genuine collective or social choice’. Yet politics occupies an uncomfortable place in schools in England, with guidance on political impartiality in schools (DfE, 2022) contributing to a confusing and potentially troubling atmosphere around environment issues, politics and education. Responding to climate change requires ‘rapid and far-reaching transitions across all sectors and systems’ (IPCC, 2023), yet government guidance states that the principles which underpin society ‘should be reinforced by schools’, setting limits on what is deemed acceptable to discuss in a classroom context.

¹ Original blog post, published 23 August 2023: <https://www.bera.ac.uk/blog/does-environmental-activism-have-a-place-within-education>

² <https://unfccc.int/topics/education-and-youth/big-picture/ACE#Article-12-of-the-Paris-Agreement>

'The CIVICUS Monitor has recently downgraded civic space in the UK and described it as "obstructed" (rather than "narrow" or "open") as human rights, freedom of association and peaceful assembly and protest are under threat.'

This intersection between politics, education and environmental action has come to the fore in recent months. There has been a reported decline in civic space across the globe. Specifically, the CIVICUS Monitor (2023) has recently downgraded civic space in the UK and described it as 'obstructed' (rather than 'narrow' or 'open') as human rights, freedom of association and peaceful assembly and protest are under threat. For example, environmental protests face increased restrictions through rulings, which prevent climate activists from giving reasons for their protest during criminal trials. The recently passed Public Order Act³ includes measures to curb environmental protests in the UK with the imposition of conditions on peaceful protests and introduction of new police powers. The United Nations has described the Act as 'deeply troubling legislation that is incompatible with the UK's international human rights obligations' (UN, 2023).

This context has implications for how educators and their students can engage in education through which students question their lifestyles and the systems and structures that maintain and promote high-consumption and high-emitting ways of living and being. How can and should educators discuss what sort of actions are needed for a just transition away from fossil fuels? What are the distinctions between education, action and activism?

3 <https://www.legislation.gov.uk/ukpga/2023/15/enacted>

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QUESTIONS FOR DISCUSSION

1. What are the distinctions between education, action and activism?
2. In which contexts may those terms be opportunities or barriers for engaging in politics in the classroom?
3. How can environmental education strengthen political participation in/through/for education?



ADVOCACY, ACTIVISM AND CITIZENSHIP

Ethical citizenship and young people's food choices



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At a time of climate and ecological emergency, children are faced with a multitude of complex, interconnected choices through which they navigate.¹ The introduction of a new Curriculum for Wales in 2022 offers opportunities for schools to engage directly with such choices, as one of its core 'purposes' is to support children to become 'ethical, informed citizens,' who can 'show their commitment to the sustainability of the planet' (Welsh Government, 2020). Our project looked at how primary age children make sense of often contradictory claims about different sources of protein and their role in future food provisioning. We used this as a route to thinking about the role of schools in enabling ethical and sustainable citizenship.

Over the past 20 years concerns have grown globally about how to reduce the environmental impacts of the food system. Food production is often framed by widespread anxieties in the media (such as animal welfare, possible contamination, public health risks), as well as specific concerns relating to access of food due to climate change (for instance limited harvests due to drought, flood and unpredictable seasons.) Much food education relates to cooking or healthy diets (Owen-Jackson & Rutland, 2016). Wales's new curriculum has the potential to delve further into issues raised by the

changing food system, particularly through enabling learners to:

- think in ways that critically, ethically and creatively consider different environmental issues
- develop and make informed decisions about these contexts and issues
- begin to establish a commitment (whether individually or as part of a collective) to mitigate environmental degradation.

Although clear about its aims for the characteristics, knowledge and skills that learners should be supported in developing, the curriculum is less explicit about how teachers might go about this.

Our project encouraged children to think critically about impacts of the food they eat now, and could choose to eat in the future. We did this through a focus on the promotion of alternative diets that urge us towards reduced meat, meat-free and plant-based menus, as well as swapping out traditional meats for edible insects. The arguments made around these diets can be complex and contentious; our project encouraged children to engage with this complexity.

We worked with around 200 7–11-year-olds and their teachers in three contrasting schools in south-west Wales. One school was a three form entry, inner city primary school; the second school was a four

¹ Original blog post, published 18 January 2024: <https://www.bera.ac.uk/blog/ethical-citizenship-and-young-peoples-food-choices>

form entry, semi-urban school; the third school was a small (approximately 50 children) rural primary school. Through a mixed method approach of surveys, workshops and focus groups we sought to explore how beef, plant-based and insect proteins can be used as a gateway to ethical citizenship and sustainable education.

‘We sought to explore how beef, plant-based and insect proteins can be used as a gateway to ethical citizenship and sustainable education.’

Children identified three themes through which they wished to explore the farming and consumption of these protein sources: impacts on health, the climate and animal welfare. Through this comparison they were encouraged to think critically. The children interrogated the pros and cons of different types of food production, with comments made such as:

- ‘Cow farts are really bad for the planet’
- ‘You might need to cut down trees to make more space for cows’
- ‘They [beef] can make you stronger’
- ‘If we eat more plants we won’t have to kill as many animals’
- ‘It’s bad for the environment if chemicals are used [in growing crops]’
- ‘Just because insects have a short life their life should be valued’

A recurring theme throughout workshops and dialogue with children was around the care and killing of animals within our food system. Children were eager to understand and discuss the language of harvest, murder, slaughter and death, what it meant, what was fair, what they felt was acceptable.

Following the workshops, the children wrote postcards to the Prime Minister, outlining their visions for future food provisioning in the UK. This was an important aspect of the project, enabling learners not only to explore the topic but act on it, thinking about different routes through which they might become active citizens. The schools received a written response from the Prime Minister, which was read out in a school assembly and used to demonstrate the possibilities of pupil voice.

The responses of the children involved with this project illustrate how relationships with food are complex

and multidimensional. Teachers reported that a focus on a number of products is essential as considering a single product does not allow for comparison and deeper, critical thinking. This work offers insight into ways school and professionals might plan for food interactions for the benefit of children and young people.

For more, visit the project website.² This research was funded by the British Academy (grant SRG21\210557) and is informed by findings from Verity’s earlier project reported in Jones (2020).

2 <https://www.cardiff.ac.uk/research/explore/find-a-project/view/2579918-young-people,-alternative-proteins-and-pedagogies-for-sustainable-futures>

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QUESTIONS FOR DISCUSSION

1. What forms of guidance and support are needed to enable conversations about the reality of the food system in schools (including animal slaughter)?
2. When, where and at what age/stage is it appropriate to discuss what we eat and where it comes from in relation to animal welfare, health and climate change?
3. How can learners be supported in taking meaningful action on what they learn in classrooms?

Growing up green: What value is placed on accessing outdoor environments across different childcare and educational settings?



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It is well known that spending time in nature is beneficial for children (Chawla, 2015).¹ However, in Britain, children now spend less time outside than previous generations (Moss, 2012), which has been exacerbated by the Covid-19 pandemic (Natural England, 2021). Furthermore, inequalities in nature access disproportionately affects those from poorer backgrounds and ethnic minority populations, with many losing out due to a lack of quality local provision or societal barriers (Holland, 2021). Children may now, therefore, be particularly dependent on their access to nature being facilitated by educational and childcare settings, but these opportunities may be distributed inequitably.

My doctoral study investigates how children aged three to seven are enabled to access nature within early and primary educational contexts. Drawing on a phenomenological tradition, the work uses social constructionist and new materialist approaches to explore the value placed on nature and any potential constraints or freedoms experienced by children in state and privately funded schools and nurseries. My study places children's voices at the heart of the research, using key elements of the creative methodology Photovoice (Wang & Burris, 1997). During fieldwork, child participants took photographs of outside spaces at their schools and nurseries, using printouts of the images to facilitate discussion on the meanings that those spaces held for them. Transcriptions of talk during the photography exercise and subsequent discussions were analysed using a Reflexive Thematic Analysis (Braun & Clarke, 2022), to develop several themes.

¹ Original blog post, published 19 February 2024: <https://www.bera.ac.uk/blog/growing-up-green-what-value-is-placed-on-accessing-outdoor-environments-across-different-childcare-and-educational-settings>

'Children may now be particularly dependent on their access to nature being facilitated by educational and childcare settings, but these opportunities may be distributed inequitably.'

One set of themes explore how children's interactions with the outdoors are both restricted by practitioners, yet also subject to disruption. Children expressed feelings of being impeded in their access, through talk of optimal weather conditions or access being restricted by the demands of school life.

'We don't come here much. Because when you're in Year 2 you have more time of work.' – Year 2 child, Private School



Dichotomously, however, children also demonstrated a sense of stewardship, agency and the means of creating change, disrupting socially constructed concepts of 'suitable conditions' for accessing the outdoors, by enjoying 'bad' weather and having a fascination with dirt and poo.

'You get to slide down it ... slide down it and it's already

wet.’ ‘And I also like splashing in puddles and I also got a coat that covers my bum so I can just go in the wet!’ – Pre-school children, Private Nursery



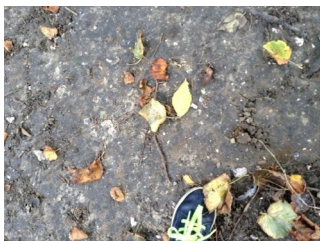
Other themes explore how meaning-making for children in these outdoor spaces is deeply connected to the self, home and significant others. Children’s domestic gardens were particularly prevalent in their talk about nature and the secure base of family provided children with a lens through which to imbue natural environments at school or nursery with emotional significance.

‘I like this one, like, my dad wants to really know about mushrooms and I just want to know about mushrooms because he had a mushroom book.’ – Year 1 child, State School

Children across settings created a personal connection with nature through self-representation in their photographic depictions.



‘[I like it] because it has my shoe there ... my lace there. Because I’m stepping on mud.’ – Pre-school child, Play Centre



Finally, outside spaces allow children opportunities for social, cultural and academic learning. Material items facilitated challenging exercise and socialising, while more natural spaces allowed children to be captivated by nearby and ‘small’ nature.

‘That’s snow! It’s a snowflake! [Quietly, in awe] Oh wow.’ – Pre-school child, Private Nursery

‘The flower’s grown! The flower’s grown, look!’ – Year 1 child, State School



Practitioners were interviewed, and I have also explored how they value these same spaces, reflecting on how children’s agency, institutional policies and practitioners’ personal values intersect to impact children’s access to the outdoors.

Anna Ridgewell received the BERA Annual Conference 2023 Best ePoster Prize for the paper ‘Growing up green: What value is placed on accessing outdoor environments across different childcare and educational settings? A doctoral study-in-progress’.

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QUESTIONS FOR DISCUSSION

1. Do you see outside spaces within schools and nurseries as primarily useful for education, nature engagement, or both? What factors influence this valuation?
2. How do children respond to those same spaces and are they influenced by the adults around them?
3. How might we better facilitate children’s interactions with the outdoors and make best use of natural spaces in schools and nurseries?



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OUTDOOR LEARNING ACROSS THE LIFESPAN

Being active in play environments: The key to children's health and wellbeing



SRUTHI ATMAKUR-JAVDEKAR
ARCHITECT

Playground closures due to the ongoing pandemic have led to urgent calls for city councils and authorities in the UK to keep play spaces open.¹ Parents and experts reason that home isolation has led to a lack of physical exercise, reduced socialisation with peers, and a loss of connection with the outdoors, resulting in greater long-term risks for children's physical and mental health and wellbeing (Grant, 2021). Play is essential for children's holistic development, and children's right to play is rightly recognised as a fundamental right by the United Nations Convention on the Rights of the Child.²

In addition to the current issue of access to play areas, there are other critical physical and social barriers to fulfilling children's play in global urban areas. These barriers include: limited green spaces; inadequate opportunities for child-controlled play; lack of adults' awareness about the significance of play; growing academic pressures on children; increased screen time and structured time for enrichment activities; and the lack of participation by children in planning for play

(IPA, 2016; McKendrick et al., 2018; Atmakur-Javdekar, 2020). One way to reduce these barriers is by ensuring that spaces at the neighbourhood-level have diverse environmental qualities that encourage children and caregivers to stay physically active, meet friends and connect with the natural environment.

'One way to reduce the physical and social barriers to fulfilling children's play is by ensuring that spaces at the neighbourhood level have diverse environmental qualities that encourage children and caregivers to stay physically active, meet friends and connect with the natural environment.'

1 Original blog post, published 9 June 2021: <https://www.bera.ac.uk/blog/being-active-in-play-environments-the-key-to-childrens-health-and-wellbeing>

2 <https://www.unicef.org/child-rights-convention/convention-text>

Over the past decade, the idea of play environments has typically meant fixed play equipment such as swings, slides, climbing frames or walls, merry-go-round and integrated play structures on rubberised surfaces that

primarily support children's gross motor development such as balancing, sitting, running, climbing, and so on. In such environments with fixed play equipment, children have limited opportunities to engage in various play types; and play is often 'scripted' by adults, meaning, children are subtly directed to use the equipment in a specific manner to climb, slide and hang from. However, adventure playgrounds (Staempfli, 2009) offer children ample opportunities to engage with diverse types of materials and a range of loose parts (such as large wooden blocks, sand, hammers, nails, and so forth) that are fundamental to promoting their creativity, imagination, self-confidence and overall physical, social-emotional, and cognitive growth and development (Lester & Russell, 2010; Gray, 2013). Yet, spaces like adventure playgrounds are often viewed by adults as unkempt and risky spaces and are deemed as 'inappropriate' for children's play.

For a long time, child development and play experts have recognised that children need a range of play types for their holistic growth and overall development (Hughes, 1999; Gray 2013). This means children need a diverse play space with a range of fixed and moveable elements and surfaces where they can perceive the environment in terms of the functions it affords (Heft, 1988; Gibson, 1979). An ideal play area is one where children can:

- challenge their physical and mental strength by grasping objects, climbing trees, crawling, running and jumping,
- build, control and manipulate the environment around them,
- have rich sensory experiences and exercise their fine motor skills, preferably with natural elements,
- participate in social experiences where they empathise, cooperate and socialise with peers, and
- exercise their creativity and imagination.

In order to improve children's play environments, a way forward for city corporations and planning authorities is to create neighbourhood-level spaces with diverse environmental qualities that includes a range of human-made and natural physical elements and surfaces (PEaS) (Atmakur-Javdekar, 2020) that afford children opportunities to engage in multiple play types, thereby supporting their holistic growth, mental wellbeing and physical development.

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QUESTIONS FOR DISCUSSION

1. Why is it important for children to have a variety of play types and materials in their environments?
2. Why do city planning authorities need to prioritise diverse, neighbourhood-level play spaces that integrate both natural and human-made elements?
3. Why do some children's play experiences become overly structured, and how does this impact their development?



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OUTDOOR LEARNING ACROSS THE LIFESPAN

Affective sociomaterialisation: An inquiry into early childhood subjectivities within outdoor early childhood provision in Scotland, UK



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In my doctoral research¹ I focus on alternative outdoor early childhood provision in Scotland.² I foreground a sociomaterial approach to understand how young children's subjectivity, related to the conditions of being and becoming a subject, is formed within such spaces. Sociomaterialism challenges conventional knowledge about how subjectivities are formed, where researchers pay close attention to how materials and spaces contribute to one's sense of self (see Tembo, 2024).

What is known about the politics of subjectivity in childhood is largely derived from the intellectual progress made through a primarily Foucauldian-informed social constructionist framework and Judith Butler's performativity theory. Broadly, researchers applying each framework argue that power is social, and that children's identity formation is primarily constructed through their social relations, known commonly as socialisation. It is language vis-à-vis

discourse that functions as a form of social control and represents reality.

The productive contributions of these approaches thus far must be stressed as crucial. However, the argument has been made by a number of researchers that any conceptual framework that primarily addresses the social realm inevitably restrains the possibility for resistance against these forms of power to the domain of discursive (human) agency, thus bracketing out the social world from the (non- and more-than-human) material world that enables it (Barad, 2007; Kirby, 2017).

In response to these concerns, in my thesis I use sociomaterialism as a more expansive metaphysics, or philosophical, approach, intended to enable a more creative exploration of children's agency. I focus on alternative outdoor childhood provision in Scotland, where the materiality of the space has gained additional significance in light of both an enhanced policy focus by the Scottish government and the recent Covid-19 pandemic. Methodologically, I engage in a multi-sensory ethnography at Wood Fire nursery, an entirely outdoor 'alter-childhood' (Kraftl, 2014) nursery environment.

1 https://www.researchgate.net/publication/366809273_Affective_Sociomaterialisation_An_Inquiry_into_Early_Childhood_Subjectivities_within_Outdoor_Early_Childhood_Provision_in_Scotland_UK

2 Original blog post, published 10 August 2022: <https://www.bera.ac.uk/blog/early-childhood-subjectivities-within-outdoor-early-childhood-provision-in-scotland>

'I focus on alternative outdoor childhood provision in Scotland, where the materiality of the space has gained additional significance in light of both an enhanced policy focus by the Scottish government and the recent Covid-19 pandemic.'

Agency has long been thought of as a defining characteristic of the human species where humans are considered to be the exclusive producers of the social world. However, through sociomaterialism, the ambit of inquiry is extended beyond the human in an attempt to unsettle the Cartesian belief that humans exist in a hierarchical relationship, above all matter, including animals, plants and objects. From a sociomaterial position, the dualistic nature of Descartes' metaphysics that has led to this parsing of nature and culture is considered to be a fundamental oversight insofar as it perpetuates notions of human mastery over the non-human world.

Any approach that might decentre the child, as the sociomaterial approach deliberately does, is likely to provoke a sense of anxiety among those unfamiliar with it. As a former early childhood practitioner myself, I am all too familiar with the aphorisms of a 'child-centred' approach and keeping the child 'at the heart' of practice, and the injunctions to always include the 'child's voice', that populate early childhood curriculum frameworks. Yet it must be made clear that thinking in sociomaterial terms does not remove the child from consideration. Rather, agency is distributed and relational instead of individualised. My approach aims to provide an alternative means of understanding the ways in which environments can shape bodily capacities.

There are several implications of this research. Primarily, though, it provides practitioners and researchers with an enhanced conception of subjectivity through the metaphysical framework produced. Questions of subjectivity identity are rarely explicit within curriculum guidance. Where they are visible, they remain appended to ways of knowing that privilege the child 'as an individual' and the cognitive at the expense of the relational and the perceptive. Ultimately, this thesis carries wider implications for what is known about how children might always-

already be forming their subjectivities with/in the world in more-than-human ways – how they might already be 'meeting the universe halfway' (Barad, 2007).

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QUESTIONS FOR DISCUSSION

1. Sociomaterialism emphasises the redistribution of agency beyond the human. What ethical considerations arise when we claim that children are not the only agents in their learning?
2. In what ways might non-human things (such as objects, materials and nature) shape children's subjectivity and identity in their learning environments?
3. Curriculum frameworks often describe the 'whole child' and the 'child's voice'. How does a sociomaterial approach differ from or complement these ideas?

Empowering nature and climate literacy: The role of educators in a changing world



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Nature and climate literacy

In our rapidly changing world, education is essential for equipping the next generation to address critical issues like climate change and the nature crisis.¹ Educators play a vital role in cultivating nature literacy – knowledge and appreciation of ecosystems, biodiversity and the interconnectedness of life (Grace et al., 2021). This deep cognitive, emotional and experiential connection to nature (nature relatedness) drives individuals to engage in conservation efforts.

Baba Dioum's (1968) statement, 'We will conserve only what we love; we will love only what we understand, and we will understand only what we are taught', underscores the need for conservation education. When students care about nature, they are more inclined to become climate literate, understanding the science behind climate change, its impacts, the role of humanity and taking informed actions to address it (Knight, 2024).

Teachers' nature relatedness

Teachers can transform children's nature and climate literacy but they face significant challenges. The expanding curriculum and administrative duties consume their time and resources, limiting their ability to engage in outdoor learning – a powerful tool for fostering nature relatedness. A recent survey by Greer et al. (2023) found that only 22.7 per cent of primary school teachers, and even fewer secondary school teachers (19 per cent), in England utilise outdoor learning. While the direct correlation between teachers' nature relatedness and their use of outdoor learning is not fully established, fostering this is important. Outdoor learning has been shown to significantly shape environmental attitudes (Harris, 2021), making

it a crucial component in developing nature literacy. Therefore, it is essential to adopt a transformative approach to teacher education that integrates outdoor learning, helping educators overcome barriers and fully nurture the next generation's environmental stewardship.

The role of initial teacher education

The entry of new teachers into the profession becomes pivotal in addressing these challenges. Early integration equips future educators to incorporate these methods throughout their careers, enhancing students' nature relatedness and overall wellbeing (Mann et al., 2022). However, initial teacher education (ITE) providers face significant hurdles. The Core Content Framework² imposes constraints on what providers are able to include in their programmes, leaving little space for environmental, sustainability or climate change topics (Dunlop & Rushton, 2022). This raises the critical question of how ITE programmes can include these essential elements in their curricula.

The natural curriculum

To address the gap in nature education, Liverpool John Moores University (LJMU) introduced the 'natural curriculum' into primary ITE courses to embed nature-related content and outdoor learning across the ITE curriculum (Rowley, 2023). Since 2016, over 3,000 LJMU ITE students have participated, fostering their passion for and emotional nature relatedness. An evaluation in 2023–24 with 229 participants assessed the impact of the programme on nature relatedness (Nisbet & Zelenski, 2013). Results showed that the programme enhanced nature relatedness among student teachers, increasing their willingness to engage in outdoor learning and take further environmental action.

¹ Original blog post, published 17 September 2024: <https://www.bera.ac.uk/blog/empowering-nature-and-climate-literacy-the-role-of-educators-in-a-changing-world>

² <https://www.gov.uk/government/publications/initial-teacher-training-itt-core-content-framework>

‘Results showed that the programme enhanced nature relatedness among student teachers, increasing their willingness to engage in outdoor learning and take further environmental action.’

The future of education

As we navigate the complexities of climate change, let us recognise the critical role teachers play. By nurturing nature and climate literacy, they empower the next generation to become informed, engaged stewards of our planet. Let us invest in their education to support their relationship to nature and ensure that the ‘natural’ becomes an integral part of every classroom. Together, we can cultivate a generation that not only understands the science behind climate change but also feels the heartbeat of the earth beneath their feet.

Figure 1: LJM primary student teachers connecting with nature through blindfold activities.

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Figure 2: LJM primary student teacher during outdoor science workshop with local pupils.

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Figure 3: LJM primary student teachers engaging with local pupils in outdoor learning workshops.

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This blog post relates to a paper presented by Avril Rowley and Silvia Cont at the BERA Conference 2024 and WERA Focal Meeting: ‘The impact of the Natural Curriculum outdoor learning programme on primary student teachers’ nature relatedness and willingness to teach outdoors’.

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QUESTIONS FOR DISCUSSION

1. How can we balance the inclusion of nature and climate literacy in school curricula with the need to address other educational priorities?
2. What are the most effective ways to overcome barriers, such as time and resources, that prevent teachers from integrating outdoor learning into their practice?
3. What strategies can initial teacher education programmes use to navigate existing constraints and effectively prepare new teachers to teach nature and climate literacy?

Ageing in nature: Outdoor learning as lifelong learning



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MIND (2021) has adopted the New Economic Foundation's Five Ways to Wellbeing and underscores that 'keeping learning' is one of the foundations of maintaining one's wellbeing.¹ In this blog post, we argue that the outdoors is an effective setting for lifelong learning, as nature provides many opportunities to inspire our curiosity and interest.

During the Covid-19 pandemic, older people, specifically the over-70s, have been defined as vulnerable (NHS, 2021). This can lead to a deficiency view of ageing, suggesting that older people require additional support. This negative perception of older folk by government created a storm of criticism from many older people as well as organisations researching or advocating for them. The British Society of Gerontology (BSG, 2020) sent a statement to the UK government arguing that many are fit and healthy, and providing evidence of the many contributions that people aged over 70 make to society. Current research by Collins, Cooper and Humberstone (2021) highlights that it is a continuing connection with the outdoors that can be the basis for many of the older people in their research to develop flexibility, resilience and healthy lifestyles. There are many opportunities for lifelong learning through the outdoors. Humberstone (2021) draws attention to these connections with nature.

While some researchers may refer to the subjective benefits of a connection with the outdoors (see for example Houge Mackenzie & Hodge, 2019; Orr et al., 2016), there is little reference to the specific impacts of lifelong learning on physical and emotional wellbeing

later in life. However, the ESRC seminar 'Outdoor natural environments: A suitable place for the older adult?' provides evidence to the contrary.²

'While some researchers may refer to the subjective benefits of a connection with the outdoors, there is little reference to the specific impacts of lifelong learning on physical and emotional wellbeing later in life.'

Being active in the outdoors and engaging in activities requires ongoing learning, ranging from planning routes, to maintaining and developing such skills as evaluating relevant safety and access considerations. It can also support an interest in outdoor-related issues, such as conservation and the impacts of climate change. Many people mentioned their increased interest in nature during the lockdown of spring 2020. As well as connecting within nature on personal levels (physical, emotional, embodied and spiritual), there are social and environmental dimensions, which may contribute to social capital. Boyes (2013 and 2016) points out that through clubs and outdoor experiences, older people are able to share their considerable outdoor skills. We suggest that many older outdoor participants and

¹ Original blog post, published 9 June 2021: <https://www.bera.ac.uk/blog/ageing-in-nature-outdoor-learning-as-lifelong-learning>

² A full list and content of seven seminars can be found at seminars.ecehh.org. 'Outdoor natural environments: A suitable place for the older adult?' specifically relates to the outdoors.

educators continue their learning as an aspect of their ongoing personal and professional involvement. Older volunteers all aged over 65 continue to update their qualifications whether related to Duke of Edinburgh Award assessing or Scouts or community walking leadership. Other educational activities involving continuing professional development in and through the outdoors are mentoring and coaching people to gain qualifications; writing and reviewing publications; examining PhDs; and active involvement in national and international organisations. A special issue of *Journal of Adventure Education and Outdoor Learning* collated a number of studies that explore the participation of older people in outdoor experiences that also suggest the benefits of being in blue and/or green spaces (Hickman & Stokes, 2019).

When considering education and learning, it is easy to forget informal and nonformal settings such as the outdoors and to ignore the importance of continuing learning to our wellbeing. In addition, stereotyping older people undermines the ongoing contributions of older people to society. We argue that the outdoors not only performs a critical function in the physical, mental, spiritual and social wellbeing of older people, but also older people contribute significantly to learning and education in the outdoors.

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QUESTIONS FOR DISCUSSION

The authors intimate the importance of an 'outdoor habit' in keeping learning as an element of wellbeing:

1. To maintain an interest in the outdoors and the development of an 'outdoor habit' beyond the early years, how might the curriculum (formal and non-formal) be broadened?
2. How can governments and NGOs support opportunities for outdoor learning activities and nature connection throughout the lifespan?
3. How might intergenerational experiences in nature and the outdoors be developed to contribute to the wellbeing of children, young people and adults?

ABOUT THE AUTHORS

Amanda Anderson is a PhD student at Anglia Ruskin University at the Faculty of Education – in Cambridge. Her research is on ESE (Environmental and Sustainability Education) and her focus is Christian ESE providers. Her research method is ethnography to look into case studies in the UK. She is originally from Malta, and her alma mater is the University of Malta, where she studied Contemporary Mediterranean Studies with specialisation in Anthropology. She read for her MA in European Studies at the University of Sussex. She has since worked at the Permanent Representation of Malta to the EU (in Brussels) as the first Attache for Education, Youth and Culture. In the UK, where she currently lives (with her husband and two children), she worked for the Qualifications and Curriculum Authority (ex-Ofqual), and more recently as reviews of results monitoring, and appeals, at OCR, the exams board part of Cambridge University Press and Assessment.

Sruthi Atmakur-Javdekar is a scholar and architect, landscape architect and environmental psychologist. Sruthi is the founder and principal architect of an interdisciplinary consulting firm, 'GRIT: environmental design + research studio' that creates environments for children, young people and adults in urban areas of the developing world. Currently, Sruthi's work portfolio comprises of residential, commercial and institutional architectural projects, along with a range of large-scale landscape work including urban street plazas and high-rise high density housing landscape development. Drawing from her work as an expert in Child Friendly Cities, Sruthi applies an intergenerational lens to her design practice.

Christopher Bear is reader in Human Geography at Cardiff University's School of Geography and Planning. His research explores the changing food system, focusing particularly on the study of human–animal–technology relations, and embracing contexts including commercial ocean fisheries, dairy farming and alternative proteins. He currently leads a work package on Enabling policy solutions for transparent food supply chains as part of a Horizon Europe consortium (TITAN).

Mike Brown holds a fractional appointment as Associate Professor Outdoor Learning at Auckland University of Technology, New Zealand. He has written extensively on place-responsive approaches to outdoor learning and has a particular interest in marine-based outdoor experiences. His most recent edited collection, *The Ocean, Blue Spaces and Outdoor Learning* was published in 2024 by Routledge. He holds commercial maritime qualifications and is actively involved in sail training – somewhat of a return to his roots in outdoor

education where he worked for the Ocean Youth Club in British waters in the 1990s.

Gilbert Burgh is an Honorary Associate Professor in Philosophy in the School of Historical and Philosophical Inquiry at the University of Queensland, Australia. He has published widely on democratic education, civics and citizenship education, and dialogic pedagogy. His books include: (with Simone Thornton) *Teaching Democracy in an Age of Uncertainty: Place-Responsive Learning* (2022) and *Philosophical Inquiry with Children: The Development of an Inquiring Society in Australia* (2019), and (with Terri Field and Mark Freakley) *Ethics and the Community of Inquiry: Education for Deliberative Democracy* (2006).

Di Collins has a broad experience in education. After 14 years teaching in a primary school, she became a youthwork coordinator. She then became a freelance facilitator and consultant working with organisations ranging from Play England to the National Health Service and Community, Youthwork and Play Services. She has also been an associate lecturer on outdoor education, youthwork and community development degree services. She was awarded a Churchill Fellowship to travel to Australia to explore making connections with nature and the outdoors. Her research interests are related to aspects of place and the promotion of access to nature and the outdoors. She is a Duke of Edinburgh Award assessor. She now enjoys exploring landscapes creatively, through wandering, writing, photography and painting.

Silvia Cont is a PhD candidate at the School of Education, Liverpool John Moores University. She is also a research assistant in the Department for Early Years Education, Faculty of Education, Edge Hill University. She is interested in outdoor learning, forest school approach within initial teacher education, and human-nature connection.

Geoff Cooper worked as a teacher, teacher trainer and for the Peak National Park before developing Wigan Council's two residential outdoor education centres in the English Lake District. He is author of *Outdoors with Young People: A Leader's Guide to Outdoor Activities, the Environment and Sustainability* (1998), and co-author of *In Touch: Environmental Education for Europe* (1992). He has organised international workshops and projects based on adventure, nature, community, and the arts. His current interests are in the links and shared values between outdoor, environmental and global education. He is a board member of the European Outdoor Educators network, and a fellow of the Institute for Outdoor Learning. He enjoys journeys on foot and by boat that allow time to meet people, share stories and appreciate nature.

Jim Dees is the headteacher of West Lodge Primary School, Pinner.

Lynda Dunlop is Director of Education for Environmental Sustainability at University of York, and a senior lecturer in science education. Her research is interdisciplinary, working across the social sciences, sciences and arts and humanities. Current studies focus on climate and environmental education, youth political participation in environmental decision making, and public dialogue on climate interventions. She teaches on the MSc Environmental Sustainability Education and Communication. For more information visit <https://pure.york.ac.uk/portal/en/persons/lynda-dunlop>.

Jane Essex is a reader at the University of Strathclyde, Glasgow, UK. Her main work is in the field of initial teacher education. Her research focus is inclusion in STEAM (science, technology, engineering, arts and mathematics) and her work considers how STEM can be made accessible to all learners. She is an active member of the Royal Society of Chemistry and was awarded its inclusion and diversity award in 2019. She has recently published her first book, *Inclusive and Accessible Secondary Science: How to Teach Science Effectively to Students with Additional or Special Needs*.

Bethan Garrett has been co-convening the North-West Beach School network since 2017. This operates along the Sefton, Fylde and Morecambe coastlines and is a free collective of educators and health professionals, designed to empower teachers and educators in using the coast in their practice. Beth is currently working at Lancaster University as a lecturer in the Morecambe Bay Curriculum, a place-based approach to education across the Morecambe Bay area.

Mary Graham is a Yugambeh Kombu-merri person through her father's clan and Wakka Wakka through her mother's clan. Mary was awarded an honorary doctorate at the Queensland University of Technology for her lifetime commitment to scholarship and community and is an adjunct associate professor at the University of Queensland. She was a member of the first Council for Aboriginal Reconciliation and is also engaged in international research projects.

Barbara Humberstone is professor emerita (sociology of sport and outdoor education) at Buckinghamshire New University and visiting professor at Plymouth Marjon University. Her research interests include: embodiment, alternative/nature-based physical activities and continuing learning; wellbeing and outdoor pedagogies; and ageing and green/blue spaces. She is interested in the connections between nature-based sport and outdoor learning in the contexts of social and environmental awareness/justice. She

recently co-edited: *Research Methods in Outdoor Studies* (Prince, H., 2020), *International Handbook of Outdoor Studies* (Prince, H. & Henderson, K., 2016), *Ageing, Physical Activity, Recreation and Wellbeing* (Konstantaki, M., 2016), and *Seascapes: Shaped by the Sea, Embodied Narratives* (Brown, M., 2015). She is co-editor of the new Routledge series *Advances in Outdoor Studies* (Higgins, P., 2019) and has papers in journals and books. She is incredibly lucky to be in New Zealand on extended visa due to the Covid-19 pandemic, where she can continue to windsurf, sail, paddleboard, ramble and do yoga.

Verity Jones is an Associate Professor of Education at the University of the West of England, Bristol. Verity leads the RESPECT team, and her research interests relate to social and environmental justice.

Nasreen Majid is a Lecturer in Education and teaches on the MA in Education programme at University College London (UCL). She is an Associate Fellow of UCL's Centre for Climate Change and Sustainability Education (CCCSE).

Anna Ridgewell is a Research Fellow and a Doctoral Researcher, funded by the Economic and Social Research Council (ESRC). Anna's PhD project uses a mixed-method, multi-sited, multiple perspective approach to explore the everyday experiences of children and adults in the outside spaces of educational and ECEC settings and how they respond to and value nature in these spaces. It also explores how children's access to the outdoors is mediated by practitioners, in the face of austerity policies and neoliberal ideologies that have simultaneously reduced state intervention in the provision of childcare and education, but increased state surveillance through the regulatory landscape. The project contrasts the experiences of those in the state education and ECEC system with those in the more autonomous and privileged environments of the private education sector.

Avril Rowley is a senior lecturer in primary education at Liverpool John Moores University (LJMU) with expertise in primary science, history and outdoor learning, including forest schools. With two decades of teaching experience in various primary schools across Merseyside, Avril joined LJMU in 2014. She is passionate about using outdoor environments to enrich educational experiences for children, leading her to establish outdoor learning areas on two LJMU campus sites. This initiative empowers primary trainee teachers to adopt a natural curriculum approach by integrating outdoor learning across all subjects. She has also launched The Natural Curriculum Hub, connecting teachers in the Merseyside area with outdoor learning strategies and professional development opportunities

which enhance teaching and learning across the curriculum. Her dedication to innovative educational practices continues to inspire educators and benefit young learners in the region.

Elizabeth Rushton is a professor in Education and the head of the Division of Education, Faculty of Social Sciences at the University of Stirling. Her research interests are in geography and science education, specifically the professional development of teachers, teacher and student participation in research and policymaking, and education for environmental sustainability (EfES). In 2021, Elizabeth co-led the BERA Research Commission with Dr Lynda Dunlop which resulted in the co-creation of a manifesto for EfES with contributions from more than 200 youth, teachers and teacher educators from across the UK. Prior to joining the University of Stirling, Elizabeth was head of Department of Curriculum, Pedagogy and Assessment, Institute of Education, University College London and research director of UCL's Centre for Climate Change and Sustainability Education. Previously, Elizabeth led the inaugural PGCE secondary geography programme at King's College London and taught geography in secondary schools in south-east England.

Smriti Safaya is a postdoctoral fellow at the University of York, where she earned her PhD in Education. Her current research focuses on the impact of experiential environmental education on how youth feel, think and act towards nature. She is an experienced educator, having previously worked in international schools in Hong Kong teaching geography and environmental issues using experiential approaches. Smriti has led a number of professional development workshops for school staff about experiential and place-based learning, sustainability and service learning. Her favourite place to teach and learn is 'where the action is.'

M. Mahruf C. Shohel is currently working as the group head of research, innovation and scholarship engagement at the Bedford College Group and a visiting faculty at the University of Roehampton, UK. Prior to this, Dr Shohel worked for several British universities after completing his doctoral studies at the University of Manchester. He is a Senior Fellow at Advance HE. He is an academic researcher and educationalist with special interests in education, childhood studies, international development, teachers' professional development, technology-enhanced learning and social science research methods. He was included in the last two Research Excellence Framework submissions (REF2014 and REF2021) by the Open University. Most recently, he served as a reviewer of the Future Leaders Fellowships applications to UK Research and Innovation (UKRI). He has written extensively on development issues

in the Global South and has conducted research on disadvantaged children including socioeconomically deprived children, street children, sex workers' children and displaced refugee children. Dr Shohel is a member of the editorial advisory board of the Journal of Applied Research in Higher Education. He is engaged in the fields of climate change, social justice and sustainability education, education in emergencies, education for sustainable development and global citizenship, emerging technologies in education, students' learning journeys, student engagement, and teaching and learning in higher education.

Shaddai Tembo is a lecturer in early childhood studies (UK and China) at Bath Spa University and an associate lecturer at the Open University. He is a trustee for the Fatherhood Institute and an independent speaker, trainer and consultant through Critical Early Years. Shaddai's research interests centre around questions of identity and equality, both among adults and young children, within the early childhood profession.

Cait Talbot-Landers has been co-convening the North-West Beach School network since 2017. This operates along the Sefton, Fylde and Morecambe coastlines and is a free collective of educators and health professionals, designed to empower teachers and educators in using the coast in their practice. Cait is an experienced LOTC educator who is currently working in a school to develop outdoor learning and art across the curriculum. She chairs the Beach School sub-group for the Applied Research Collaboration on the North West Coast.

Lucy Taylor is a teacher and art leader at West Lodge Primary School.

Simone Thornton is a Senior Lecturer in Philosophy in the School of Humanities and Social Inquiry at the University of Wollongong, where she teaches in environmental philosophy, global ethics and existentialism, and is an Honorary Research Fellow at the University of Queensland. Her research interests intersect social, political, environmental, and educational philosophy with a focus on eco-rationality. Simone has published widely in the field of educational philosophy, including her recent book, *Eco-Rational Education: An Educational Response to Environmental Crisis* (2024). She is also a founding member of the Australian Philosophy Research Group along with Gilbert Burgh, Mary Graham and Michelle Boulous Walker.

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