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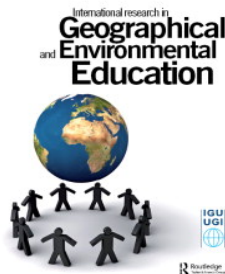
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Researching education for environmental sustainability through intergenerational dialogue

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ABSTRACT

This study uses intergenerational dialogue as an approach to researching Education for Environmental Sustainability (EfES) with UK youth (aged 16–18 years), teachers and teacher educators. Through analysis of qualitative data from 210 participants shared through 18h of participatory online workshops, we identify the framings introduced into discussions on EfES. We find a range of conceptual framings, with youth tending to centre on levels of accountability and critique of economic prioritisation. The case study demonstrates how intergenerational perspectives can be brought into conversation during the research process and identifies an appetite for intergenerational dialogue in EfES. We argue that intergenerational dialogue opens up our collective selves (adult and youth) to the thinking of others so that we can transform obstructions and enact education for environmental sustainability. Future work should consider the place for dialogue between key actors across generations in education decision-making processes.

KEYWORDS

Co-creation; education for environmental sustainability (EfES); intergenerational dialogue; teacher educators; teachers; youth

Introduction

Education has been recognised as a fundamental part of local, national and international efforts to bring about a just world with equitable access to key services and resources and, participation in advocacy and decision making (McKenzie, 2004). Whilst previous research has indicated that young people have completely different interests and priorities to previous generations (Gough, 1998), youth (here taken to mean young people aged 16–18) and teachers alike are increasingly persistent in calls for greater focus on climate change and sustainability in education (UK Student Climate Network, 2020; UNICEF, 2021). Whilst much attention has been paid to pedagogies and curriculum relating to environmental sustainability and teacher education (e.g. Evans & Ferreira, 2020), little research considers teacher educators' perspectives on environmental sustainability. Furthermore, researchers have largely considered teacher

and youth ideas and perspectives on environmental sustainability separately. Such absence and separation is important to consider, as global leaders have asserted the importance of intergenerational dialogue on environmental matters (UN, 2021). Intergenerational dialogue is important when responding to challenges with spatial and temporal complexity, such as those resulting from anthropogenic climate change (Klein et al., 2021) because action or inaction has consequences for all. There has been some attention to intergenerational communication between children and relatives including parents (Howard et al., 2021; Spiteri, 2020); however, discussions about the place of education in the context of global environmental crises frequently omit dialogue between different communities involved in formal educational processes.

In contrast to intergenerational research which might typically involve a wide range of people from young children to older adults (e.g. Pruneau et al., 1999), in the context of this research the intergenerational encounters involve youth and adults engaged in formal education. We explore intergenerational dialogue in research on Education for Environmental Sustainability (EfES) drawing on a UK-based case study of manifesto-making (BERA, 2021). The manifesto-making project brought together teacher, teacher educator and youth priorities for EfES from across four jurisdictions of the UK through a series of online participatory workshops held during 2021 (Dunlop et al. 2022). In what follows, we share how manifesto-making provided the context for intergenerational dialogue on EfES. Prior to this, we briefly consider the current place of EfES across the UK, as the geographical context for the study.

Researchers have documented the varied and inconsistent inclusion of sustainability in education across the UK related to devolution (Martin et al., 2013). In Wales, environmental sustainability is foregrounded as part of the new curriculum and schools inspection framework (Welsh Government, 2021). Similarly, although Scotland (Learning for Sustainability National Implementation Group, 2016) and Northern Ireland (DofE, 2007) identify sustainability in statutory curricula, there is limited evidence that environmental sustainability is enacted in practice, even where it has been longer recognised in policy (McGregor & Christie, 2021). In England, the concepts of sustainability is absent or barely mentioned in recent policy documents including the Inspection Framework (Ofsted, 2019) and the Early Career Framework (DfE, 2019) as well as the National Curriculum, with environment and climate change predominantly considered in science, geography and design and technology curricula (DfE, 2013).

This study explores intergenerational dialogue as an approach to EfES including:

1. What framings do young people, teachers and teacher educators bring to discussions on EfES?
2. To what extent and in which ways can intergenerational dialogue be used as an approach to EfES?

Intergenerational dialogue in the context of environmental sustainability

Intergenerational learning allows for the sharing of knowledge, competencies and attitudes between generations, enabling generations to understand each other's perspectives without necessarily adopting them (Boström & Schmidt-Hertha, 2017).

Intergenerational learning includes spaces for discussion across generations, known as intergenerational dialogue, which acknowledges youth voices through greater interconnectedness with adults (Wyness, 2013). Dialogue is understood to involve the creation of new ideas through differences in meaning generated through talk, with differences in interpretation creating disequilibrium which allows dialogue to progress (Bohm, 1996). Graham and Fitzgerald (2010) describe this feature of dialogue as responsible for the possibility of seeing things differently and strengthening a sense of trust and community. Intergenerational approaches can be empowering for all involved (Klein et al., 2021). However, Taft (2015) argues that there is a need to pay attention to the ambiguous and complex status of adult voice in youth participation. Recent studies indicate that in some contexts, there are barriers to young people bringing about change because adults continue to occupy the decision-making roles and there is not always confidence in young people's agency (Chineka & Yasukawa, 2020).

Intergenerational dialogue is important in the context of education for environmental sustainability because climate change raises urgent questions about what risks people living today should be able to impose on future generations and about how to ensure the sustainability of ecosystems (UNICEF, 2012). Older generations can make young people aware of serious but rare hazards and events (Marchezini et al., 2017) and in the case of education, share rationales for practice. From a rights-based perspective, the UN Convention on the Rights of the Child states that children (i.e. young people below the age of 18 years) should have the right to a voice on matters that affect them (UNICEF, 1989). Few young people are heard through electoral processes at that age, so it is important to create opportunities where young people's views are sought by those who make decisions on their behalf. Mannion (2007) has argued for moving beyond discourses that position young people as either marginalised from adult structures or agents of their own destiny independently of adults, towards a more relational perspective. One way of doing this is through intergenerational dialogue.

A number of studies report on intergenerational approaches to sustainability (Klein et al., 2021), environmental (Ballantyne et al., 1998) and climate education (Williams et al., 2017) and several indicate that multiple perspectives and conflicts of interest elicited through talk can be a resource for learning (Berglund & Gericke, 2022). We found few studies which involve educational actors from across generations focused on education for environmental sustainability. Whilst environmental action must involve adults and young people working together, there are tensions between youth autonomy and adult authority which must be negotiated in intergenerational dialogue (Schusler et al., 2017). To prevent dialogue being used to re-centre adult power, there is a need for structured approaches and practices that actively interrupt adult power and amplify the perspectives of young people (Taft, 2015). The ways in which we dealt with tensions are found in the methods section below.

Methods

Making a manifesto for education for environmental sustainability

The context for this research is a manifesto making project held in 2021 (BERA, 2021). The manifesto was co-created as a result of nine online participatory workshops (each 2 h long) held in two phases: peer workshops and intergenerational

workshops. Through these workshops we aimed to identify priority actions to contribute to education for environmental sustainability at secondary school level. These priorities were identified by asking what sort of education is necessary for environmental sustainability and how can this be achieved? We did not share rigid definitions at the outset of our work, instead working with definitions participants brought to the dialogue. The findings of the manifesto-making are reported elsewhere (Dunlop et al., 2022); here we focus on the process of intergenerational dialogue.

Participants

Teachers ($n=96$), teacher educators ($n=18$) and young people ($n=96$) across England, Northern Ireland, Scotland and Wales (the four jurisdictions of the UK) were recruited through professional and social media networks. Young people were aged 16–18 so that they had recent experience of compulsory education. We did not ask participants for information about their sex, nationality, ethnicity, socio-economic background or other personal characteristics; therefore, we must be alert to potential and actual absences. Registrations broadly reflected the population distribution across the UK meaning that those resident in England were overrepresented. Nevertheless, perspectives from Northern Ireland, Scotland and Wales were included across each of the three participant groups. The focus on the UK means that perspectives from other geographical locations where environmental crises are more keenly felt are not foregrounded. The participants are likely to reflect those with an interest in EfES as the workshops were voluntary.

Design

Intergenerational dialogue was adopted as a key feature of the research design. A number of principles have been identified as important in youth participation, but these are equally important for the participation of adults in research: respect, genuine opportunity to effect change, access to information and mutual interdependence (Graham & Fitzgerald, 2010). Schusler et al. (2017) identify factors important in managing the tension between young people's will and adults' authority (in terms of both wisdom from experience, and decision-making powers). They argue that it is important to structure participation, support young people, value mutual learning and communicate transparently. In the present study youth, teacher and teacher educator participation was structured carefully into the following four phases to bring generations into dialogue to co-construct meanings of and priorities for EfES.

1. *Provocations*: Young people, teachers and teacher educators were invited to share their visions of EfES in writing and/or video to serve as stimuli for thinking. Provocations were hosted by Routes (2021), an open-access journal for student geographers. These were made available to all participants in advance of workshops.
2. *Peer workshops*: The following questions were investigated in a series of participatory futures workshops: what values are important for EfES? Where are

we now and where do we need to be with EfES? How do we get to where we want to be with EfES? Workshops were hosted by the project co-leads (authors 1 and 2) and facilitated by adult practitioners. Each workshop had opportunities for participants to speak in small groups facilitated by researchers (authors 3, 4, 5 and 6), post anonymously, and make comments in the chat. Peer groups were used in the first phase to help participants feel comfortable talking about values, experiences, visions and barriers, and to ensure that power dynamics working in both ways did not silence participants. Perspectives from different groups were brought into dialogue during the analysis of workshop contributions, with common themes across youth, teacher and teacher educator workshops identified in advance of the next phase of intergenerational workshops to inform the manifesto text. Summaries were shared with participants via email following the peer workshops, with the opportunity to respond and suggest changes.

3. *Intergenerational workshops*: Two intergenerational visualisation workshops were held in June 2021 with teachers, teacher educators and young people present together and were facilitated by an artist. A total of 20 people participated in this phase of workshops. All participants in this second phase of workshops had previously registered for the peer workshops. These workshops visualised and elaborated themes from the peer workshops, answering the question, what would EfES look like? The imagery created was used as a stimulus for the artist to illustrate the manifesto.
4. *Launch*: The online launch of the manifesto (BERA, 2021) included responses from a panel consisting of a youth climate activist, a politician, a representative of a learned society and an artist and environmentalist, bringing youth and teachers voices into dialogue with each other, with decision-makers and the wider community.

Data collection and analysis

Ethical approval for the study was obtained from the relevant ethics committee (9/3/2020, Reference 20/18) and voluntary informed consent obtained from participants. Adult facilitators were present in the main room and breakout rooms during the workshops. Data resulted from (1) recordings of workshops, including responses included using the *Zoom* chat function, and (2) responses provided by teachers and youth and (3) artefacts from workshops (e.g. *jamboard*, *miro* and *padlet* posts). Data is reported according to whether it was offered by a teacher (T), young person (Y) or teacher educator (TE).

Qualitative content analysis (Hsieh & Shannon, 2005) was used. All authors were involved in the analysis. In the first phase, researchers were assigned a single dataset corresponding to one participant group (teacher, teacher educator and youth) and coded data which related to participants' understanding of what EfES is and what it could be in the future. In the second phase of coding, researchers identified shared themes and discussed them to identify areas of agreement, tensions and absences. The third phase of analysis was incorporated into periods of writing and discussion involving authors 1 and 2 and then subsequently sharing drafts of the

paper and incorporating feedback and revisions provided by the team. Findings were generated inductively from the data rather than from a theoretical framework so that we could be driven by participants' views. In what follows, we share our analysis of the framings that participants brought to discussions of EfES (Table 1). Having identified these framings we then looked across responses from participant groups to identify intra- and inter-generational consensus, tensions and absences.

We ensured the conclusions reflected the discussions held by: (1) reflexive and recursive discussion amongst the authors and (2) discussion and checking with workshop facilitators at key points during the analysis process, including sharing a draft of the manuscript and allowing time for responses and feedback.

Results

What framings do young people, teachers and teacher educators bring to discussions focused on EfES?

The **first research question** focused on the framings of EfES which participants drew on (Table 1). Framings are examined for tensions and consistencies within and between participant groups in order to understand how to approach EfES in a way that works across differences.

Economic framings

Participants brought a range of economic framings to their discussions of education for environmental sustainability (Table 1). The connection between economic interests and environmental sustainability was identified across all groups of participants. Participants held divergent perspectives within the economic frameworks discussed, with some using the economic framework of development found within ESD and the SDGs whilst others modified their use of the SDGs, for example, 'I never teach SDG8—Economic Growth!' (T) or preferred to draw on alternative economic frameworks such as doughnut economics. Other teachers challenged capitalism as an economic model that was consistent with EfES whilst reporting that they could find themselves in professional difficulty if they 'challenged capitalist ideals!' (T). This tension perhaps relates to policy directives from the English context: in the latest DfE guidance for Relationships, Sex and Health Education (DfE, 2020) schools are directed that:

...they should not under any circumstances use resources produced by organisations that take extreme political stances on matters...Examples of extreme political stances include, but are not limited to...a publicly stated desire to abolish or overthrow...capitalism...

(DfE, 2020, p. 9)

Therefore, for teachers, and especially those based in England who participated in this study, there remain tensions around the extent to which they can question capitalist norms and economic frameworks that are consistent with their vision for EfES and the guidance from the Department for Education which categorises such thinking as an 'extreme political stance' (DfE, 2020, p.9).

Table 1. Framings participants used in discussions on EfES.

Frameworks	Examples	Indicative quotes
Economic	Racial capitalism	"Addressing the extractivism and racial capitalism that structures how we use resources in such a way to do profound harm to ecologies and societies." (T)
	Neoliberalism	"We need for policy makers to support practice - a feeling the government is failing to commit to change - a feeling that is related to neoliberalism." (TE)
	Education for Sustainable Development and Sustainable Development Goals	"Broadening from the climate crisis...thinking about 2030 Sustainable Development Goals." (TE) "New strategy and action plan for ESD is about to be published in Northern Ireland – young people, stakeholders, ITE and teachers who contributed want to deliver ESD." (TE)
	Doughnut economics/ Circular economy	"We need to change the way we teach economics – Look at Kate Raworth's <i>Doughnut Economics</i> ." (T) "Living like the rest of the natural world – within an interconnected and circular economy." (T)
	Questioning capitalism	"The idea of saying anything against the capitalist economic model, you know, can cost you your job in education now which is scary and ridiculous isn't it? ...there are certain freedoms that we don't have as teachers to challenge the orthodoxy that's there at the moment." (T) "...the reason we are in this situation is due to the pursuit of wealth... the capitalist societal construct is the best system that's been come up with thus far...but...the pursuit of wealth is what leads to environmental degradation..." (Y)
Conceptual	Connection with nature	"Everyone...humans, life and environment are an inseparable relationship." (TE) "Being in green space a lot more and being able to connect with the outdoors rather than learning from it in a classroom." (Y)
	Social justice, equity and ethics	"I think environmental equity and justice is key. We need to make sure that marginalised groups, who often suffer most from these issues, have equal access" (Y) "Within computing there are questions that you can answer around ethics and philosophy, and around the environment potentially, but tends not to be an 'easy option' and not required, so not done." (TE)
	Pedagogies of hope	"How do we develop pedagogies of hope?" (TE)
	Decolonialism	"Decolonialisation related to environmental education as the voices that haven't been heard are the people who are most affected." (TE)
Accountability	Individual vs collective	"It is great for individual action [to happen] but systemic collective is needed for real change" (Y) "We should be taught about big business and corporations - what their impact actually is. A lot of greenwashing goes on with big companies making individuals feel as if they are solely responsible. However, if we are taught about the power we have to lobby big companies and governments. Education should empower us to demand change and to demand the rights we should have." (Y)
	Government, leaders and business responsible for enacting systemic change	"We need systemic change too! By focusing on everything we need to change in our own lives people become overwhelmed. Which is what the massive corporations which are the main polluters want because it maintains the status quo which they directly benefit from and created." (Y) "Need the political will to enact environmental sustainability across the spectrum of ITE." (TE) "Need school leadership who are invested in empowering others to enact change across the school." (T)

Young people tended not to talk about specific economic frameworks other than capitalism. However, the perceived prioritisation of economic interests over environmental priorities associated with capitalism featured in discussions, with young

people recognising that ‘economics are really kind of central to understanding that going forward’ (Y). Young people discussed the difficulty of transitioning to alternative economic models but identified ways in which capitalist approaches could do better for the environment than they are at present, for example by costing environmental degradation, building costs into taxation policy and taking stronger action on greenwashing and lobbying of the government by polluting industries.

Conceptual framings

Participants discussed conceptual framings which included ideas of connection to nature, social justice, equity and values. Across generational groups the importance of understanding humans and the environment as an ‘inseparable relationship’ (TE) was highlighted. Participants identified the need for young people to spend time in nature to strengthen this connection. For example, enabling young people to develop a stronger connection with nature was seen as a way to ensure young people learning about environmental issues such as deforestation understand the way their lives and behaviours contribute to environmental challenges rather than seeing themselves as separate and lacking accountability (Table 1).

Across all conceptual framings were ideas of justice. Social justice, ethics and decolonisation were described as desirable because they enabled EfES to foreground the needs of those most impacted by climate change now and the future. Both youth and teacher educators saw a need for EfES to give voice to, and have concern for, marginalised groups who disproportionately suffer the consequences of the climate crisis (see Table 1)

There was a synergy between the conceptual frameworks participants drew on: connection with nature, social justice, equity and ethics, pedagogies of hope and decolonisation (Table 1). These frameworks have complementary concerns including the need for justice and equity in relation to environmental challenges. In England, tensions exist between approaches to EfES which are rooted in justice and equity and the wider policy context. For example, comments made by the Chief Inspector of Ofsted, called for schools not to ‘commandeer’ the curriculum for the climate and to ‘teach the science behind climate change, not a morality tale’ (Spielman, 2020). Furthermore, the recent Department for Education (2022) Sustainability and Climate Change strategy emphasises the need for the science of climate change to be taught, underlines the need for teachers to be politically impartial and, depoliticises issues of climate change and sustainability. These discourses limit schools’ capacity to explore environmental, climate change and sustainability education as a matter of social and environmental justice.

Levels of accountability

There was agreement across generations that there were people and school communities who were passionate about enacting EfES. However, there was a sense that this practice was due to inspirational individuals and that structural barriers constrained EfES. As youth participants said, ‘curriculum education is very limited in terms of environmental sustainability - the onus is often put on teachers or senior students to lead clubs’ and schools will ‘go as far as they possibly can, as long as

it does not compromise a financial budget or academic results' (Y). Teachers and teacher educators agreed that leadership was needed and they wanted leaders to be 'invested in empowering others to enact change across the school' (T). Whilst accountability regimes were critiqued, there was recognition of their power in determining what happens in school, with 'league tables, performance management etc that pull us away from sustainability and towards being competitive with one another' (T). To achieve EfES either sustainability must be recognised in inspections, school development plans and other accountability mechanisms—at the same time as ensuring schools are funded to make sustainable choices - or such systems should be fundamentally altered to serve a constructive and supportive (rather than judgemental and punitive) function.

Teachers, teacher educators and youth articulated tensions between ideas of individual and collective responsibility. There was a sense that education should empower people to understand the individual actions they could take, but also to 'empower us to demand change and to demand the rights we should have' (Y). Youth frequently highlighted the need for systemic change than teachers and teacher educators (see Table 1).

In contrast, teacher educators and teachers focused on the government's responsibility for enacting policies that enable EfES, indicating tension related to who has power to effect change within as well as between generations. For example, one teacher stated the impetus for EfES needed to come from those with influence beyond an individual teacher: 'sustainability needs to be a must before it is included - at the moment it isn't a must! Even in Scotland where sustainability is part of teacher ed [sic]' (T). Teacher educators from Scotland (where the Curriculum for Excellence, focuses on 'responsible citizenship') and Northern Ireland (which has education for sustainable development as a key element) were in agreement that, 'the curriculum lends itself to embedding environmental sustainability, but the actual provision looks different in schools' (TE)... 'what plays out in schools is probably less empowering' (T). There was broad consensus from teacher educators that EfES is 'not central to the programme [of initial teacher education]' and that beginning teachers often had 'mixed experiences on school placements' that are 'dependent on enthusiastic teachers' (TE). In England, teacher educators noted that, 'the Government has omitted EfES from the [ITE] curriculum, there is nothing in the Teachers' Standards or the Core Content Framework' (TE) and another asked, 'are we at the right time to start pushing for wider curriculum reforms that push for cross-disciplinary work across the whole school curriculum and then ITE?' (TE). The recent prevalence of discussions about the climate emergency was cited by one teacher educator as having 'galvanised other subjects in the ITE community' so that the emphasis for EfES is not solely on geography and science specialisms.

To what extent and in which ways can intergenerational dialogue be used as an approach to EfES?

The **second research question** examined the ways and the extent to which intergenerational dialogue could be used as an approach to EfES, and we considered participants' perspectives on the place and value of intergenerational dialogue.

Participants' perspectives on the place and value of intergenerational dialogue in education

Intergenerational dialogue was important to both educators and young people, with arguments that 'there needs to be respect for elders, but there needs to be respect for youngers from elders too - it has to work both ways to be effective' (T) and 'discussion between all groups is necessary to communicate the issues and the solutions' (Y). Within school, this included opportunities to 'speak to younger years or older years, working with teachers as well, to use those leadership skills to kind of educate others and...to drive change' (Y). Groups identified by participants also included parents: 'they play such an important role in students' lives, and also have the ability to vote, so can help implement change at a government or council level' (T). There was an appetite for school buildings to be used as local hubs for sustainability beyond the school day so that environmental sustainability did not become a 'peripheral issue' (TE), and for these local hubs to be spaces for engagement by all age groups. For example, schools could host short duration workshops and exhibitions; longer-term clubs and courses; and as meeting places and event spaces for parents, children, youth and community groups and local businesses, networks and organisations. Learning about environmental sustainability from a young age was seen as important by participants so that children 'know what they are facing' (Y).

Whilst intergenerational dialogue was seen as important, limitations were identified in what teachers could do given constraints of time, access to professional development, budgets and government policy, as well as fear of 'getting things wrong':

...senior teachers...were talking about how they don't have the resources and also, they know that the students care so much, they don't want to offend us or say the wrong thing... at the moment, a lot of the teachers themselves think they don't know enough about it in order to start a conversation, because they don't want to say something wrong. (Y)

Formal decision-making and governance mechanisms were seen by teachers as important to enable intergenerational dialogue to lead to change in schools:

If you've got a school where the student voice feeds into the school improvement plan...it could be through in the leadership and management strand or it could be in the student wellbeing strand, get the senior leaders to commit to putting something around environmental sustainability on the school improvement plan. (T)

Whilst intergenerational dialogue has a role to play in education for environmental sustainability, there is a need for dialogue between teachers, teacher educators and young people, *and* policy-makers in order to effect change. As one young person noted 'I think the final change definitely comes from people in power, but it starts from the very bottom' and another:

I think it has come from somewhere nice and high up...I think the government or at least councils or the advisers to these exam board companies. (Y)

Although there was support for intergenerational dialogue to better understand youth and teachers' experiences of EfES, such dialogue can only have a limited impact in terms of bringing about change because budget holders and decision

makers, from school governors and leaders, to exam boards, and government are those with most power to effect change.

Discussion

Intergenerational dialogue is the creation of new ideas through differences in meaning through talk between people from different generations, here, teachers and young people. Previous research has found a relationship between positive attitudes to solidarity and future-orientation (Torbjörnsson & Molin, 2015) and we attempted in this study to nurture this solidarity between generations through discussions on a theme that both groups had a strong stake in. Difficulty has been observed in implementing intergenerational collaboration because of broader age-based inequalities in society (Taft, 2015). This appears to have some resonance here, with higher attendance at peer workshops than intergenerational workshops (although this may also be due to the different nature of the workshops, with the former futures workshops and the latter art-based visualisation workshops). Nevertheless, youth and adult perspectives were brought into interaction through provocations, visualisation workshops, data analysis and presentation and launch of the manifesto (BERA, 2021). The relational and dialogic model used here was adult led, with youth and adults alike involved in the processes leading to the manifesto. This approach enabled generations to understand and work together to co-create visions for a positive future for EfES, whilst naming the barriers to realising the vision.

The role of the adult has sometimes been overlooked in moves to increase the role of young people in research and practice (Wyness, 2013). Involvement of adults is important because (1) teachers and teacher educators are able to make a difference to the lives of young people (2) identifying common priorities gives weight to arguments about what EfES can and should look like within school settings and, (3) teachers and young people can name the barriers to education for environmental sustainability from different perspectives. Young people see participation as a way of making a difference (Wyness, 2013), so it is important to bring them into dialogue with those who can implement change. In educational contexts, there are different levels of influence, from the individual to the class, the school, and policy. Much change that teachers, teacher educators and young people wanted to see was limited by the policy context, and in particular by curricula, assessments and inspections at all levels of the education system - within, rather than between generations.

Related to how power is expressed within generations, there was a clear nexus of tension between two central ideas: (1) development and (2) decolonisation in the economic and conceptual frameworks expressed by teachers, teacher educators and young people, and their perceptions of how these underpin education systems across the UK. Schools and universities in the UK have started to engage with decolonial and anti-racist perspectives in their curricula, seeking to critically explore both the subject stories and the voices that their curricula make visible and invisible (Manathunga, 2018). This is especially relevant to EfES, where educational ideas and schooling have been central to colonial projects around the world (Fallace, 2015) and where the consequences of climate change will be disproportionately felt

by those who have made a marginal contribution to historic greenhouse gas emissions (Evans, 2021). Decolonisation in the context of education involves exposing colonial legacies that are rooted in inequity so that inequities can be addressed. This implies alternative approaches to school, pedagogy and curriculum such as those seen in the works of Freire (1972) and Manathunga (2018), among others.

There is growing critique of development as a measure of economic growth or progress. Brown and McCowan (2018) note that development discourses, including the Sustainable Development Goals, separate nature and society and, at times, commodify nature. In contrast, they foreground indigenous concepts such as 'buen vivir' which focus not on linear economic 'progress' but living in harmony in the present. The tension between the SDGs and ESD which lend themselves to rapid and widespread implementation across curricula, and the challenge that notions of development are rooted in economic growth, is evident in the contributions made by participants when articulating their ideas for EfES. The tension between intrinsic and economic value is also rooted in ideas of responsibility and accountability—and which nations, governments, corporations, communities, and individuals should make the compromises and shoulder the burdens required to enact EfES? Participants spoke of the need for systemic change, with leadership of schools, businesses and government as well as individuals taking forward action in their own lives and communities. Accountability for EfES has been recognised as an important way for EfES to become integral to education at different levels (BERA, 2021). Whilst we acknowledge that the inclusion of EfES in accountability systems may do much to increase the visibility and accessibility of environmental, climate change and sustainability education in the short term, perhaps decolonial thinkers such as Freire (1972) might challenge the very notion of such accountability systems or structures as being at odds with the principles of EfES if they do not allow dialogue.

Conclusion

The teachers, teacher educators and youth who participated in this study arguably represent a group who are engaged with issues relating to climate change and environmental sustainability education in a western context. Nevertheless, there are power dynamics that constrain and enable when and how teachers, teacher educators and young people feel able to speak. This research presents deficiencies and desires from the UK, and perspectives on the place for intergenerational dialogue. These findings may or may not be relatable to other contexts, depending on the similarities between cultures, education systems, and the immediacy of existential threat felt due to environmental crises. Questions remain about how effective the manifesto-making process will be in effecting change. However, we argue this is an important step in acknowledging the present situation (including constraints) through the involvement of key actors of different generations to imagine how more desirable futures can be achieved.

Intergenerational dialogue is central to understanding how environmental sustainability is conceptualised and experienced through education, and for understanding different duties and roles depending on the resources and capacity of different groups. However, intergenerational dialogue alone is not sufficient because in order to bring

about change, access to budget-holders and policy-makers is needed. In the UK, these responsibilities lie with government (national and devolved) as well as with schools (and in England, with academy trusts). However, we contend that it is important to value intergenerational perspectives, as through intergenerational dialogue, we were able to co-create visions for more environmentally sustainable education, and to imagine how these could be achieved together. This approach explored different perspectives through dialogue, where tensions and inconsistencies (for example between varied economic and conceptual frameworks) were seen as a resource to understand the ideas of others rather than barriers which need to be overcome in order to establish a shared vision for EfES. Scholars in children's literature (e.g. Beauvais, 2015; Gubar, 2016) use the idea of kinship to draw attention to likeness and relatedness between generations whilst at the same time making room for difference and variation. This approach may serve future research in EfES thinking about how to unite adult power with what Beauvais (2015) describes as the might of the child as the power of a life not yet lived. We argue that intergenerational spaces can enable teachers, teacher educators and youth to draw on the Freirean *Pedagogy of Hope* (Freire, 1992) where, through dialogue, we open up our collective selves to the thinking of others so that we can transform oppressive structures and enact environmental and social justice. Therefore, we argue that this intergenerational understanding of Education *for* Environmental Sustainability, which is rooted in democratic dialogue, places education in its entirety to work *for* environmental sustainability, for all.

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References

BERA. (2021). A manifesto for education for environmental sustainability: Launch. <https://www.bera.ac.uk/event/a-manifesto-for-education-for-environmental-sustainability-launch>.

- Ballantyne, R., Connell, S., & Fien, J. (1998). Students as catalysts of environmental change: A framework for researching intergenerational influence through environmental education. *Environmental Education Research*, 4(3), 285–298. <https://doi.org/10.1080/1350462980040304>
- Beauvais, C. (2015). *The mighty child: Time and power in children's literature*. John Benjamins Press.
- Berglund, T., & Gericke, N. (2022). Diversity in views as a resource for learning? Student perspectives on the interconnectedness of sustainable development dimensions. *Environmental Education Research*, 28(3), 354–381. <https://doi.org/10.1080/13504622.2021.1980501>
- Bohm, D. (1996). *On Dialogue*. Routledge: London.
- Boström, A.-K., & Schmidt-Hertha, B. (2017). Intergenerational Relationships and Lifelong Learning. *Journal of Intergenerational Relationships*, 15(1), 1–3. <https://doi.org/10.1080/15350770.2017.1260408>
- Brown, E., & McCowan, T. (2018). Buen vivir: Reimagining education and shifting paradigms. *Compare: A Journal of Comparative and International Education*, 48(2), 317–323. <https://doi.org/10.1080/03057925.2018.1427342>
- Chineka, R., & Yasukawa, K. (2020). Intergenerational learning in climate change adaptations; limitations and affordances. *Environmental Education Research*, 26(4), 577–593. <https://doi.org/10.1080/13504622.2020.1733494>
- Department for Education. (2013). *National curriculum*. Retrieved from: <https://www.gov.uk/government/collections/national-curriculum>. Accessed on 22 November 2021.
- Department for Education. (2019). *Early career framework*. HM Government. Retrieved from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/978358/Early-Career_Framework_April_2021.pdf.
- Department for Education. (2020). *Guidance. Plan your relationships, sex and health curriculum*. Retrieved from: <https://www.gov.uk/guidance/plan-your-relationships-sex-and-health-curriculum>. Accessed on 22 November 2021
- Department for Education. (2022). *Sustainability & climate change. A strategy for the education & children's services systems*. Available at: <https://www.gov.uk/government/publications/sustainability-and-climate-change-strategy/sustainability-and-climate-change-a-strategy-for-the-education-and-childrens-services-systems>. Accessed 21 April 2022.
- Department of Education. (2007). *The education (curriculum minimum content) order* (Northern Ireland) Retrieved from: <https://www.education-ni.gov.uk/sites/default/files/publications/de/minimum-content-order-2007.pdf>. Accessed 18 November 2021.
- Dunlop, L., Rushton, E. A., Atkinson, L., Ayre, J., Bullivant, A., Essex, J., Price, L., Smith, A., Summer, M., Stubbs, J. E., Turkenburg-van Diepen, M. & Wood, L. (2022). Teacher and youth priorities for education for environmental sustainability: A co-created manifesto. *British Educational Research Journal*, 48(5), 952–973. <https://doi.org/10.1002/berj.3803>
- Evans, N., & Ferreira, J. (2020). What does the research evidence base tell us about the use and impact of sustainability pedagogies in initial teacher education? *Environmental Education Research*, 26(1), 27–42. <https://doi.org/10.1080/13504622.2019.1703908>
- Evans, S. (2021). Analysis: Which countries are historically responsible for climate change? *Carbon Brief*. Retrieved from: <https://www.carbonbrief.org/analysis-which-countries-are-historically-responsible-for-climate-change>. Accessed on: 26 November 2021
- Fallace, T. (2015). The savage origins of child-centered pedagogy, 1871–1913. *American Educational Research Journal*, 52(1), 73–103. <https://doi.org/10.3102/0002831214561629>
- Freire, P. (1972). *Pedagogy of the oppressed*. Penguin.
- Freire, P. (1992). *Pedagogy of hope*. Penguin.
- Gough, A. (1998). Researching environmental education in teacher education: Initiating and sustaining student interest. *International Research in Geographical and Environmental Education*, 7(3), 260–264. <https://www.tandfonline.com/doi/pdf/10.1080/10382049808667583>. <https://doi.org/10.1080/10382049808667583>
- Graham, A., & Fitzgerald, R. (2010). Progressing children's participation: Exploring the potential of a dialogical turn. *Childhood*, 17(3), 343–359. <https://doi.org/10.1177/0907568210369219>

- Gubar, M. (2016). The hermeneutics of recuperation: What a kinship-model approach to children's agency could do for children's literature and childhood studies. *Jeunesse: Young People, Texts, Cultures*, 8(1), 291–310. <https://doi.org/10.1353/jeu.2016.0015>
- Howard, L., Howell, R., & Jamieson, L. (2021). (Re) configuring moral boundaries of inter-generational justice: The UK parent-led climate movement. *Local Environment*, 26(12), 1429–1444. <https://doi.org/10.1080/13549839.2021.1973977>
- Hsieh, H. F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, 15(9), 1277–1288. <https://doi.org/10.1177/1049732305276687>
- Klein, S., Watted, S., & Zion, M. (2021). Contribution of an intergenerational sustainability leadership project to the development of students' environmental literacy. *Environmental Education Research*, 27(12), 1723–1758. <https://doi.org/10.1080/13504622.2021.1968348>
- Learning for Sustainability National Implementation Group. (2016). *Vision 2030+: Concluding report of the learning for sustainability national implementation group*. Education Scotland. <https://education.gov.scot/improvement/Documents/res1-vision-2030.pdf>
- Manathunga, C. (2018). Decolonising the curriculum: Southern interrogations of time, place and knowledge. *Scholarship of Teaching and Learning in the South*, 2(1), 95–111. <https://doi.org/10.36615/sotls.v2i1.23>
- Mannion, G. (2007). Going spatial, going relational: Why “listening to children” and children's participation needs reframing. *Discourse: Studies in the Cultural Politics of Education*, 28(3), 405–420. <https://doi.org/10.1177/0907568212459775>
- Marchezini, V., Trajber, R., Olivato, D., Munoz, V. A., de Oliveira Pereira, F., & Oliveira Luz, A. E. (2017). Participatory early warning systems: Youth, citizen science, and intergenerational dialogues on disaster risk reduction in Brazil. *International Journal of Disaster Risk Science*, 8(4), 390–401. <https://link.springer.com/article/10.1007/s13753-017-0150-9>. <https://doi.org/10.1007/s13753-017-0150-9>
- Martin, S., Dillon, J., Higgins, P., Peters, C., & Scott, W. (2013). Divergent evolution in education for sustainable development policy in the United Kingdom: Current status, best practice, and opportunities for the future. *Sustainability*, 5(4), 1522–1544. <https://doi.org/10.3390/su5041522>
- McGregor, C., & Christie, B. (2021). Towards climate justice education: Views from activists and educators in Scotland. *Environmental Education Research*, 27(5), 652–668. <https://doi.org/10.1080/13504622.2020.1865881>
- McKenzie, S. (2004). Social Sustainability: Towards Some Definitions. *Hawke Research Institute Working Paper Series*, 27. <http://w3.unisa.edu.au/hawkeinstitute/publications/downloads/wp27.pdf>, 1–31. Accessed 23 November 2021.
- Ofsted. (2019). Education inspection framework (EIF). Retrieved from: <https://www.gov.uk/government/publications/education-inspection-framework>. Accessed on 22 November 2021.
- Pruneau, D., Chouinard, O., Arsenaault, C., & Breau, N. (1999). An intergenerational education project aiming at the improvement of people's relationship with their environment. *International Research in Geographical and Environmental Education*, 8(1), 26–39. <https://doi.org/10.1080/10382049908667587>
- Routes. (2021). What could the future of education for environmental sustainability look like? <https://routesjournal.org/projects/bera/>.
- Schusler, T. M., Krasny, M. E., & Decker, D. J. (2017). The autonomy-authority duality of shared decision-making in youth environmental action. *Environmental Education Research*, 23(4), 533–552. <https://doi.org/10.1080/13504622.2016.1144174>
- Spielman, A. (2020). Amanda Spielman launches Ofsted's annual report 2019/2020 Speech. Retrieved from: <https://www.gov.uk/government/speeches/amanda-spielman-launches-ofsted-s-annual-report-201920>. Accessed 22 November 2021.
- Spiteri, J. (2020). Too young to know? A multiple case study of child-to-parent intergenerational learning in relation to environmental sustainability. *Journal of Education for Sustainable Development*, 14(1), 61–77. <https://doi.org/10.1177/0973408220934649>
- Taft, J. K. (2015). “Adults talk too much”: Intergenerational dialogue and power in the Peruvian movement of working children. *Childhood*, 22(4), 460–473. <https://doi.org/10.1177/0907568214555148>

- Torbjörnsson, T., & Molin, L. (2015). In school we have not time for the future: Voices of Swedish upper secondary school students about solidarity and the future. *International Research in Geographical and Environmental Education*, 24(4), 338–354. <https://doi.org/10.1080/10382046.2015.1086105>
- UK Student Climate Network. (2020). *Our demands*. Retrieved from: <https://ukscn.org/our-demands/>. Accessed July 13 2020.
- UNICEF. (1989). The United Nations Convention on the Rights of the Child. <https://www.unicef.org.uk/what-we-do/un-convention-child-rights/>.
- UNICEF. (2012). *Climate Change and Intergenerational Justice*. <https://www.unicef-irc.org/article/920-climate-change-and-intergenerational-justice.html>.
- UNICEF. (2021). *Youth for climate action*. Retrieved from: <https://www.unicef.org/environment-and-climate-change/youth-action>. Accessed 18 November 2021.
- UN. (2021). Co-chairs conclusions of education and environment ministers summit at COP26. <https://ukcop26.org/co-chairs-conclusions-of-education-and-environment-ministers-summit-at-cop26/>.
- Welsh Government. (2021). (2021). *The Curriculum for Wales –Statements of What Matters Code*. Retrieved from: https://gov.wales/sites/default/files/publications/_11/_curriculum-for-wales-statements-of-what-matters-code.pdf. Accessed 22 November 2021.
- Williams, S., McEwen, L. J., & Quinn, N. (2017). As the climate changes: Intergenerational action-based learning in relation to flood education. *The Journal of Environmental Education*, 48(3), 154–171. <https://doi.org/10.1080/00958964.2016.1256261>
- Wyness, M. (2013). Children's participation and intergenerational dialogue: Bringing adults back into the analysis. *Childhood*, 20(4), 429–442. <https://doi.org/10.1177/0907568212459775>